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Challenges Facing International Medical Graduate Trainees in General Practice and Solutions Founded on Educational Praxis: A Case Study

Abstract

Objectives

Primary care in the United Kingdom is delivered through the National Health Service medical workforce comprising 25% international medical graduates. This study explored the challenges experienced by international participants as they progressed through specialty training in General Practice and sought solutions to those challenges through the lens of applied educational theory, or 'praxis'.

Methods

The case-based methodology was founded on a qualitative paradigm and postpositivist theoretical framework. Data were collected from international medical graduates and General Practice Trainers via focus groups, on-line questionnaire and semi-structured interviews. A strategy of convergence of evidence underpinned thematic data analysis, triangulating data to construct theory through cycles of continuous iteration.

Findings

Challenges relating to difference, relationships, conceptual understanding and expertise, practical barriers, wellbeing and risk were countered by applied metacognition, emotional intelligence, resilience and curiosity. Trainees passivity confounded these solutions.

Conclusions

The considerable challenges encountered by participants, not all comprehended before commencement of training, were compounded by poor conceptual understanding of the NHS and primary care and impacted on educational progression and wellbeing. Strategies centred on the application of metacognition and applied curiosity. These findings have considerable potential for training programmes and policy makers with respect to trainee orientation and workforce development.

Keywords
IMGs, Primary care; National Health Service, applied metacognition; curiosity

Stuart Anthony Holloway MA, MB BChir, MMEd, FRCGP, FAcadMEd, Linda Jones EdD, BASS MAH&PE EdD, (International) SFHEA
University of Dundee

saholloway@nhs.net

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U of Hertfordshire, UK
Subodh Dave,
U of Bolton, UK
Kamal Sidhu, GP,
Health Education England, Leicester, UK

Introduction

The register of doctors working in the United Kingdom (UK) is maintained by the General Medical Council (General Medical Council (GMC) [1]. The UK medical register comprises about 25% international medical graduates (IMGs) [2], a figure comparable to other western countries. Given the importance of IMGs to the UK workforce, this UK study aimed to explore the challenges facing IMGs entering General Practice (GP) Specialty Training across a six-county deanery, and solutions to those challenges.

The GMC defines an international medical graduate as a doctor who is ''a national of a country outside the UK, European Economic Area (EEA) or Switzerland and graduated from a medical

school outside of the UK'', or a doctor who is ''a UK national who has graduated from a medical school outside the UK, EEA or Switzerland'' [3]. Questions arise about the inherent benefits and risks of doctors migrating to western countries and Australia [4]. Coupled with ''pull factors'' such as recruitment and financial incentives, the unmet needs of physicians in their home countries may lead to ''brain push'' [5]. Moreover, doctors migrate abroad to improve their circumstances, resulting in ''brain drain'' from the country concerned [6][7]. If challenges facing IMGs are not identified and resolved, the UK may fail to mitigate the workforce shortage it faces and there may be deleterious outcomes for individual IMGs seeking work in this country.

Hashim (2017) reported a dearth of literature in the UK appertaining to challenges faced by IMGs. Whilst the extent of problems specifically in UK primary care is uncertain, international research suggests IMGs face a range of difficulties[2]. For example, significant demands are placed on IMGs to obtain immigration certification. Notwithstanding the employment opportunities available, the success rate for IMGs entering the USA remains low [8] corresponding with the 76% pass rate for the PLAB examination required for entry into the UK [9].

Whilst many challenges are cited internationally, so too are solutions. The term 'acculturation' [10,11], which indicates a period of adaptation to the host country, has been proposed as a solution. However, acculturation is also perceived as a difficulty in terms of IMG psychological wellbeing [12]. Cultural adaptation may induce psychological strain [13] and considerable stress may be apparent in foreign doctors [14]. Perhaps a solution lies in what will be coined here as 'reciprocal acculturation', placing a responsibility on patients to develop their understanding and to adapt to the cultures of those who assist them.

A further solution starts with the premise that acculturation demands that an individual maintains a degree of curiosity about their new environment. As a human trait, curiosity is afforded the status of omnipotence by authors on the subject [15,16] but in our experience, curiosity is discussed rarely, if ever, in the educational arena. Assessment-driven learning may not convey the deep understanding offered by curiosity-driven learning, and it is conceivable that IMGs might benefit from the latter approach.

Whilst many of the challenges facing IMGs are predictable, the extent of the challenges in UK postgraduate primary care and solutions thereof has not been determined. This UK-based study presented the opportunity to resolve this knowledge gap and to raise educator and political awareness of the nature of challenges and solutions within the context of a national health and primary care service peculiar to the UK.

Therefore, we asked the following research questions:
1. What challenges do international medical graduates experience with respect to undertaking specialty training in General Practice in the East Midlands?
2. How do IMGs perceive that such challenges might be solved?
3. Do IMGs employ strategies suggestive of curiosity to solve any challenges they face with respect to undertaking specialty training in General Practice in the East Midlands?

Method

The study followed a postpositivist theoretical framework, employing a qualitative case study methodology, commonly used to document and analyse implementation processes. Predicated on a philosophical understanding of the relationship between reality and context, thereby recognising the construction of knowledge and interpretation thereof by researcher and IMGs, the case study design embodied a 'relativist-constructivist / interpretive' paradigm. [17] The case was bound in terms of its participants, six-county geographical footprint, 2018-19 timeframe and educational context, aligning with a 'single-case (holistic)' study design described by Yin [18].

Ethics approval was received from the University of Dundee, authorisation from Health Education England and we followed British Educational Research Association guidelines (British Educational Research Association, 2018).
The inductive approach was designed to draw themes out of data [19–21]. Given the researcher's position as an 'insider', [22] a reflexive approach served to mitigate the risk of bias with the employment of memo-writing, diagramming, member-checking and research journal. Commensurate with case study theory the post-positivist approach reflected the inductive nature of grounded theory [23] and naturalistic enquiry [24] juxtaposed with pragmatism [25,26].

Criteria

Participants were IMGs and GP Trainers recruited by an overlying strategy of purposeful sampling to establish a breadth and depth of data. Participants were invited by the electronic distribution of a pre-contact introductory letter. All participants received a participant information sheet and provided informed consent, or tacit consent in the questionnaire phase.

A mixed methods approach was utilized, employing three methods of data sampling to enhance methodological rigour.

- In Phase 1, separate GP Trainer and IMG focus groups permitted homogeneity, reducing the risk of unfavourable power dynamics. The two focus groups followed a discussion guide and questions were designed to explore the experience of participants relating to the challenges facing IMGs and solutions to these challenges. The number of focus groups was dictated by the need for homogeneity, the number of volunteers and appropriate group size. Moderation and audiotaping were undertaken by the lead researcher.
- Phase 2 of data collection involved an on-line questionnaire using open-ended questions and targeted towards IMGs across the region. An iterative approach to question design was used to develop the trial questionnaire as themes emerged from Phase 1. Four IMGs and three trainers sampled purposively trialled the questionnaire which was piloted by two IMGs similarly sampled. Confirming with Health Education England East Midlands that it was not possible to target IMGs as a discrete group obligated distribution to all GP trainees across the six counties. However, clear instructions were provided to complete the questionnaire only if the trainee was an IMG, for which a definition was provided. Reflexively accepting that this introduced a risk of non-IMG responders, demographic data were requested in terms of country of medical school to confirm status and to ensure rigour.
- Phase 3 of data collection involved semi-structured interviews. Snowball sampling enhanced participant numbers when participant engagement proved difficult and sampling proceeded to theoretical saturation, defined by the point at which no new theoretical insights were determined from the data. Interviews were conducted in a private setting and facilitated by a 'topic guide'. Topic guide questions were developed iteratively from the themes established in Phase 2 and trialled by three IMGs and two GPs sampled purposively. The interview was facilitated through the use of 'prompts' to direct responses towards the interview questions, and 'probes', or additional questions, to develop responses. Suggestions for prompts and probes were provided in the topic guide.
- Thematic analysis, informed by grounded theory was undertaken inductively to generate themes and secondary themes from which theory could be generated. A strategy of 'convergence of evidence' underpinned data analysis, triangulating data from the three collection methods to construct themes and theory through cycles of continuous iteration.
- Pilot data, which contained useful information, were included in the analysis. Conducted by the lead researcher and reviewed by the second researcher, coding followed open, axial and selective phases. Codes were reviewed using the 'constant comparative method'. The benefits of using computerised software to assist with coding were considered. However, manual coding was employed given the reported limitations of using such software, including the indeterminate computerised analyses and unsophisticated evaluations generated.

Findings

Participants included 12 IMGs and 4 GP trainers in Phase 1; 28 IMGs in Phase 2 and 5 IMGs in Phase 3 from six counties (Table 1). Countries represented included: Bangladesh, Egypt, India, Libya, Nigeria, Pakistan, Philippines and Saudi Arabia. Three IMG focus group volunteers were excluded following verification that they were not IMGs. Two questionnaire responses were excluded due to duplication of responses / UK primary medical degree.

Research question 1 (challenges)

Six challenge themes were derived from the data (Table 2).

Themes	Illustrative Data
Experience of difference	***Experience of difference*** *'We are learning new culture, we are learning new system, we are learning new everything.'* (IMGB) ***Challenges*** *'I think there is a lot of challenging and to be honest it is not GP training only, it is all specialties'* (IMGG) ***Culture and communication*** *'The main challenge is actually, I would say, to put it frankly, is a cultural difference, language barrier…'* (IMGG) ***Linguistics***

	'...if a patient told you he was sick in XXXX that would mean the patient erm, wanted an admission...Whereas here if the patient was saying he was sick that would mean they have nausea or vomiting. (IMGSSI15) ***Situational withdrawal and abandonment*** *'…again sometimes a sort of cultural barrier; it was a feeling people do things differently than I do...so I sort of, for instance, even if it was just erm cracking jokes and I sort of felt that it wasn't really appropriate to me I sort of withdraw mostly, keep quiet you know, and not sort of participate…'* (IMGSSI2) ***Leaving behind loved ones*** *'I think there has a background of leaving extended families behind, memories and other things back home…'* (IMGG) ***Isolation*** *'There is no-one else going to come to help me. It's just me.'* (IMGK)
Dysfunctional Relationships	***Communication*** *'…there isn't that negotiation in consultation…'* (TRC) ***Power imbalance*** *'I did not realised that I will be bullied because I did not know... It was hard...'* (IMGQ6) ***Discrimination*** *'I've had a trainee who, who has an accent and that was directly commented on by other professionals…'* (TRB) ***Hierarchical challenge*** *'I also never thought there would be individuals trying to intimidate or threaten a junior doctor into compliance with their wishes.'* (IMGQ28) ***Reversal of challenge*** *'…he was erm, erm, Iranian and erm, older than me and there was a slight issue with him taking direction from me as a female…'* (TRA) ***Examination failure*** *'…there are so many who fails in CSA exams. Who fail them? It's the IMG doctors isn't it? And what's the reason? It is because, is there any discrimination…'* (IMGI) ***Loss of confidence*** *'…sometimes the supervisor will tell you as well, 'You need to do well because you are an IMG', and that dropped the confidence.'* (IMGI)
Impaired Conceptual Understanding and Expertise	***Limited understanding of the NHS*** *'I did not know how NHS works.'* (IMGQ6) *'I did not realised that doctors in the UK rotate all the time.'* (IMGQ6) ***Lack of Expertise*** *'I had to work hard to improve my communication skills and soft skills…'* (IMGQ5) ***Prior Perception of Achievement*** *'…we are all very good back home, that's why we get into very hard entrance exam…'* (IMGA) ***Further difficulty*** *'Not very supportive supervisor... Because of this I struggled a lot and it affected my, erm, my confidence'* (IMGI) ***Trainee level*** *'Why did you do that? Why didn't you come in and ask me?'* (TRC) ***Trainer level*** *'…he said, 'Mmm, do you know some of these CbD tickets, you know when I receive them on my e-mail they make me want to self-harm.'* (IMGL) ***National level*** *'…when I went for the PLABs I failed 4 times and the GMC,…they told me to study from, from err, from medical journals (general laughter), seriously, exact words…' (*IMGL)
Practical Barriers	***Understanding of process*** *'…we were quite confused whether we had to take up medicine or GP… when we fixed it to GP we didn't know what the next step was…'* (IMGA) *'…we don't know what they find difficult, you know, you encounter difficulties but you then go, '...I'd never imagine that that would have been difficult!'* (TRC) *'Initially trying to access management guidelines'* (IMGQ2) *'I was unaware of the process of application for training in General Practice.'* (IMGQ9) ***Isolation*** *'…it may be actually that they're in the UK on their own and their family is in their, sort of country of origin or even somewhere else, erm, and actually the pressures that that puts on them so not only are they sort of a fish out of water but actually they are doing that without the personal support of their, sort of family and close friends…'* (TRC)
Compromised Wellbeing	***Poor self-awareness***

	'…when I was asked during interviews what grade I had, I did not know what to answer. I did not know who are SHO, SpR, Reg, CT1, ST1…' (IMGQ6) ***Psychological difficulties*** *'I found that it was a stressful journey and failing in any of those steps will end up in wasting 6 more months and cost extra…'* (IMGQ13) ***Serious psychological impact*** *'People who becomes isolated and they dip in their mood and I think it's not only because of the work environment and because of the different culture…'* (IMGG) *'The one's that cope by becoming more isolated. That go into struggle with their mood and become depressed. Err, I don't know if anyone taking it further by committing suicide.'* (IMGH)
Balanced Risk	***Concern about misinterpretation*** *'…you sometimes feel you have to raise things quite carefully erm, which I think is, is a shame…'* (TRD) *'Yeh. I think I try to be as careful as possible…'* (TRB) ***Risk of being misunderstood*** *'…I think maybe there's the risk of being embarrassed or may be misinterpreted that we're asking questions. Rather than trying to be supportive and interested, you know, it may be viewed as being derogatory in some way…'* (TRD) ***Fear of statements being misconstrued*** *'It's not, it's not that we're saying (**emphasis**) that it's just that we're trying to understand that I think, yeh, that's my concern when I have this conversation with them.'* (TRA) ***Risk of precipitating dependency*** *'And then all of a sudden you are sort of in this situation where you are going. 'Oh my god! My registrar is almost living with me, because I've almost progressed this and now I'm slightly uncomfortable with it, but I can't pull back from that support…'* (TRA) ***Compromise*** *'…whilst it, you know, it's not our responsibility to sort that if there is nobody else that they can call on then I think if we ask the questions then we do have a little bit of responsibility to help try and help direct them…'* (TRA) ***Risk from withdrawing support*** *'…because actually that's another kick in the teeth that someone that's really struggling err, for someone to ask a question but actually sort of just go, 'Oh well!', err, and move on.'* (TRC)

1. Experience of difference.

Thematically, the 'Experience of difference' was apparent across every stage of data collection and appeared central to the personal realities of IMGs. When questioned about challenges faced by IMGs, one IMG provided a concise summary of the centrality of 'difference': '*We are learning new culture, we are learning new system, we are learning new everything'* (IMGB). Challenges relating to difference were extensive and an understanding of differences came late. Challenges embraced many areas such as culture, communication, social norms, perception of illness, prior education and career expectations, which in turn impacted on postgraduate education and clinical performance. Language itself was complicated by linguistic cues, nuance, the abstract, associated body language and differences in interpreted meaning, illustrated by, *'Back in XXXX we have our own,…idiomatic expressions…Lingua franca…but coming here to the UK they have theirs that you need to learn…'* (IMGSSI5). The personal reality of differences extended to the challenge of leaving behind loved ones. Consequently, the experience of difference and environmental change led to feelings of profound isolation.

2. Dysfunctional relationships.

Exemplified by the statement, *'Racial, social and challenges with colleagues who wouldn't respect you as one but define from the perspective of where you come from'* (IMGQ14), this theme relates to the interpersonal association between individuals and how relationships between IMGs and other individuals, employers, and the state are managed and controlled. IMGs openly described challenges relating to ineffective communication. An absence of meaningful professional discourse coupled with power imbalance and hierarchical challenge underpinned this theme. Perceived discriminatory practice within and outside the profession was demonstrated in such statements as: *'…some people would be so racist'* (IMGSSI3). Moreover, the dichotomy of hierarchy and informality in the UK proved challenging in the face of prior experience of hierarchical classification and formality of relationships abroad.

3. Impaired conceptual understanding and expertise.

Illustrated by *'…my background knowledge was zero when I started in GP training'* (IMGK) and *'I did not realised* [*sic*] *that doctors in the UK rotate all the time.'* (IMGQ6), this theme encompasses a breadth of associated challenges emanating from limited comprehension, including a lack of conceptual understanding of postgraduate education and the NHS: *'I did not know how NHS works'* (IMGQ6).

Fundamental educational concepts in postgraduate medical education such as self-directed learning, reflection, portfolio management and audit also proved problematic. Expertise challenges related to historical curriculum deficiencies, obstacles in patient management, inadequate expertise developed from prior experience and suboptimal assessment feedback. Ensuing difficulties appertaining to self-confidence, educational progression and assessment contrasted with prior perception of achievement.

4. Practical barriers.

Practical barriers were realised prior to commencement of GP training and continued throughout. Reflecting the inter-relatedness of current and former themes they included an *understanding* of process, exemplified by: *'…we were quite confused whether we had to take up medicine or GP…when we fixed it to GP we didn't know what the next step was…'* (IMGA). Practical barriers were experienced in the management of visas, childcare and personal finance: '*We then have to go back … for changing our visa to Tier 2 visa in order to come back for work…'* (IMGQ12) and *'Of course, you mentioned strain as well. We can't survive on NHS salary.'* (IMGG). Educational practicalities and temporal challenges such a UK culture of immediacy of healthcare provision also proved difficult. Such temporal restraints extended to travelling long distances with family within restricted time frames. The impact of this was considered again to be isolation, leading to the next theme of 'Compromised wellbeing'.

5. Compromised wellbeing.

This theme was derived from poor self-awareness, the expression of feelings and the psychological difficulties articulated by the IMGs. Adverse sentiments included fear, uncertainty, compulsion to change, lack of self-confidence, difficulty coping and feeling overwhelmed, accompanied by thoughts of resignation. Feelings that related to the previously cited subtheme of perceived discrimination were also expressed: *'A constant feeling of being a guest indebted to my host in form of patients'* (IMGQ21).

Trainers appeared aware of feelings of fear, inhibition, and a lack of self-confidence. Such feelings translated into a suggestion of serious psychological difficulty and compromised personal wellbeing: '*The one's that cope by becoming more isolated. That go into struggle with their mood and become depressed…I don't know if anyone taking it further by committing suicide.'* (IMGH).

6. Balanced risk.

This theme relates to the challenge of balancing the risk of intervention against that of failing to intervene. Concern was expressed about the risk of making IMGs feel uncomfortable, of being misunderstood by IMGs and of being perceived to make pejorative comments: *'…I think maybe there's the risk of being…misinterpreted…*' (TRD). Risk was perceived to extend to that of a registrar becoming dependent. However, the risk of withdrawing support was perceived as triggering further insult to registrar wellbeing.

Ultimately, solutions were recognised as a compromise between risk and benefit, not only for IMGs, but for trainers and the patient community. This presented a conceptual cycle of challenge, solutions that presented risk and consequential challenge: *'Rather than trying to be supportive and interested, you know, it may be viewed as being derogatory in some way…'* (TRD).

Research questions 2&3 (solutions).

Four solution themes were derived from the data (Table 3).

[Table 3

Themes	Illustrative Data
Application of Metacognition	***Preparing for training*** *'I'll have to do some, before joining GP…'* (IMGC) *'I think better be equipped beforehand, before coming to the GP training here…'* (IMGJ) ***Predicating perceived ability*** *'…I have seen many international medical graduates and the local graduates, and I really believe that I have seen the clinical examination skills of the international medical graduate is, is superior than the local ones…'* (IMGF) ***Engagement in learning about communication*** *'Communication skills is something that most of us are now consciously learning.'* (IMGB) ***Planning supervisory time*** *'…they need to get time with the consultant beforehand'* (IMGF) ***Adjusting thought processes*** *'She's like 'You know we are not used to thinking the way people think in this country,...so you've got to always take a step back and think not your own common sense but probably what other people do' and that helps I must say.'* (IMGSSI2) ***Deciding on focus*** *'…working hard or doing things twice, this is an approach but for me I don't have that piece of work basically. Instead of doing, for example probably 3 times, I focus on the quality…'* (IMGG)
Employment of Emotional Intelligence	***Personal reflection*** *'I think we flourish quite well actually.'* (IMGF) ***Faith*** *'...our religion also helps us cope with any challenge because you believe, you can pray, you can work hard. So I think that also helps.'* (IMGSSI1) ***Positive thinking*** *'…positive thinking and having a focus'* (IMGQ2) *'Staying focused on my job and rather than these negative thoughts…'* (IMG20)
Deployment of Curiosity	***Understanding information source*** *'I feel that first and foremost being that you are an international medical graduate, that sources of information, management information, would be critical…eventually I've come to realise that the CKS is the place to get information.'* (IMGH) ***Active information-gathering*** *'…onus is upon us to improve on that be that via watching videos or there are a lot of tools available out there.'* (IMGH) *'I think the idea is that the information is out there…'* (IMGH) ***Passive information-gathering*** *'…just bullet points, these are the services which you can refer to so that's if they can make a nice…'* (IMGK) *'…then I was told that you can get an assessment for dyslexia and actually they cope with these things.'* (IMGL)
Nurturing Resilience	***Adjustment with time*** *'I said it was difficult the first few months but I think it is something I have come to accept...'* (IMGSSI5) ***Character*** *'…they've got a lot of life lessons as well, erm, and all of these things kind of build that particular character…'* (TRD) ***Attitude*** *'…I agree with you in the sense that people flourish sometimes under pressure…'* (IMGH)

7. Application of metacognition.

Metacognition, the capacity to regulate thought processes through mechanisms such as analysis and reflection (Fletcher & Carruthers, 2012), was recognised as a mechanism by which registrars coped. Registrars demonstrated an ability to use higher order thinking skills to contextualise, strategize, reflect and conceptualise to resolve their difficulties: *'…trying to address these expected difficulties early on with problem-solving mindset.'* (IMGQ25). Metacognition was evidenced across a range of actions such as preparing for training in the UK, predicating perceived ability on experiential evidence, consciously engaging in learning about communication, planning supervisory time, adjusting thought processes and deciding on how to focus learning.

8. Employment of emotional intelligence.

Thematically the employment of emotional intelligence provided a further solution to the

challenges faced by IMGs. Emotional intelligence is that relating to the discernment and comprehension of emotion in self or others and acting on these positively. Emotional intelligence was seen to operate on an individual and a reciprocal basis. When questioned about finding solutions IMGH responded, *'If they had just looked back and picked up on one person and said ''I'll help this person, or I'll help this group of people'', we wouldn't be having this conversation today…'* (IMGH) suggesting a recognition of the benefits of a shared understanding and resolution of the problems faced by colleagues. The employment of emotional intelligence with respect to patients enabled information-gathering and engendering long-term relationships with patients was seen to anchor a registrar in familiar territory. IMGs demonstrated the use of emotional intelligence independent of the training system and they benefitted from reciprocal use of emotional intelligence by patients.

9. Deployment of curiosity.

The importance of seeking information and understanding its source was evident from the narratives. Registrars engaged in active (deliberate) and passive (neutral) information-gathering. This concept of gathering information was linked with that of a personal responsibility to learn but adopting responsibility was not uniform across IMGs.

IMGs put forward suggestions for mechanisms of information-gathering such as questioning, reading and use of technology. Moreover, registrars were curious to learn about their environment, for example, they discussed induction: *'I think having even a…few weeks of observership or attending sort of clinic…is important*' (IMGJ). Another remarked, '*…maybe it's good if…before we go to the GP training we are allowed to see what GP looks like'* (IMGI). Planning in this way suggested a relationship between curiosity and metacognition. In the presence of a learning need, strategizing led to enquiry and subsequent comprehension.

10. Nurturing resilience.

Resilience, which may have individual, external, genetic and biological influences, refers to coping in the presence of difficulty (Bowes, & Jaffee, 2013). It is related to elements of character, or individual traits, and attitude, related to cognitive and psychological responsivity. Trainers felt that IMGs demonstrated elements of innate resilience: *'…they are probably inherently adaptable people and prepared to put themselves out there'* (TRD). As a group, IMGs were perceived to be self-selected, self-motivated, innately flexible, diligent, determined, willing to accept assistance and to demonstrate existing resilience of character. Approaches towards developing resilience facilitated empowerment, a concept that was evident in the process of orientation and in the recognition of the value of difference: *'…I don't feel ashamed of saying, 'What does that word mean? I don't understand exactly. Can you explain it?'* (IMGSSI4).

Discussion

We addressed research questions appertaining to the challenges facing IMGs entering GP Speciality Training and solutions to those problems. We believe the thematic presentation of our results for challenges and solutions offers a schematic discourse for the first time in the UK that moves away from commonly cited cultural and language difficulties towards a broader classification of themes encompassing a multiplicity of subthemes. It is clear that these themes are not discrete, rather their interconnections form a conceptual chain that highlights the challenging journey of the international medical graduate in primary care training. These findings at postgraduate level add to those of Huhn et al. [27] in international undergraduate students and Sathaananthan and Jones (unpublished conference paper) in doctoral students.

The data suggest that IMGs face a conceptual challenge of experiencing difference. From a position of familiarity and experience in their home countries they face associated challenges of generating new relationships and countering perceived oppression in a system that presents practical barriers to success and about which they may have poor conceptual understanding. Inadequate expertise with which to cope with these challenges, occasioned by passivity and a lack of curiosity in the trainee and trainer, results in compromised wellbeing and consequential failure to progress in postgraduate education.

Emerging from the data is evidence that IMGs solve their difficulties by the employment of metacognition through which they might choose to enact curiosity, to employ and respond to emotional intelligence, and to develop strategies for building resilience. This process is enhanced by reciprocation by the professional and patient communities. Perhaps benefits are to be gained from promoting the development of curiosity and emotional intelligence?

Defined by Aristotle, the term 'praxis' recognises the application of theory to practice as the primary objective of learning [28]. Applying the lens of educational praxis to this interpretation of events it is possible to offer two theoretical propositions derived from our conceptual themes, that is to say, theory that might be applied practically.

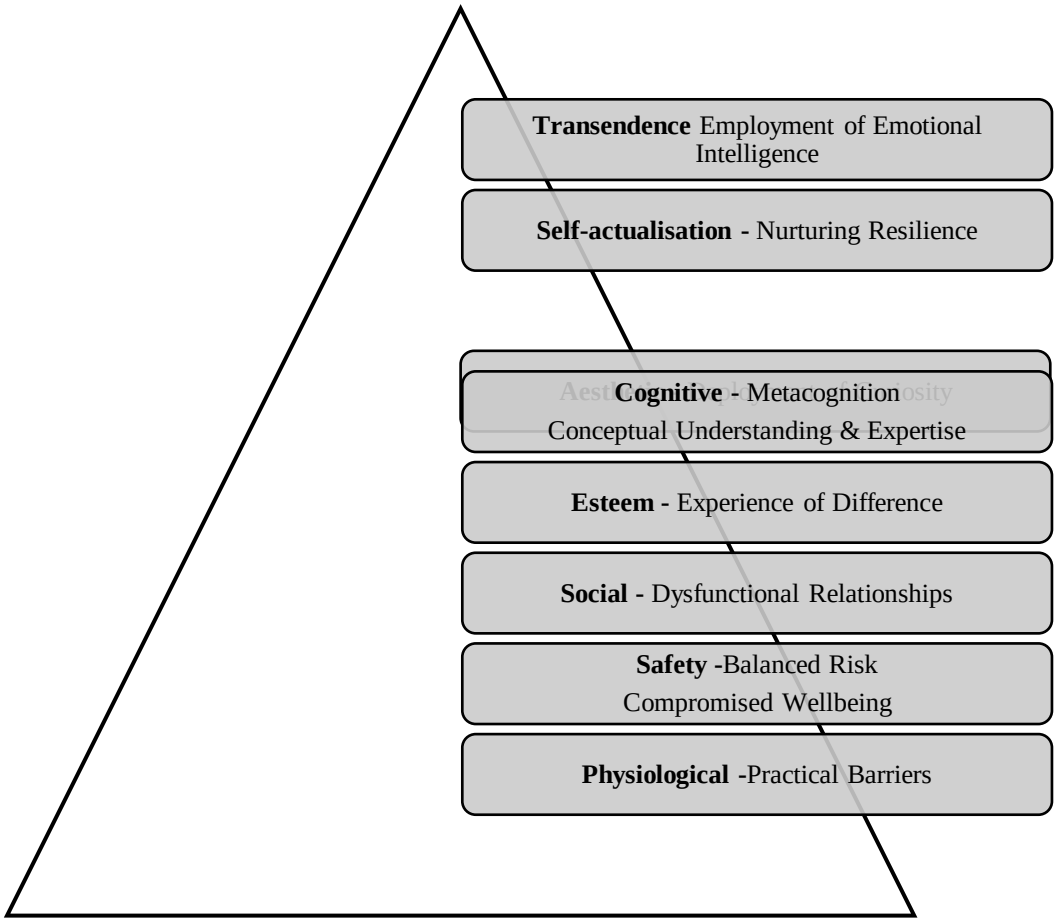

Figure 1: Adapted from Maslow's domains

Theoretical proposition 1: Cognitive Domain Theory

Maslow's 'Theory of Motivation' later adaptation [29] described the hierarchical realisation of the needs of an individual to assuage deprivation, and subsequent progress of the individual towards self-actualisation and transcendence as their basic needs are met. Through the lens of Cognitive Domain Theory the challenges faced by IMGs arguably run parallel to the levels of need defined in Maslow's hierarchy, up to and beyond the point of Cognition (Figure 1). The point of Cognition maps directly to both the conceptual challenge of 'impaired conceptual understanding and expertise' and the conceptual solution of 'application of metacognition' in the present study. Below this point it is IMGs' challenges that map to the hierarchy; above this level the solutions map to the hierarchy. Thus, 'practical barriers' are reflected in Maslow's 'physiological needs' and 'emotional intelligence' maps to Maslow's 'transcendence'.

> *Cognitive Domain Theory determines that IMGs must fulfil their needs up to the cognitive domain if they are to find the solutions ultimately required to achieve academic transcendence.*

If this is the case, how do IMGs attain the cognitive domain if they have not met their lower order needs?

Theoretical proposition 2: Metacognition-Curiosity Theory

We suggest that in the presence of an unresolved challenge the activation of metacognition stimulates curiosity which in turn feeds back to resolve deprivations at every level of the hierarchy. Csikszentmihalyi's (2014) description of Flow Theory in which the mastery of increasing challenge associated with emerging skills is facilitated by concentration, interest and enjoyment, aligns with this theory, since these three conditions relate conceptually to curiosity (Figure 2). However, we have found a difficulty: IMGs who employ a strategy of passivity to gathering information or fail to display curiosity may fail to achieve.

Therefore, consideration should be given towards enhancing the capacity of IMGs to employ metacognitive skills, thereby to initiate the active use of curiosity, to foster resilience and to promote conscious use of emotional intelligence.

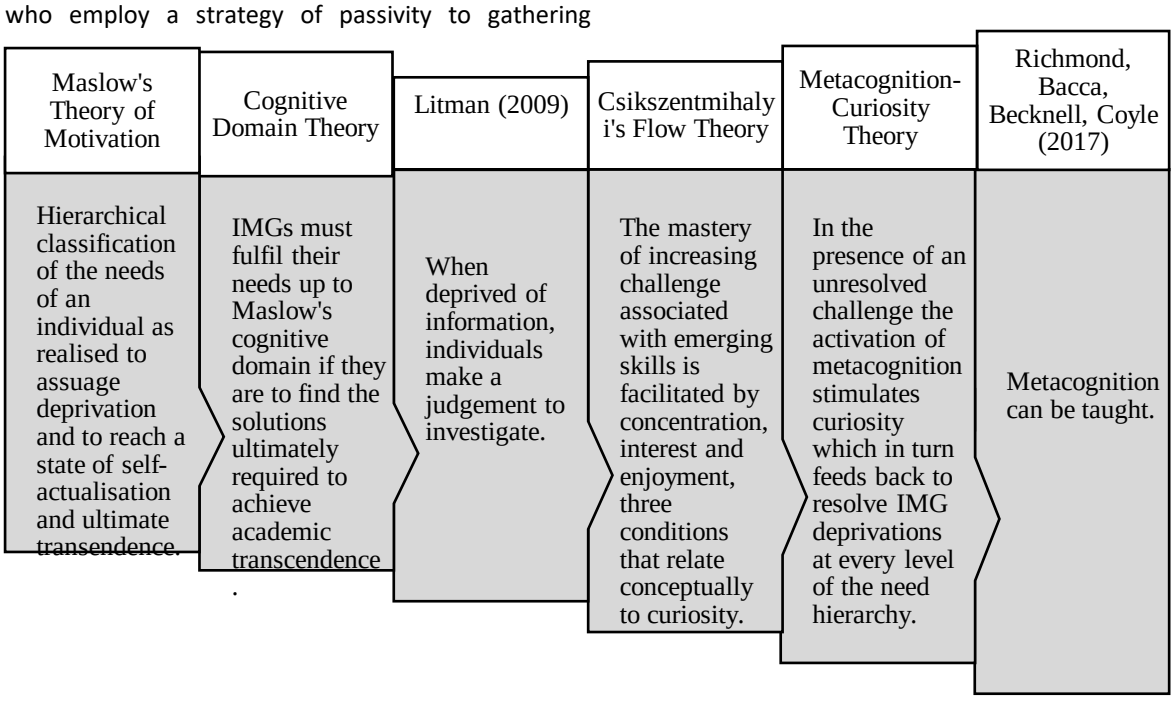

Figure 2. Integrating new theory with existing theory.

Consistent with the findings of the present study, is the proposition that the key mechanism to initiate curiosity is metacognition [30], and this, can be taught. If metacognition can be taught, educators have a theoretical means by which to facilitate the resolution of challenges experienced by IMGs. This study does not offer quantitative evidence to verify the significance of concepts outlined. However, this is counterbalanced by the depth of understanding achieved using case study methodology. The inherent risk of participation bias was reduced by sampling methods. Moreover, the range of participants provided a degree of construct validity with respect to the findings when the data were triangulated.

In terms of transferability, the question arises as to whether the findings could be applied in other contexts.

The case was bound by demographics relating to international medical graduates entering GP training. However, theory generated here may offer insight relevant to secondary care IMGs and UK medical graduates entering postgraduate training abroad. Moreover, despite limitations of sample size and context, theory derived from this study might resonate with Health Education England in the UK and educational authorities abroad where nations are dependent upon a foreign workforce, and thereby help to inform policy. The key message for educators, policy-makers and governments internationally is that investment in orienting IMGs to their new environments is crucial to their welfare and success. This process should include skilled coaching in the development of metacognitive skills.

Practice Points

1. Challenges faced by IMGs may be resolved through the application of educational praxis.
2. The application of educational praxis is exemplified in the metacognitive stimulation of curiosity.
3. Curiosity drives the application of emotional intelligence and development of strategies to promote resilience.
4. Training in metacognition is a priority for IMGs.

Notes on Contributors

Dr Stuart Anthony Holloway is Associate Postgraduate Dean and Training Programme Director in General Practice for Health Education England East Midlands, Fellow of the Royal College of General Practitioners and Fellow of the Academy of Medical Educators.

Dr Linda Jones is a senior lecturer at the Centre for Medical Education Dundee and a Senior Fellow HEA. Her roles at Dundee include leading research modules and her research interests lie in the fields of international education; acculturation of international students; creative pedagogies and Emotional Labour and Intelligence.

Glossary Terms

Reciprocal acculturation. The concept of placing responsibility on patients to develop their understanding of the cultures of those who assist them, and to adapt to those cultures.

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Declaration of interest

The authors report no declarations of interest.

References

1 The medical register. https://www.gmc-uk.org/registration-and-licensing/the-medical-register (accessed 21 May 2021).
2 Hashim A. Educational challenges faced by international medical graduates in the UK. *Adv Med Educ Pract* 2017;**8**:441–5. doi:10.2147/AMEP.S126859
3 Provisional registration for international medical graduates. https://www.gmc-uk.org/registration-and-licensing/join-the-register/registration-applications/application-guides/provisional-registration-for-international-medical-graduates (accessed 21 May 2021).
4 Gorman DF, Brooks PM. On solutions to the shortage of doctors in Australia and New Zealand. *Med J Aust* 2009;**190**:152–6. doi:10.5694/j.1326-5377.2009.tb02320.x
5 Jenkins R, Kydd R, Mullen P, *et al.* International Migration of Doctors, and Its Impact on Availability of Psychiatrists in Low and Middle Income Countries. *PLOS ONE* 2010;**5**:e9049. doi:10.1371/journal.pone.0009049
6 Gouda P, Kitt K, Evans DS, *et al.* Ireland's medical brain drain: migration intentions of Irish medical students. *Human Resources for Health* 2015;**13**:11. doi:10.1186/s12960-015-0003-9
7 Saeed F, Majeed MH, Kousar N. Easing International Medical Graduates' Entry Into US Training. *Journal of Graduate Medical Education* 2011;**3**:269–269. doi:10.4300/JGME-D-11-00002.1
8 Pinsky WW. The Importance of International Medical Graduates in the United States. *Ann Intern Med* 2017;**166**:840–1. doi:10.7326/M17-0505
9 Recent pass rates for PLAB 1 and PLAB 2. https://www.gmc-uk.org/registration-and-licensing/join-the-register/plab/recent-pass-rates-for-plab-1-and-plab-2 (accessed 21 May 2021).
10 Chan MO. International medical graduates: acculturation, repatriation and the third-culture kids of medicine. *Medical Education* 2015;**49**:850–1. doi:https://doi.org/10.1111/medu.12802
11 Huang A. Continuing Controversy Over the International Medical Graduate. *JAMA* 2000;**283**:1746. doi:10.1001/jama.283.13.1746-JMS0405-2-1
12 Majeed MH, Ali AA, Saeed F. International medical graduates: from brain drain to potential gain. *Int J Med Educ* 2017;**8**:37–8. doi:10.5116/ijme.5869.008a
13 Rivkin I, Johnson S, Lopez EDS, *et al.* Yup'ik Understanding of Stress Within the Context of Rapid Cultural Change. *Journal of Community Psychology* 2017;**45**:33–52. doi:https://doi.org/10.1002/jcop.21831
14 Hussein OM. Prevalance of Stress among International Post-graduate Doctors at the University Malaya Medical Centre (ummc), Kuala Lumpur. *Journal of Clinical and Diagnostic Research* 2012;**6**:4.
15 Ofer G, Durban J. Curiosity: Reflections on Its Nature and Functions. *APT* 1999;**53**:35–51. doi:10.1176/appi.psychotherapy.1999.53.1.35
16 Schattner A. Curiosity. Are you curious enough to read on? *J R Soc Med* 2015;**108**:160–4. doi:10.1177/0141076815585057
17 Boblin SL, Ireland S, Kirkpatrick H, *et al.* Using Stake's Qualitative Case Study Approach to Explore Implementation of Evidence-Based Practice. *Qual Health Res* 2013;**23**:1267–75. doi:10.1177/1049732313502128
18 yin_6e_chapter_1_getting_started.pdf. https://www.sagepub.com/sites/default/files/yin_6e_chapter_1_getting_started.pdf (accessed 6 Jun 2021).
19 O'Cathain A. Editorial: Mixed Methods Research in the Health Sciences: A Quiet Revolution. *Journal of Mixed Methods Research* 2009;**3**:3–6. doi:10.1177/1558689808326272
20 Bowling A. *Research methods in health: investigating health and health services*. 4th ed. Maidenhead, Berkshire, England: : Open University Press 2014. http://catalogue.library.ulster.ac.uk/items/1388886, http://www.dawsonera.com/depp/athens?url=http://www.dawsonera.com/depp/reader/protected/external/AbstractView/S9780335262755 (accessed 6 Jun 2021).
21 Cleland J. Exploring versus measuring: considering the fundamental differences between qualitative and quantitative research. In: *Researching Medical Education*. John Wiley & Sons, Ltd 2015. 1–14. doi:10.1002/9781118838983.ch1
22 Unluer S. Being an Insider Researcher While Conducting Case Study Research. *TQR* Published Online First: 20 January 2015. doi:10.46743/2160-3715/2012.1752
23 Corbin JM, Strauss A. Grounded theory research: Procedures, canons, and evaluative criteria. *Qual Sociol* 1990;**13**:3–21. doi:10.1007/BF00988593
24 Naturalistic Inquiry. SAGE Publications Ltd. 2021.https://uk.sagepub.com/en-gb/eur/naturalistic-inquiry/book842 (accessed 6 Jun 2021).
25 Checklists for improving rigour in qualitative research: a case of the tail wagging the dog? | The BMJ. https://www.bmj.com/content/322/7294/1115 (accessed 6 Jun 2021).
26 Denscombe M. The Good Research Guide (5th edition). https://www.academia.edu/2240154/The_Good_Research_Guide_5th_edition_ (accessed 6 Jun 2021).

27 Huhn D, Junne F, Zipfel S, *et al.* International medical students – a survey of perceived challenges and established support services at medical faculties. *GMS Z Med Ausbild* 2015;**32**:Doc9. doi:10.3205/zma000951
28 Cronen VE. Practical Theory, Practical Art, and the Pragmatic-Systemic Account of Inquiry. *Communication Theory* 2001;**11**:14–35. doi:10.1111/j.1468-2885.2001.tb00231.x
29 Mcleod S. Maslow's Hierarchy of Needs. Simply Psychology. 2020.https://www.simplypsychology.org/maslow.html (accessed 6 Jun 2021).
30 Litman J. Curiosity and metacognition. *Metacognition: New Research Developments* 2009;:105–16.

Table 1
Participants and exclusions, East Midlands, 2018-2019.

Focus group participants	
Group 1: International Medical Graduates - Country of Medical Degree	Numbers
Bangladesh	1
Egypt	2
India	2
Nigeria	2
Libya	1
Pakistan	2
Philippines	1
Saudi Arabia	1
Total participants	12
Exclusions	
Norway	1
UK	1
Germany	1
Self-exclusion due to distance	1
Total exclusions	4
Group 2: Trainers	
General Practice Trainer	3
General Practice Trainer and Programme Director	1
Total participants	4
Exclusions	
Total exclusions	0
Questionnaire survey participants	
International Medical Graduates - Country of Medical Degree	Numbers
Bangladesh	4
India	5
Nigeria	11
Pakistan	6
Russia	1
Saudi Arabia	1
Total participants	28
Exclusions	
Response duplication	1
Primary medical degree from the UK	1
Total exclusions	2
Semi-structured interview participants	Numbers
International Medical Graduates - Country of Medical Degree	
Nigeria	3
Philippines	1

Libya	1
Total participants	5
Exclusions	
Total exclusions	0