



ORIGINAL RESEARCH

Understanding Barriers and Motivations: Enhancing Support for UK Medical Students' Participation in Foreign Medical Electives

Shazia Sarela¹, Naireen Asim²,*, Shruthi Atapaka²,*, Vafie Sheriff³, Gabriela Anna Barzyk-Sheriff³

¹UCL Medical School, University College London, London, UK; ²St George's University of London Medical School, St George's University of London, London, UK; ³Royal Wolverhampton NHS Trust, Wolverhampton, UK

Correspondence: Shazia Sarela, University College London, Gower Street, London, WC13 6BT, United Kingdom, Email Shazia.sarela.19@ucl.ac.uk

Purpose: This study aimed to explore UK medical students' preferences, motivations, and barriers regarding international electives and to evaluate the impact of an online planning event designed to address these. Additionally, this study examined trends in UK medical students completing foreign electives over the past decade.

Methods: Freedom of Information requests were sent to 46 UK medical universities requesting data on the number of students undertaking foreign electives over the past 10 years. Attendees at a peer-led event regarding electives completed a survey on their motivations and challenges in doing a foreign elective, followed by a post-event feedback form. Results were analysed using the Python Scipy package.

Results: Of the 103 respondents, 76.7% preferred to undertake an international elective, while 21.36% preferred a combination of the UK and international locations. Non-academic reasons were significant motivators for undertaking a foreign elective, while safety and financial concerns were major deterrents. The online event received positive feedback, with participants appreciating the utility of the event in aiding their understanding of the elective planning process.

Conclusion: UK medical students show a strong preference for international electives, despite significant barriers, particularly related to safety and finances. The peer-led event proved to be effective in supporting students' planning of electives.

Keywords: undergraduate medical education, medical student elective, COVID-19 pandemic, cultural competencies, international medical education

Introduction

Medical electives are short-term placements that medical students undertake, typically in their final years of study, to gain hands-on experience in a clinical setting of their interest, either locally or internationally. The key motivations behind medical students' participation in international electives are cultural immersion, exposure to diverse healthcare practices, opportunities for personal and professional growth. Multiple studies conclude such experiences also foster an increased interest in academic medicine and enhance cultural competence. Additionally, foreign electives offer opportunities for enhancement of problem solving and critical and innovative thinking, as students may be exposed to limited resource settings where they must still provide effective patient care. However, existing studies are limited by their poorly specified scope of participating medical schools, dearth of comparative data between medical schools, and narrow participation criteria. Also, factors such as destination choice and support structures remain underexplored.

UK medical students face several obstacles in participating in international medical electives. Safety concerns, politically unstable regions, or areas with inadequate healthcare infrastructure, frequently discourage participation,⁶ and the high costs of international travel and living can be prohibitively expensive.⁷ Visa requirements and language barriers further limit equitable access and available experiences, as do integration into foreign clinical environments.^{6,7} Furthermore, the ethical

^{*}These authors contributed equally to this work

considerations and dilemmas associated with international electives significantly influence students' choice of destination, especially when there is limited availability of support structures necessary for effective participation.

The COVID-19 pandemic has significantly affected medical students' perceptions of their careers and their engagement in electives. The pandemic is likely to have influenced their destination choices as they navigate career planning amid uncertainty. However, the influence of the pandemic on international electives, including barriers to participation and the level of support provided by medical schools has not been directly evaluated. Whilst the pandemic's effects on medical education have been studied, these efforts have focussed on shifts in clinical practice, telehealth adoption, and disruptions in clinical rotations. Research on medical students' involvement in clinical research during the pandemic has highlighted various challenges but motivations, expectations and challenges in relation to international electives as well as destination choices of foreign electives have not been investigated.

Considering the multitude of challenges that are faced by students, medical schools could play a vital role in supporting international elective participation. Comprehensive support, including financial aid and mentorship, can boost students' confidence and experience during international electives. The UK Medical Schools Council recommends enhancing support through early exposure, safety protocols, and psychological assistance across all elective phases. Despite this, levels of support that are received by medical students in planning international electives have not been studied.

There are substantial advantages in pursuing electives. However, a significant gap in the literature persists regarding the perceptions, motivations, and obstacles faced by UK medical students, and the support that is available to them, when considering foreign electives. This study aims to examine the experiences of UK medical students with planning and considering international electives. The objectives of our study are to a) understand trends and accessibility of a foreign elective for medical students in the UK by assessing the number of students who have undertaken a foreign elective in the past 10 years; b) explore the motivations and expectations of UK medical students considering a foreign elective; c) identify any barriers or concerns that may discourage UK medical students from pursuing international electives; d) understand current students' knowledge and understanding of planning foreign electives; and e) understand the level of support students perceive they have received from their institutions.

Addressing the identified barriers and enhancing support structures will empower students to fully engage in and benefit from international electives, ultimately shaping well-rounded healthcare professionals ready for the complexities of global health.

Methods

A Freedom of Information (FOI) Request was sent to all 46 British Medical Schools requesting the percentage of students completing an elective in any part for any duration outside of the UK in each cohort 2013–2023 to understand trends in foreign electives and assess the pandemic's impact on accessibility. Additionally, institutions were requested to provide the reason why they were unable to provide the requested data in any part.

A survey to collect data related to medical student preferences, understanding, motivating and deterring factors surrounding international electives was designed using the AMEE guide for educational research, including pilot testing on 10 individuals and feedback from medical educators.

The survey consisted of 26 close-ended questions, including demographics; preference of elective location and the impact of the Covid pandemic on elective choices. Factors related to students' knowledge, understanding, motivations and barriers to foreign electives were assessed using a 5-point Likert Scale, with 1 being the least and 5 the most (Table 1). Students were given the option to provide additional details for the reasons the Covid pandemic impacted their choice of elective destination. Students' eligibility for Widening Participation Programmes (WPP) and students' number of years before undertaking their elective were collected as control variables.

Survey participants were recruited using convenience sampling through an online event titled "How to plan your elective", targeting UK medical students. This sampling technique was selected due to the ease of participant recruitment and to avoid recruiter bias. This event consisted of current medical students and doctors talking about their experiences while undertaking an international elective and providing advice on how to plan and benefit from an international elective. The survey was administered to attendees prior to the event. A separate feedback form, composed of 3 Likert scale-based questions and one open-

Table I Aspects Regarding Undertaking a Foreign Elective Students Were Asked to Rate Using a Likert Scale

Question	Details						
Rating of Understanding and	Rating of Understanding and Knowledge of Aspect related to Undertaking a Foreign Elective						
Requirements by your university	Timing of elective, duration of elective, Sign offs required, permissible countries to complete an elective in						
Travel essentials	Required medical or travel insurance, necessary vaccinations before the journey.						
Planning and logistics	Decision-making process for selecting a region, identification of hospitals meeting university and personal criteria, accommodation arrangements.						
Support available	Availability of companies assisting with elective placement, financial support options, pastoral support during the elective, supervision arrangements during the elective.						
Rating of Factors that would	make Completing a Foreign Elective More Likely						
Non-academic reasons	Opportunity to travel, Spend time with friends, New experience, Volunteering/ Extra-curricular opportunities available alongside						
Academic/ career-motivated reasons	Addition to CV, specific interest in global health, interest in speciality offered at foreign hospital, research opportunities, observe procedures/ conditions/ techniques/ infrastructure at foreign hospital						
Personal reasons	Existing relationship to country eg family, interest in country, research into country as prospective future place of working						
Recommendation/ encouragement	Encouragement form other students/ peers/ family, encouragement by university						
Rating of Factors that would	make Completing a Foreign Elective Less Likely						
Financial	Cost of travel, accommodation, hospital fees, insurance etc.						
Logistical difficulties	Difficulties in applying for visas and insurance, time involved in planning, difficulties in finding accommodation						
Reasons related to being abroad	Language barriers, cultural sensitivities, political situation, lack of knowledge regarding region and customs						
Reasons related to the hospital	Lack of pastoral support, lack of understanding by hospital of elective, lack of confidence in performing procedures and contributing, lack of understanding how different medical system works, having to act beyond competency						
Safety reasons	Safety of travel, risk of infection, personal safety, crime, political situation						
Personal reasons	Caring for family members, not wanting to leave family/ friends/ relationship, health reasons,						

ended question, was administered after the event (Table 2). By nature of the survey, only current medical students in the UK could complete the survey and feedback form. This study received exemption from ethics approval by UCL as it collected completely anonymous, non-sensitive data from students using an educational survey. All students attending the event were provided with a Participation Information Leaflet, which detailed how their data would be used for research and their right to withdraw from the study at any time. All students who completed the survey and feedback form consented to their anonymous data being used for research purposes.

Table 2 Aspects Regarding the "How to Plan Your Elective" Event Students Were Asked to Rate Using a Likert Scale

Question I Confidence in planning an elective after attending the event			
Question 2 Students perceived understanding of foreign electives after the ev			
Question 3	Perceived utility of such an event in planning their elective		

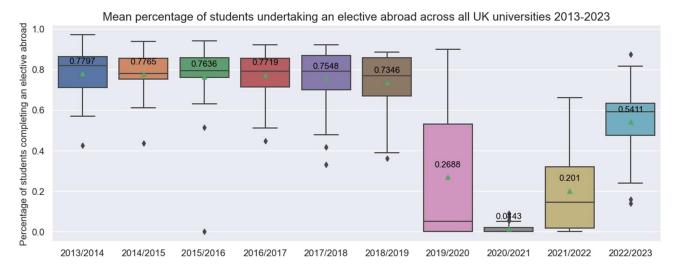


Figure 1 Box plot representing mean percentage of students undertaking a foreign elective in part or full across British universities in the period 2013–2023.

Statistical analysis was conducted using Python's ScipyStats package and included a chi-squared test to demonstrate association between categorical variables; a Wilcoxon Signed Rank Test or The Friedman Test to compare paired data; a Mann Whitney *U*-test for unpaired data; and a Spearman Rank Test to demonstrate correlation.

Results

Figure 1 demonstrates the average Percentage of Students Undertaking a Foreign Elective (PSUFE) from 2013 to 2023 from the FOI data. Tables 3, 4 and <u>Table S1</u> outline the number of universities able to provide data for each year and includes yearly statistics including the mean, maximum, minimum, inter-university variance and percentage changes from pre-pandemic levels. This achieved our aim to understand trends and accessibility of a foreign elective for medical students in the UK by assessing the number of students who have undertaken a foreign elective in the past 10 years.

One hundred and three out of the 149 (69%) attendees at the online event completed the questionnaire and consented for their data to be used for research. The demographic data from the questionnaire is outlined in Table 5, with responses from students of 10 different British universities. Over 90% of all respondents were scheduled to undertake their elective in the next 2 years, with 70% in just over 1 year. 76.7% of students preferred an entirely international elective, followed by 21.36% in the UK and Abroad, and 1.94% in the UK only. The respondents' preferences for elective location by country is outlined in Figure 2.

Students identifying themselves as eligible for Widening Participation Programmes (WPP) were found to be 3-fold more likely to prefer a UK-based elective than those who were ineligible (Chi-squared test p-value = 0.002).

Table 3 Number of Medical Schools Able and Unable to Provide Data for Various Reasons in Response to a FOI Request Regarding the Percentage of Student's Undertaking a Foreign Elective Between 2013 and 2023

Medical School Category	Number of Medical Schools
Medical schools sent FOI requests	46
Medical schools not subject to FOI requests	1
Medical schools unable to provide any data	2
Medical Schools without a cohort that had yet undertaken an elective	8
Medical schools able to provide data for all or some of the years requested	33

Table 4 Values Related to the Average Percentage of Students Undertaking a Foreign Elective in 33 British Universities from 2013 to 2023

Years	Minimum	Maximum	Average	Percentage Change from Previous Year	Percentage Change from Pre- Pandemic Average	Interuniversity Variance
2013-2019	0.33316667	0.92951103	0.76351517			0.0211
2019/2020	0	0.8991	0.268781073	-64.7968915	-64.7968915	0.114
2020/2021	0	0.09	0.014287196	-94.6844487	-5244.05199	0.0007
2021/2022	0	0.65972222	0.201007988	1306.91002	-73.6733471	0.353
2022/2023	0.14	0.873926	0.541053413	169.170105	-29.1365207	0.0325

Table 5 Demographics of Students Responding to Pre-Event Questionnaire

rd year or below th (Penultimate) Year 57.3 th (Final) Year 21.4 therecalating (BSc/ MSc) 56.4 56.4 56.5		
th (Penultimate) Year th (Final) Year 21.4t Attercalating (BSc/ MSc) Sender Jale Stale	Year of Medical School	
th (Final) Year the (Final) Year attercalating (BSc/ MSc) sender fale 33.00 emale 66.00 Other Videning participation Eligibility es 18.40 for sure 12.60 Not sure 12.60 Asian or Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Vidie: English, Irish, Scottish, Welsh, Gypsy or Irish Traveller, Roma, any other White Background fixed or multiple ethnic groups: White and Black Caribbean, White and Black African, White and Asian, any other nixed background fixed background fixed background fixed back British, Caribbean, any other Black background fixed background fixe	3rd year or below	18.40%
ntercalating (BSc/ MSc) Sender Itale 33.00 Semale 66.00 Other Videning participation Eligibility Ses 18.40 Not sure 12.60 Strinicity Saian or Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Vitie: English, Irish, Scottish, Welsh, Gypsy or Irish Traveller, Roma, any other White Background Sized or multiple ethnic groups: White and Black Caribbean, White and Black African, White and Asian, any other nixed background Slack: Black British, Caribbean, any other Black background Straduate Status Undergraduate 82.50	4th (Penultimate) Year	57.30%
Seemale 33.00 Seemale 66.00 Other Videning participation Eligibility Sees 18.40 Seemale 12.60 Seemale 18.40 Seemale 18.	5th (Final) Year	21.40%
table 33.00 emale 66.00 bether Widening participation Eligibility Tes 18.40 blo 68.90 blot sure 12.60 bethicity 18.50 bisian or Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background 56.30 byhite: English, Irish, Scottish, Welsh, Gypsy or Irish Traveller, Roma, any other White Background 68.80 bisiand or multiple ethnic groups: White and Black Caribbean, White and Black African, White and Asian, any other nixed background 68.80 bisiack: Black British, Caribbean, any other Black background 68.80 bether Ethnic Group: Arab, Middle Eastern, any other Ethnic group 38.80 brigging and the status 82.50 brigg	Intercalating (BSc/ MSc)	2.90%
temale Other Widening participation Eligibility Videning partic	Gender	
Videning participation Eligibility Yes 18.40 68.90 18.4	Male	33.00%
Videning participation Eligibility (es 18.40 68.90 68.90 18.40 68.90 69.9	Female	66.00%
Is 40 It is sure It is in or Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Vhite: English, Irish, Scottish, Welsh, Gypsy or Irish Traveller, Roma, any other White Background Iixed or multiple ethnic groups: White and Black Caribbean, White and Black African, White and Asian, any other hixed background Idack: Black British, Caribbean, any other Black background Other Ethnic Group: Arab, Middle Eastern, any other Ethnic group 3.80 Graduate Status Undergraduate 82.50	Other	1%
Note sure 12.60 Intrincity Asian or Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background 56.30 White: English, Irish, Scottish, Welsh, Gypsy or Irish Traveller, Roma, any other White Background Aixed or multiple ethnic groups: White and Black Caribbean, White and Black African, White and Asian, any other nixed background Black: Black British, Caribbean, any other Black background 6.80 Other Ethnic Group: Arab, Middle Eastern, any other Ethnic group 3.80 Graduate Status Undergraduate 82.50	Widening participation Eligibility	
Ithnicity Island or Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other White Background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other White Background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other White Background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other White Background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background Selection of Asian Background Selection	Yes	18.40%
Station or Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background 56.30 White: English, Irish, Scottish, Welsh, Gypsy or Irish Traveller, Roma, any other White Background 1ixed or multiple ethnic groups: White and Black Caribbean, White and Black African, White and Asian, any other nixed background 6.80 Stack: Black British, Caribbean, any other Black background 6.80 Other Ethnic Group: Arab, Middle Eastern, any other Ethnic group 3.80 Graduate Status Indergraduate 82.50	No	68.90%
Asian or Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background 56.30 White: English, Irish, Scottish, Welsh, Gypsy or Irish Traveller, Roma, any other White Background 6.80 Alixed or multiple ethnic groups: White and Black Caribbean, White and Black African, White and Asian, any other nixed background 6.80 Cheler Ethnic Group: Arab, Middle Eastern, any other Ethnic group 6.80 Graduate Status Indergraduate 82.50	Not sure	12.60%
White: English, Irish, Scottish, Welsh, Gypsy or Irish Traveller, Roma, any other White Background 26.20 Aixed or multiple ethnic groups: White and Black Caribbean, White and Black African, White and Asian, any other nixed background 6.80 Clack: Black British, Caribbean, any other Black background 6.80 Cher Ethnic Group: Arab, Middle Eastern, any other Ethnic group 3.80 Graduate Status Undergraduate 82.50	Ethnicity	
Alixed or multiple ethnic groups: White and Black Caribbean, White and Black African, White and Asian, any other nixed background 6.80 6	Asian or Asian British: Indian, Pakistani, Bangladeshi, Chinese, any other Asian background	56.30%
black: Black British, Caribbean, any other Black background 6.80 Other Ethnic Group: Arab, Middle Eastern, any other Ethnic group 3.80 Graduate Status Undergraduate 82.50	White: English, Irish, Scottish, Welsh, Gypsy or Irish Traveller, Roma, any other White Background	26.20%
Other Ethnic Group: Arab, Middle Eastern, any other Ethnic group Graduate Status Undergraduate 82.50	Mixed or multiple ethnic groups: White and Black Caribbean, White and Black African, White and Asian, any other mixed background	6.80%
Graduate Status Undergraduate 82.50	Black: Black British, Caribbean, any other Black background	6.80%
Indergraduate 82.50	Other Ethnic Group: Arab, Middle Eastern, any other Ethnic group	3.80%
-	Graduate Status	
	Undergraduate	82.50%
praduate 16.50	Graduate	16.50%

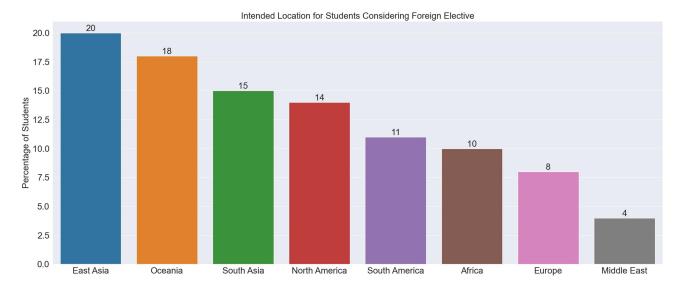


Figure 2 Bar chart representing students' self-reported preference for elective destinations.

Table 6a and b outlines the students' responses for five-point Likert scale questions assessing their understanding and knowledge; motivating aspects and deterring factors related to foreign electives and are further detailed below.

Students' rating for their levels of understanding and knowledge of the requirements from their university regarding their electives received the highest mean score (2.29/5) out of the 4 aspects measured. There was no significant difference

Table 6 Percentage of Students Rating Each Score and the Mean Scores Given by Students for Their Level of Understanding, Knowledge or Self-Perceived Importance for All Questions Asked Using a Likert Scale

Aspect Related to Electives Surveyed	Percentage of Students Providing a Score of I	Percentage of Students Providing a Score of 2	Percentage of Students Providing a Score of 3	Percentage of Students Providing a Score of 4	Percentage of Students Providing a Score of 5	Mean Score Given by Students Out of 5 Using a Likert Scale
Understanding & I	knowledge of aspe	cts related to ele	ctives			
Requirements by University	0.34951456	0.22330097	0.29126214	0.05825243	0.0776699	2.29
Travel Essentials	0.43359412	0.29126214	0.18446602	0.06796117	0.00970874	1.91
Planning and Logistics	0.44660194	0.3592233	0.09708738	0.06796117	0.02912621	1.9
Support Available	0.41747573	0.34951456	0.14563107	0.0776699	0.00970874	1.87
Aspects motivatin	g students to unde	ertake a foreign e	lective			
Non-Academic Reasons	0.01941748	0.03883495	0.15533981	0.3592233	0.42718447	4.13
Academic/Career- Motivated Reasons	0.00970874	0.09708738	0.23300971	0.33980583	0.32038835	3.86
Personal Aspects	0.10679612	0.18446602	0.25242718	0.27184466	0.18446602	3.33
Recommendation/ Encouragement	0.02912621	0.14563107	0.39805825	0.31067961	0.11650485	3.24

(Continued)

Table 6 (Continued).

Aspect Related to Electives Surveyed	Percentage of Students Providing a Score of I	Percentage of Students Providing a Score of 2	Percentage of Students Providing a Score of 3	Percentage of Students Providing a Score of 4	Percentage of Students Providing a Score of 5	Mean Score Given by Students Out of 5 Using a Likert Scale
Aspects posing as a	a barrier for forei	gn electives				
Financial Aspects	0.01941748	0.18446602	0.2815534	0.31067961	0.2038835	3.99
Logistical Difficulties	0.00970874	0.12621359	0.24271845	0.40776699	0.21359223	3.95
Aspects Related to Being Abroad	0.00970874	0.06796117	0.22330097	0.3592233	0.33980583	3.68
Aspects related to the Hospital	0.03883495	0.04854369	0.18446602	0.33980583	0.38834951	3.53
Safety Aspects	0.01941748	0.18446602	0.2815534	0.31067961	0.2038835	3.49
Personal Reasons	0.13592233	0.30097087	0.32038835	0.10679612	0.13592233	2.805

found amongst the rating of understanding for the 3 lowest scoring aspects (travel planning; logistics; and financial support) (Friedman Test p value = 0.959). This achieved our aim to understand current students' knowledge and understanding of planning foreign electives.

Student scores for the importance of non-academic reasons (4.13/5) were significantly greater than the scores for the importance of academic factors (3.86/5) (Wilcoxon signed-rank test p value = 0.026). This achieved our aim to explore the motivations and expectations of UK medical students considering a foreign elective.

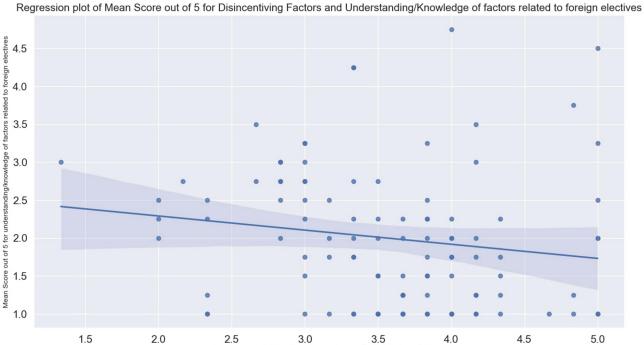


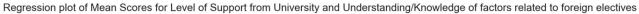
Figure 3 Regression plot demonstrating correlation between rating for understanding and knowledge related to foreign electives and importance of deterring factors.

Mean Score out of 5 for importance of factors hindering foreign electives

Table 7 Percentage of Students Rating Each Score for Their Perceived Level of Support Received from Their University Regarding Their Elective Using a Likert Scale

Score Given	Percentage of Students Providing Score
1	38.83%
2	33.98%
3	21.36%
4	5.83%
5	0.00%

There were no significant differences amongst student scores for the importance of financial (3.95/5) and safetyrelated aspects while undertaking a foreign elective (3.99/5) (Wilcoxon signed-rank test p value = 0.656). The overall score across all deterring factors was significantly higher amongst students preferring UK-based electives (5/5) than a foreign elective (3.93/5) (Mann Whitney *U*-test p value = 0.046). Additionally, the rating of the importance of financial barriers was significantly higher amongst students eligible for WPP (4.47/5) than those who were not (3.79/5) (Mann Whitney *U*-Test p-value = 0.009). A significant negative correlation was found between student levels of understanding and knowledge of planning electives and the level of importance given to deterring factors (Spearman Rank Test p-value = 0.009) (Figure 3). This achieved our aim to identify any barriers or concerns that may discourage UK medical students from pursuing international electives, 78.65% of students reported no impact of the pandemic on their elective choices. 16.5% were more likely to choose a foreign elective, citing reasons such as missed travel opportunities and wanting to explore alternative medical settings after the pandemic. 4.85% were more likely to remain in the UK due to concerns about illness or a desire to contribute to the NHS.



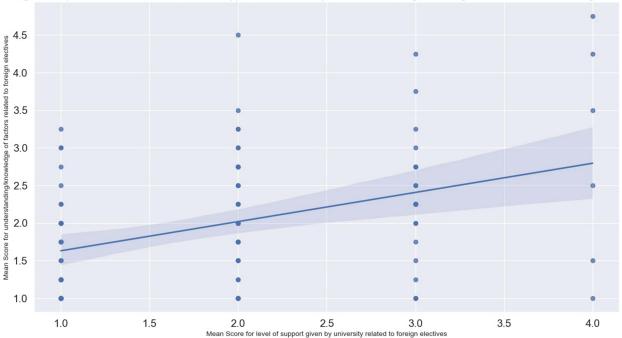


Figure 4 Regression plot demonstrating correlation between student understanding and knowledge related to foreign electives and level of support received from their universities.

Table 8 Percentage of Students Rating Each Score for Different Aspects of the "How to Plan Your Elective" Event Feedback Form Using a Likert Scale

Aspect Related to Event Surveyed	Percentage of Students Providing a Score of I	Percentage of Students Providing a Score of 2	Percentage of Students Providing a Score of 3	Percentage of Students Providing a Score of 4	Percentage of Students Providing a Score of 5
Confidence in planning elective post event	0	0.07407407	0.51851852	0.2962963	0.11111111
Understanding of foreign elective post event	0	0	0.30769231	0.5	0.19230769
Utility of event in planning elective	0	0	0.23076923	0.5	0.26923077

Table 7 shows the self-perceived level of support students received from their university regarding electives using a five-point Likert scale, with a mean score of 1.94/5. There was no significant difference in the scores of students greater or less than 2 years away from undertaking their elective (Mann Whitney U-test p-value = 0.79). Students preferring foreign electives rated university support significantly higher (1.95/5) than those preferring UK-based electives (1.5/5) (Mann Whitney U-test p-value = 0.056). A significant positive correlation was found between the student levels of understanding and knowledge of planning electives and the level of support received from their university (Spearman Rank Test p-value = 0.0001) (Figure 4). This achieved our aim to understand the level of support students perceive they have received from their institutions.

The post event feedback survey was answered by 70/149 students (46.9%), with the results shown in Table 8 and Figure 5. The reduction in response rate from the pre-event questionnaire was primarily due to non-response bias as participants had already filled out the initial survey and benefited from attending the event, as well as logistical challenges, including scheduling conflicts, time constraints, and participants' inability to attend the full event. Students described hearing from students with foreign elective experience and learning about the logistics of foreign electives as the most valuable aspects of the event in the open-ended question asked in the feedback form.

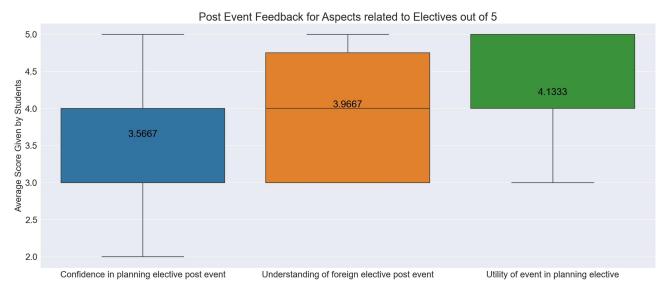


Figure 5 Box plot demonstrating mean score out of 5 for questions asked to students after the "How to Plan Your Elective" event.

Discussion

The FOI request data reveal significant trends in UK medical students' participation in international electives. The prepandemic proportion of students undertaking foreign electives was 75.1% from 2013 to 2019, with minimal annual variation. This consistency suggests a sustained interest in international experiences, aligning with previous studies that highlight the importance of global health exposure in medical education. The considerable variation between universities (see <u>Table S1</u>) could be attributed to differing institutional support, financial resources, and the availability of established partnerships with foreign institutions.

The pandemic resulted in a 63.1% decrease in foreign elective participation in 2019–2020, consistent with previous studies that reported a substantial decline in medical student mobility during the pandemic due to travel restrictions and safety concerns. The lowest participation rate of 1.6% was recorded in 2020/2021. In contrast, 53.9% of students completed a foreign elective in 2022/2023. Yet, this was significantly lower than the pre-pandemic average, despite the easing of travel restrictions. The slow recovery in foreign elective participation may be due to increased reliance on virtual learning and telemedicine, post-pandemic. Nonetheless, the numerous and clear benefits of international electives provide a compelling argument for efforts to ensure that hesitancy to travel owing to lack of confidence or experience does not lead to students opting out of foreign electives.

Previous studies corroborate our findings that UK medical students are primarily motivated to undertake foreign electives by opportunities for personal growth, cultural immersion, and professional development.¹⁷ The highest scores of importance given to non-academic reasons emphasise the value students place on the holistic experience of living and working in a different cultural setting.

The high scores given to financial and safety-related factors by students as aspects deterring them from completing a foreign elective emphasises the importance of financial support being made available to students. Also, concerns regarding safety require to be discussed and mitigated to facilitate more students to complete a foreign elective. The significantly higher average score to deterrent factors by students preferring UK-based electives highlights the importance that safety, finance, logistics and personal aspects play in discouraging students from undertaking foreign electives. Targeted talks, materials and mentorship can serve to quell unrequited worries.

Students eligible for WPP are typically from lower socio-economic backgrounds, giving rise to concerns regarding the specific barriers for these students. Students eligible for WPP were found to be 3-fold more likely to complete a UK-based foreign elective. This can be largely attributed to financial constraints as the average score given to the importance of financial barriers was significantly higher amongst WPP eligible students than others. WPP students often lack the resources to cover the costs of travel, accommodation, and living expenses abroad. Additionally, the complexity of organising international placements and scarcity of institutional support could further deter these students from pursuing international electives. Unequal access to international electives could exacerbate existing disparities in medical education, through missing out opportunities for holistic growth. However, despite the recognised benefits, there is insufficient support available specifically for financially constrained students. Potential solutions include the provision of targeted financial aid for international electives, comprehensive guidance and planning resources, and establishment of partnerships with international institutions to create more affordable opportunities.

A significant majority (76.7%) of respondents expressed a preference for completing their elective abroad, with East Asia (20%) and Oceania (18%) emerging as the most popular destinations. East Asia's rapidly advancing healthcare infrastructure and technology may be attractive to students as an opportunity to gain exposure to cutting-edge medical practices and innovations.²¹ Furthermore, the cultural immersion and vastly different healthcare system can provide valuable learning experiences, particularly in areas like infectious diseases and public health.²² Oceania appeals to students interested in environmental health and indigenous health care, as well as those seeking experience in rural and remote medicine.²³ Students who completed electives in Oceania reported significant gains in their understanding of global health issues and a greater appreciation for the social determinants of health.^{24,25}

The Middle East remains the least popular destination, chosen by only 4% of students. Concerns regarding safety may be the underlying cause. In our study, safety has emerged as the most important factor deterring students from undertaking a foreign elective, receiving an average score of 3.99/5, and being scored 5/5 for importance by 38.8% of

respondents. Perceptions of political instability, regional conflicts, and cultural differences, alongside limited awareness of healthcare systems and institutional partnerships may contribute to the low appeal of the Middle East.²⁶ Addressing these concerns through improved communication, safety assurances, and fostering collaborations could enhance its attractiveness as an elective destination.

The feedback from our elective planning event highlights the value students place on practical knowledge and peer support, with most respondents reporting excellent confidence in planning their elective and a good understanding of the logistical and cultural aspects involved post the event. The present feedback is consistent with previously reported evidence that structured preparation (including cultural competency training, language courses, and logistical planning) significantly enhances the educational outcomes of international electives. Students who receive comprehensive pre-departure training are more likely to have positive experiences and report higher levels of satisfaction with their electives. Additionally, such training mitigates the risks of cultural misunderstandings and logistical challenges, allowing adequate focus on clinical and professional development. In this context, access to experienced mentors helps students to navigate foreign healthcare systems and to enhance the learning experience. Furthermore, mentorship contributes to students' personal growth by providing them with role models who embody professionalism and ethical practice in diverse cultural settings.²⁷

The average rating for institutional support by students was 1.95/5, with over 70% of students rating the support as 1 or 2 out of 5. This indicates a concerning lack of resources, support and guidance provided to students in planning international electives. Also, students' knowledge and understanding of factors related to planning their electives such as support available, university mandated requirements and travel essentials, was low across all domains. We found a significant positive correlation between the scores for available support and levels of student understanding and knowledge. This finding strongly indicates that improving support, resources and mentorship at the university level can enhance students' confidence in planning foreign electives. Furthermore, the significantly negative correlation between students' understanding and knowledge of elective related factors and their scoring of the importance of deterring factors suggests that many of the issues students regard as adverse could be mitigated by greater support from their medical schools.

In making decisions about allocating resources to supporting international electives, medical schools should consider that the integration of global health curricula and cultural competency training into medical education is crucial for preparing students for the challenges and opportunities of medical practice. Students who receive such training are better equipped to adapt to different cultural contexts and are more likely to have successful and meaningful elective experiences.^{28,29} Medical schools should prioritise these elements in their educational policies to ensure that all students, regardless of background, can access and benefit from international electives.

We accept that the present study is limited by the small sample size of 103 respondents, and FOI data only up to 2023, which limited our ability to assess post-COVID-19 trends. The event for recruiting participants was primarily aimed at helping students to plan foreign electives, which may have attracted a participant pool that was biased to foreign electives, leading to overestimation of the importance of motivating factors. We opted to primarily use close-ended questions and limited the number of controlling variables collected, such as WPP eligibility and the timeframe until students would undertake their elective, to maximise survey participation and minimise respondent burden. However, this approach restricted the opportunity for deeper exploration of other perceived barriers or motivations related to undertaking a foreign elective, such as ethical considerations or more specific, individualised concerns. Collecting additional data—such as individual students' financial status, visa requirements, and specific connections to countries or hospitals—could provide a more comprehensive understanding of the factors that motivate or hinder participation in foreign electives.

We are now contemplating further research, using data beyond 2023, to assess the long-term impacts of the pandemic on medical student mobility. A mixed-methods approach with surveys and interviews may provide deeper insights into students' experiences. Additional research on the effectiveness of specific support methods about planning foreign electives and the long-term career impacts of international electives, especially for WPP students, would be valuable. Our understanding of the value and long-term benefits of international electives may also be advanced by retrospective survey of the experiences of qualified doctors with specialist interests, including research and extra-clinical activities. Such studies may incentivise medical schools to strengthen support structures and provide direction on successful support structures.

Conclusion

Our study highlights the motivations, preferences, and challenges of UK medical students pursuing international electives and was able to fulfil all its objectives initially stated. To promote global engagement and equip students with essential skills, medical schools should align elective planning with students' goals for clinical and personal growth while directly engaging them in the process to ensure diverse clinical exposure and personal development. Addressing declining participation and support gaps worsened by COVID-19 is critical, as is applying innovative models to overcome financial, logistical, and institutional barriers that hinder access to international electives. By leveraging data to create inclusive policies, medical schools can expand participation in foreign electives in the post-pandemic context. Additionally, strengthening institutional support—through financial aid, logistical guidance, and mentorship—will ensure equitable access, particularly for underrepresented students. These efforts will not only enhance the impact of international electives but also foster a more inclusive and globally competent generation of medical professionals.

Disclosure

The authors report no conflicts of interest in this work.

References

- 1. Holmes D, Zayas LE, Koyfman A. Student objectives and learning experiences in a global health elective. *J Community Health*. 2012;37 (5):927–934. doi:10.1007/s10900-012-9547-y
- Arps S, Noviski KM, Tucker L, Tutwiler A. Medical students' motivations for participating in an elective focused on social inequalities and health disparities. Adv Health Sci Educ. 2024;29(1):1–26. doi:10.1007/s10459-024-10320-8
- 3. Hayashi M, Son D, Nanishi K, Eto M. Long-term contribution of international electives for medical students to professional identity formation: a qualitative study. *BMJ Open*. 2020;10(8):e039944. doi:10.1136/bmjopen-2020-039944
- 4. Harmer A, Lee K, Petty N. Global health education in the United Kingdom: a review of university undergraduate and postgraduate programmes and courses. *Public Health*. 2015;129(6):797–809. doi:10.1016/j.puhe.2014.12.015
- Arja SB, Arja SB, Ponnusamy K, Kottath Veetil P, Paramban S, Laungani YC. Medical education electives can promote teaching and research interests among medical students. Adv Med Educ Pract. 2024; Volume 15:173–180. doi:10.2147/AMEP.S453964
- 6. Liljedahl M, Björck E, Ponzer S, Bolander Laksov K. Navigating without a map: how medical students interact with clinical learning environments. Stud Higher Educ. 2019;44(2):275–286. doi:10.1080/03075079.2017.1359822
- 7. Rahim A, Knights F, Fyfe M, Alagarajah J, Baraitser P. Preparing students for the ethical challenges on international health electives: a systematic review of the literature on educational interventions. *Med Teach*. 2016;38(9):911–920. doi:10.3109/0142159X.2015.1132832
- 8. Byrnes YM, Civantos AM, Go BC, McWilliams TL, Rajasekaran K. Effect of the COVID-19 pandemic on medical student career perceptions: a national survey study. *Med Educ Online*. 2020;25(1):1798088. doi:10.1080/10872981.2020.1798088
- 9. Storz MA. International medical electives during and after the COVID-19 pandemic-current state and future scenarios: a narrative review. Globalization Health. 2022;18(1):44. doi:10.1186/s12992-022-00838-0
- 10. Hall L, Binks S, Heal C. The effect of COVID-19 on medical student clinical skill practice and self-perceived proficiency. *MedEdPublish*. 2023;13:10. doi:10.12688/mep.19478.2
- 11. McKinnon T, Watson A, Richards L, Sears J, Brookes MJ, Green CA. The volunteers in research programme: supporting COVID-19 research and improving medical training in parallel. *Clin Med.* 2021;21(3):182. doi:10.7861/clinmed.2020-1072
- 12. Cherniak WA, Drain PK, Brewer TF. Educational objectives for international medical electives: a literature review. *Acad Med.* 2013;88 (11):1778–1781. doi:10.1097/ACM.0b013e3182a6a7ce
- 13. Wiskin C, Barrett M, Fruhstorfer B, Schmid ML. compiled on behalf of the MSC UK Electives Committee. Recommendations for undergraduate medical electives: a UK consensus statement. *Medical Education*. 2018;52(1):14–23. doi:10.1111/medu.13445
- Collaborative IU. Global health education in medical schools (GHEMS): a national, collaborative study of medical curricula. BMC Med Educ. 2020;20:389.
- 15. Yıldırım S, Bostancı SH, Yıldırım DÇ, Erdoğan F. Rethinking mobility of international university students during COVID-19 pandemic. *Higher Educ Evaluation Develop*. 2021;15(2):98–113. doi:10.1108/HEED-01-2021-0014
- Walters M, Alonge T, Zeller M. Impact of COVID-19 on medical education: perspectives from students. Acad Med. 2022;97(3S):S40–8. doi:10.1097/ACM.0000000000004525
- 17. Watson DA, Cooling N, Woolley IJ. Healthy, safe and effective international medical student electives: a systematic review and recommendations for program coordinators. *Tropical Dis Travel Med Vaccines*. 2019;5(1):1–4. doi:10.1186/s40794-019-0081-0
- 18. Sartania N, Alldridge L, Ray C. Barriers to access, transition and progression of Widening Participation students in UK Medical Schools: the students' perspective. *MedEdPublish*. 2021;10(1). doi:10.15694/mep.2021.000132.1
- 19. Harrison N, Davies S, Harris R, Waller R. Access, participation and capabilities: theorising the contribution of university bursaries to students' well-being, flourishing and success. *Cambridge J Educat*. 2018;48(6):677–695.
- 20. Krstić C, Krstić L, Tulloch A, Agius S, Warren A, Doody GA. The experience of widening participation students in undergraduate medical education in the UK: a qualitative systematic review. *Med Teach*. 2021;43(9):1044–1053. doi:10.1080/0142159X.2021.1908976
- 21. Hasebe K, Tamai A, Yamada S, Maskarinec GG. Trends of international electives in medical education undergraduates in Japan. *Hawaii J Health Soc Welfare*. 2022;81(10):279.

- 22. Peluso MJ, Rodman A, Mata DA, Kellett AT, van Schalkwyk S, Rohrbaugh RM. A comparison of the expectations and experiences of medical students from high-, middle-, and low-income countries participating in global health clinical electives. *Teaching Learning Med.* 2018;30(1):45–56. doi:10.1080/10401334.2017.1347510
- 23. Liu Y, Zhang Y, Liu Z, Wang J. Gaps in studies of global health education: an empirical literature review. *Global Health Action*. 2015;8(1):25709. doi:10.3402/gha.v8.25709
- 24. James Imperato P. A third world international health elective for US medical students: the 25-year experience of the state university of New York, Downstate Medical Center. *J Community Health*. 2004;29(5):337–373. doi:10.1023/B:JOHE.000038652.65641.0d
- 25. Withers M, Press D, Wipfli H, et al. Training the next generation of global health experts: experiences and recommendations from pacific rim universities. *Globalization Health*. 2016;12(1):1–7. doi:10.1186/s12992-016-0162-z
- 26. St Clair NE, Pitt MB, Bakeera-Kitaka S, et al. Global health: preparation for working in resource-limited settings. *Pediatrics*. 2017;140(5): e20163783. doi:10.1542/peds.2016-3783
- 27. Smith JK, Weaver DB. Capturing medical students' idealism. Anna Family Med. 2006;4(suppl 1):S32-7. doi:10.1370/afm.543
- 28. Battat R, Seidman G, Chadi N, et al. Global health competencies and approaches in medical education: a literature review. *BMC Med Educ*. 2010;10(1):1–7. doi:10.1186/1472-6920-10-94
- 29. Mews C, Schuster S, Vajda C, et al. Cultural competence and global health: perspectives for medical education—Position paper of the GMA committee on cultural competence and global health. GMS J Med Educ. 2018;35(3). doi:10.3205/zma001174

Advances in Medical Education and Practice

Publish your work in this journal



Advances in Medical Education and Practice is an international, peer-reviewed, open access journal that aims to present and publish research on Medical Education covering medical, dental, nursing and allied health care professional education. The journal covers undergraduate education, postgraduate training and continuing medical education including emerging trends and innovative models linking education, research, and health care services. The manuscript management system is completely online and includes a very quick and fair peer-review system. Visit http://www.dovepress.com/testimonials.php to read real quotes from published authors.

Submit your manuscript here: http://www.dovepress.com/advances-in-medical-education-and-practice-journal