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Partnering to build surgical capacity in low-resource settings: a qualitative study of Canadian global surgeons

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ABSTRACT

Objectives This qualitative study aimed to explore the perspectives of Canadian global surgeons with experience developing surgical education partnerships with low- and middle-income countries (LMICs) for the purpose of identifying factors for success.

Design A purposive sample of leaders from global surgery programmes at Canadian Faculties of Medicine participated in virtual semi-structured interviews. A six-phase thematic analysis was performed using a constructivist lens on verbatim transcripts by three independent researchers. Key factors for success were thematically collated with constant comparison and inter-investigator triangulation in NVivo software until theoretical saturation was reached.

Participants Fifteen surgeons, representing 11 subspecialties at 6 Canadian academic institutions and a combined experience across 6 continents, were interviewed between January and June 2022.

Results Four facilitators for success of global surgery training programmes were identified, with a strong undertone of relationship-building permeating all subthemes: (1) facilitative skill sets and infrastructure, (2) longitudinal engagement, (3) local ownership and (4) interpersonal humility. Participants defined facilitative skill sets to include demonstrated surgical competence and facilitative infrastructure to include pre-existing local networks, language congruency, sustainable funding and support from external organisations. They perceived longitudinal engagement as spanning multiple trips, enabled by strong personal motivation and arrangements at their home institutions. Ownership of projects by local champions, including in research output, was noted as key to preventing brain drain and catalysing a ripple effect of surgical trainees. Finally, interviewees emphasised interpersonal humility as being crucial to decolonising the institution of global surgery with cultural competence, reflexivity and sustainability.

Conclusions The interviewed surgeons perceived strong cross-cultural relationships as fundamental to all other dimensions of success when working in low-resource capacity-building. While this study presents a comprehensive Canadian perspective informed by high-profile leadership in global surgery, a parallel study highlighting LMIC-partners' perspectives will be critical to a more complete understanding of programme success.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This is the first study that employs a qualitative approach to provide a comprehensive Canadian perspective on the surgeon-identified facilitators to success in establishing global surgery programmes.
⇒ A cross-Canadian methodology was employed and several high-profile, socially influential participants with decades of experience in the field were recruited.
⇒ Recruitment of participants and subsequent data analysis were continued until thematic saturation was reached, increasing confidence in our findings.
⇒ This study had no representation of the perspectives of any low-income and middle-income country partners.
⇒ Given the academic and administrative shift towards equity and diversity, there may have been a selection bias when recruiting surgeons from programme leadership, who may be predisposed towards prioritising cultural sensitivity and longer-term partnerships.

INTRODUCTION

Approximately 5 billion people around the world do not have access to safe and affordable surgical and anaesthetic care, with an additional 143 million surgical procedures required to meet this demand.[1 2] To address this deficit, the 2015 United Nations Sustainable Development Goal 3C advocates for increased retention of healthcare workers in low-income and middle-income countries (LMICs).[3] Specialist surgical workforce density—defined as including surgeons, anaesthesiologists and obstetricians—has also been adopted by both the WHO in its 100 Core Health Indicators, and the World Bank Group in their World Development Indicators.[4 5] Yet, a staggering 100-fold difference can still be seen in this indicator between higher-income countries (HIC), like Canada (36 per 100 000) and LMICs, like the Central African Republic (0.36 per 100 000).[6]

Many different projects in global surgery have subsequently emerged to tackle this gap in healthcare provision, despite the continuing lack of conceptual clarity on what it means to practice 'safe global surgery'.[7–9] Indeed, definitions of such have varied over the years, with one group framing it as 'the enterprise of providing improved and equitable surgical care to the world's population, with its core tenets as the issues of need, access and quality' and another author characterising it far more comprehensively as the 'area for study, research, practice, and advocacy that places priority on improving health outcomes and achieving health equity for all people worldwide who are affected by surgical conditions or have a need for surgical care'.[10 11] Yet, whereas the content of any singular global surgery project has varied, a systematic review of partnerships between North American and LMIC institutions found that over 81% of these projects included a surgical education component.[12] Other partnerships have included help with accreditation bodies, technology acquisition, research capacity, library access and human resource development.[13]

Such a focus on surgical education is prudent; it is well known that physicians tend to stay where they train. One American survey showed that 54.5% of residency graduates between 2007 and 2016 were still practicing in the same state, and a similar Canadian study showed that graduates of rural programmes from 1993 to 2002 were 4.56 times more likely to practice in such settings.[14–16] Research originating from LMICs has shown even greater promise, with one study following specialist surgical graduates from training programmes across eight countries in East, Central and Southern Africa finding retention rates of up to 100% with the expansion of local surgical training initiatives.[17] Establishing accredited fellowships in the cultural context of LMICs can therefore create self-renewing pools of local surgeons more likely to serve their respective regions, especially in countries with zero surgeons of a particular subspecialty.[18]

There remains limited consensus on the best way to design and implement surgical training partnerships. Thus, many projects face challenges of hampered sustainability, pseudo-colonial exploitation and unreliable funding models.[12 19] With significant heterogeneity in project design and outcomes hindering a quantitative meta-analysis, this project aims to use a qualitative approach to consolidate experiences from global surgeons across Canada to characterise key factors for success behind education-based surgical capacity-building efforts.

METHODS

Participant recruitment

We conducted a qualitative research project and reported it according to the Consolidated Criteria for Reporting Qualitative Research guidelines.[20] Our study was grounded in an interpretivist and constructivist theoretical framework.

A purposive sample of global surgery programmes at Canadian Faculties of Medicine was taken. Key informants were identified among the leadership of each programme with the express intent to select a breadth of experience across subspecialties and locations. Inclusion criteria included known experience helping establish surgical training programmes in LMICs. Out of 16 informants sent email correspondence for recruitment, 15 responded to partake in the study.

With their informed consent, participants engaged in a virtual semi-structured interview between January and June 2022. Interviews were conducted one-on-one by MUK, a male student in an MD/MSc programme, using an academic Zoom Account. A predetermined interview guide (online supplemental materials 1) was followed for each interview, developed via consensus between three researchers (MUK, LE and AS), one of whom (AS) has demonstrated experience in qualitative research.

Fourteen of the 15 interviewees did not know MUK prior to their interaction; however, MUK was briefed by LE and AS in ways to conduct an interview with those holding greater social influence. Interviews included short introductions, an explanation of the research purpose and elicitation of surgeons' experiences in global surgery. Constant comparison methods informed each subsequent interview, and no repeat interviews were performed. Field notes were not made. Lasting 30–60 min, interviews were audio recorded, transcribed verbatim and fully anonymised. Transcripts were not returned to participants for comment.

Data analysis

Three independent researchers (MUK, AM and MB) performed an initial thematic analysis on two transcripts each to derive a preliminary codebook in NVivo software via consensus. Two researchers (MUK and AM) used this codebook to perform a six-phase process of thematic qualitative analysis on all 15 transcripts, modifying the codebook as necessary. These phases included familiarisation with the data set, generation of initial codes, search for common themes, review of themes (with modification, if necessary), defining of themes and reporting of themes.[21] Coding discrepancies were iteratively resolved (MUK, AM and MB), and theoretical saturation was reached. Interviewees did not provide feedback on the findings.

Patient and public involvement

It was not appropriate or possible to involve patients or the public in the design, or conduct, or reporting, or dissemination plans of our research.

Researcher characteristics

All authors of this study believe that global health has been rooted in colonialism and missionary work. We believe in the need to transition away from these roots, moving towards sustainable, long-term and reciprocal partnerships.

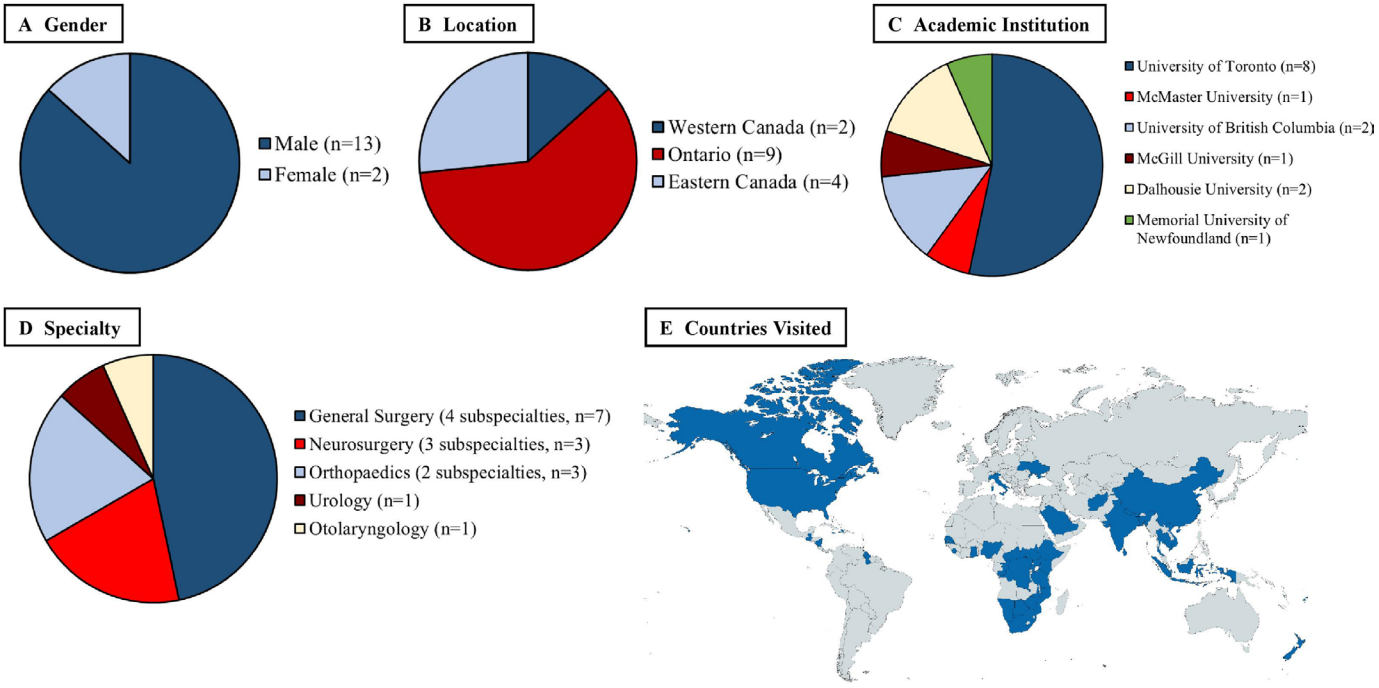

Figure 1 Interviewee demographics. There was representation across genders (A) and location (B). Informants were from 6 academic institutions (C), represented 11 surgical subspecialties (D) and had worked across 6 continents (E). Subspecialties were omitted to safeguard participant confidentiality.

MUK brought lived experience in an LMIC to the study, having interacted with organisations serving socioeconomically disadvantaged individuals at the intersection of power and oppression. AM and MB have significant qualitative research experience from their undergraduate (AM and MB) and graduate (MB) training with marginalised populations in the context of health promotion. LE is a global cardiac surgeon with experience establishing culturally sensitive fellowship programmes and communication systems. AS is a researcher who has led many mixed-method and qualitative health services research studies in low-resource settings to improve healthcare access and quality.

RESULTS

Fifteen Canadian surgeons were interviewed, 13 (86.7%) of whom were men. Surgeons were affiliated with 6 institutions across Canada, representing 11 surgical subspecialties and a collective experience across 6 continents (figure 1). Many held roles as Directors, co-Directors, or distinguished members of Global Surgery Offices. Others were Chairs of Surgery at their respective institutions. Some were either founders or board members of non-governmental organisations, humanitarian organisations or academic conferences, with one also being additionally involved in Canadian politics.

Interviews yielded a total of 616:32 min of content (range: 22:03–60:24). Participants identified four factors for success in building surgical education capacity in LMICs: (1) facilitative skill sets and infrastructure, (2) local ownership, (3) longitudinal engagement and (4) interpersonal humility. Relationship-building underlined all themes, as shown in the thematic structure of figure 2.

Theme 1—facilitative skill sets and infrastructure

Surgeons described that they, the surgeons interested in cultivating surgical training partnerships with LMICs, needed to be first proficient in their home environments as a precursor to meaningful engagement abroad. They noted that speaking local languages was inherently of benefit. They also described the importance of facilitative infrastructure for both the HIC surgeons and LMIC hosts during the initiation and early development of partnerships. Such infrastructure included strong pre-existing networks, sustainable funding and support from external institutions.

Demonstrated surgical competence

Interviewees highlighted the need for strong surgical skills and confidence in their scopes of practice, which allowed them to easily adapt to environments with limited resources.

> You have to be the best surgeon possible […] the credibility of a surgeon comes from their ability to do surgery. – P13

> If you're uncomfortable in your operating room here in your home hospital, you should not go anywhere else. You're way outside your comfort zone in these places; you don't have the detailed CT or MRI scan; you don't have the biomedical engineer to fix something that's broken. – P7

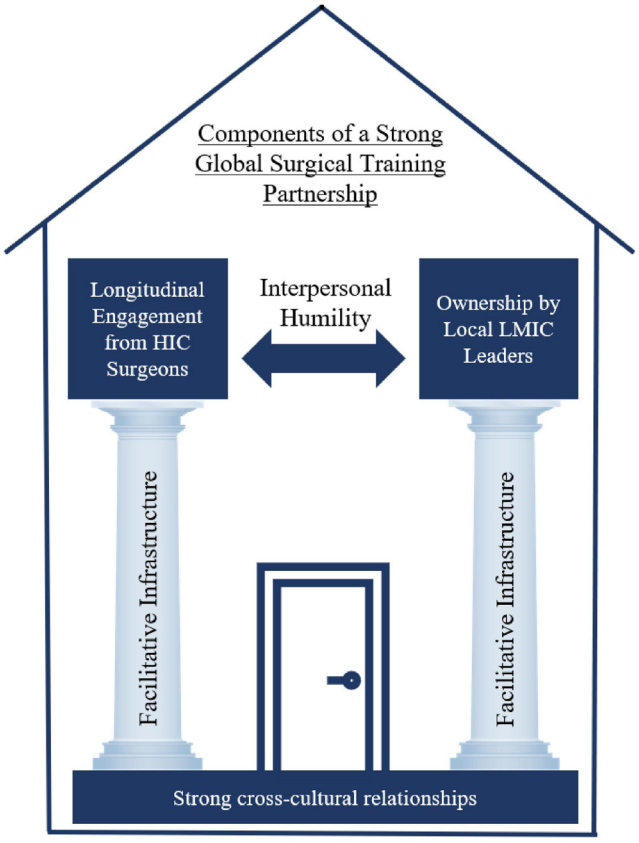

Figure 2 Thematic representation of factors for success. A strong global surgical education partnership requires a foundation of strong cross-cultural relationships. These relationships enable facilitative infrastructure that support both higher-income (HIC) surgeons, who are committed long-term and the low-income and middle-income partners (LMIC), who take ownership of the project. These two partners must then interact with interpersonal humility.

Interestingly, one participant described that the high degree of surgical acumen required of surgeons to engage with global partnerships left them vulnerable to exploitation from locals. Exploitation, as defined by this particular surgeon in this particular context, directly referred to the use of his expertise as an advertising tool to attract patients wanting surgery from a foreigner to, as this surgeon perceived it, only make money for local institutions. However, it would also not be unreasonable to assume that a local hospital would want, from a humanitarian perspective, to have as many patients operated on as possible while the surgeon is there, even if they may also financially benefit from it as a result.

> One of the places I was going to, and I went there more than once, they were using me […] you have to be very, very wary of that exploitation of the expert. They were making a lot of money off me! – P1

Language congruency

Participants explored the various facilitative roles that language congruency between HIC and LMIC partners can play in supporting relationship building and furthering project objectives. For many, speaking the language of an LMIC influenced their participation in projects from the outset.

> I'm French speaking, so they always specifically deploy me to French-speaking countries, so it's easier to communicate with local providers. – P4

> One of my good partners […], she speaks fluent [local language], and one of the very first steps for us was for her to go over on a reconnaissance mission to [LMIC] to identify those hospitals that seemed interested in partnering with us. – P12

Without language congruency, participants risked breakdown in communication, from partnership building to practical performance in the operating room.

> You can imagine in the operating room, you have to understand each other like implicitly, or else a disaster could occur! […] We were always certain to ensure that we had interpretation or interpreter services available for us within the country. – P12

Pre-existing networks

Interviewees described the benefit of initiating one's experience in global surgery by partnering with those already completing prior work as 'there are enough things going on in enough different places' (P7). These pre-existing networks provide frameworks for current projects and inspire future work.

> If I had to just out of the blue say, hey I'm going to organize a team to go to [LMIC], it would have been a wasted trip […] [and] a blind foray into trying to find something to do down there, which I think a lot of well-meaning people attempt to do. It's probably not as effective a use of time and resources as if you could partner with someone who's already kind of kicked the tires, and done some of that troubleshooting, and made those alliances. – P2

Sustainable access to funding

Surgeons spoke candidly about the ways in which financing infrastructure underpinned the feasibility of their programmes. For example:

> I had a very well-endowed chair which paid for my missions. For me, it paid for my researchers to go, it paid for anaesthetists, it paid for nurses, it paid for residents. – P3

They emphasised how one needed to consider sustainable fiscal planning to support programmes long-term.

> [The program must] be financially sustainable within the realm of the context where you're going. I have never worked beyond the means of the Ministry of Health or the University […] [because] when the money goes, the program goes. – P13

Limiting reliance on exhaustible external funding was also identified as a priority.

> All of these were fairly low resource-demanding projects from our end […] done as fairly straightforward academic collaborations, without having to go and seek a whole ton of external funding. – P15

> We don't believe in designing a project around the grant cycle. We will take a grant if we can get one, but we're not going to have a project be limited by a grant. – P9

Support from external institutions

Strong support from external institutions were also key aspects of a facilitative infrastructure, including connections with host politicians, offices of global surgery and commercial entities. These support systems interplayed as teams, piggybacking off each other to enable a programme's goals. Some of these supports were on-the-ground in the partner country.

> Some of the key players, […] one was the CEOs and the people who ran the hospital. Two was government officials. And three, was the surgical society [of the country]. We made sure that we had good working relationships with them, and the residency program. – P11

> There were certainly lynchpins who stood out, but it was the whole being greater than the sum of parts. It was the teams that you could go to at the Ministry of Health [of the LMIC], at the [LMIC University], so that if you ran a workshop […] you can take from one and give to the other, and move your players across the board, and troubleshoot. – P14

> I didn't want to work in a [politically] unsafe environment […] And then where I go, it's a real hospital. [City] is the fourth biggest city in [LMIC], there are a couple of operating rooms, there's a little mini-ICU, there's an infrastructure. – P6

Other supports came from HIC institutions, such as provincial governments, industry partners and academic entities.

> The key piece to [sustainability] is having an organisational structure. I think that's one of the driving reasons for having a Global Surgery Office. […] In giving it a name and giving it a structure, it then becomes bigger than you […] the Department of Surgery now has a budget line for global surgery. – P14

> Supporting universities and their ventures to be global partners is an important step for provincial governments. – P11

> [Airline] was somewhat helpful in waiving baggage fees […] We also partnered with some of our industry partners. – P2

Theme 2—longitudinal engagement

Interviewees highlighted the need for continued involvement in local capacity development and relationship-building. Ongoing commitment required two things: physician interest, and support from the HIC home institution and colleagues.

Continued involvement

Surgeons described the longitudinal commitment to community as paramount to facilitating long-term success of the programme. Short-term 'mission' projects were emphasised as being harmful and outdated for the contemporary global surgery landscape.

> [Avoid] the White Knight Syndrome, where somebody from the West comes in with a team and operates on six cases in a week […] then leaves knowing that those people will never be able to do that on their own. – P3

> I don't think there's any role for short-term missions, I think this should just not exist anymore. I strongly believe that this is harmful. – P4

Surgeons emphasised how global surgery work requires extended time and continuous participation.

> Somebody has to be committed to it for a decade, it's not a 3-year project. – P5

Longitudinal engagement laid the foundation for meaningful, relational work with LMICs and a mutual commitment of improving one another.

> I'm pretty sure the first time we said we would be back, no one believed us […] Well, we continued to go back again and again and again, and I think that established legitimacy with the local teams. – P11

> I had coaches and mentors who were invaluable, who would say this you can say, this you can't. This is appropriate, this is inappropriate. […] Now, it didn't happen overnight, and certainly it's much more apparent now 20 years into it. – P13

There was a caveat though: Programmes revolving around one individual, regardless of their commitment over time, are often unsustainable, suggesting that a team is necessary:

> Once you die or retire or COVID comes and you can't go there anymore, their program stops. – P1

> It's one of the great Achilles heels of many of these projects that they depend on one personality who keeps them going […] and they don't outlast the individual. – P8

Support from home institutions

Engagement in surgical programme development would not be possible without support from the home institution, including bidirectional support of colleagues.

> Not every practice wants one of their colleagues leaving them for 3 months a year. Not every academic institution sees this as a legitimate academic contribution […] I basically negotiated with my partners

[…] you got to have support of your colleagues who are going to take calls for you, and you've got to have support of your faculty, who are going to continue to pay you to continue your role. – P5

Supporting global surgeons was described as a benefit for home institutions' credibility as well.

I was able to negotiate as part of my contract here at [hospital]. It didn't start off that way; as they saw that I was actually justifying a scholarly mandate, and there's a quid pro quo. They like […] being able to say that we have somebody who looks after the mandate saying healthy children means a healthy world. – P13

Drivers of physician interest

Such continued involvement had to be driven by some sort of interest in global surgery projects, which could range from early experiences in the field to a desire for exotic travel to academic interest in global surgery to personal belief systems.

There was certainly an element of wanderlust […] New sights, new smells, new experiences. – P13

I always like travelling. […] I worked in exotic places […] I saw the need for improved health care in places like this, and it looked like an awful lot of fun to do. So, through medical school, I did electives [abroad]. – P8

I've always had an interest in the global community of surgeons, the local community of health care providers who are engaged in the work that I do from an academic point of view. – P9

As a member of the [faith], one of the concepts […] was this concept of the oneness of humanity. […] there's a justice and an importance of bringing justice and equal surgical care to everybody. – P5

Theme 3—local ownership

Collaboration with local institutions was necessary for ensuring receptivity and integration of new surgical education programmes into existing infrastructure. Such involvement must go beyond consultation and instead champion local ownership, even in research output. In these cases, even one local leader may go a long way.

We only go to places […] where there's a local champion, who is already trying to do this, who has invited us to come and do this with them to support and complement what they're doing […] we're not the primary project managers, we're not the local champions, nor can we or should we be. – P9

The only people who come from the [HIC] with me are people who come with a very definite, non-clinical, educationally valuable plan for locals [but] the stipulation is that [research] will be owned and operated by the nurse practitioners in the [clinic]. It is their study. They will present. They will be part of the publication team. – P13

Local ownership facilitates not only the development of surgical training programmes that meet the needs of LMIC communities, but also helps to ensure the existence of such programmes long-term.

These were local surgeons that were the local leaders and advocates for the program. And I worked with them. It wasn't an outside program coming in. It was a need-identified, locally led by local surgeons […] this is their program […] they're not going to let it end. – P5

Brain drain

'Brain drain', or the emigration of trained professionals away from their home countries, was described as a critical impetus for developing training programmes within LMICs.

They had had a medical school for a decade, but what they were finding was that […] the whole idea of 'send the best person we got away for 5 years of surgical training, so that they come back and be a surgeon here', that sort of model wasn't working. – P4

What the local surgeons in [LMIC] […] had learned from this was: hey, let's start our own surgical training program […] they needed to train their own surgeons locally to fill the needs that they saw. – P5

Importantly, participants noted that the reasons for 'brain drain' varied based on personal and economic circumstances. Recognising that people may choose to relocate regardless of where surgical training takes place, participants emphasised that creating opportunities for physicians to remain local for practice was a priority.

I might challenge the concept of brain drain […] most people would like to stay where they are, but there's reasons why, personal, economic, safety, and I would never judge anybody for that. […] [But] I agree, I don't think anybody wanted to see a situation where we've trained 20 surgeons, and they've all gone off to work somewhere else. That would have been a failure of the program. – P5

Interviewees noted the importance of creating resources and infrastructure within LMICs to facilitate high-quality surgical care to enable those who stay after local training to succeed in practice.

It's one thing to train people, but if you don't give them the infrastructure to be able to practice, then they'll leave. – P4

Ripple effect

Local ownership of training programmes enables students who participated in the programmes to become teachers themselves. In this sense, the programmes truly

become self-sustaining—trainees become mentors and the programmes expand surgical capacity by a snowball effect in the local communities.

> A big component of each course is called "Train the trainers". We were running an instructor course with the surgical residents […] then immediately following, we would have a course for medical students when the surgical residents, now the instructors, would train the medical students. – P5

> If you can train 20 surgeons in your life to work in a particular place, that makes a big difference. What makes the bigger difference is if you can train 20 surgeons who are not only surgeons, but surgical educators, and each of them trains 20 people. – P8

One participant went so far as to describe this as a crucial differentiator between the potential impact of surgical training programmes and humanitarian relief work.

> Well, I think that the humanitarian relief work is good in that you are able to treat one patient, but if you are able to teach someone to teach one patient, then that legacy lives on forever. – P11

Theme 4—interpersonal humility

Willingness to learn from others, acknowledging one's shortcomings, and reflexivity to changing roles within the local context were discussed as positive qualities for HIC surgeons to embody in global surgical partnerships and crucial factors for decolonisation. Surgeons must dedicate time to learning about the community and be receptive to adapting as needs evolve.

Decolonisation

Participants in this study emphasised the ways in which the ongoing legacies of colonisation impacted their partnerships with LMICs.

> The high-income country has to be very explicitly aware and constantly working to mitigate the potential for propagating neocolonialism, […] power disparities, and the harmful effects that that may have on the research question, on the output, on the relationship. – P14

For some, colonial power structures that created racial power imbalances favouring white HIC doctors were particularly important to acknowledge and address.

> There are challenges going to a place like that as a white dude […] you stand out in a way that draws often negative attention to yourself […] most people assume if you're a white guy there, then you probably are a doctor […] there's a huge kind of race-associated power imbalance. – P14

Yet, despite this emphasis on decolonisation, there were still moments where surgeons perpetuated colonial rhetoric about the structure of HIC–LMIC partnerships.

> If you saw the poor quality of the education they had there for the residents, it was horrific. And, so, I started teaching […] I'm just sort of leading the steering committee on. Think about these little ducklings that follow their mother, ducklings are the steering committee, and I'm the mother, sort of where I want it to go, but I made it so that every 5 or 10 years at most, somebody else becomes that mother duck. – P1

> People are really, by and large, delighted to see you, happy to take your advice and you are kind of the big cheese, they have to ask what to do, and they're going to agree with that. – P8

> I chose a country that, amongst the educated class, was English-speaking. […] It is the language of the educated, right? – P6

Cultural and contextual humility

Demonstrating humility by creating ethical space for LMIC partners' languages and cultural practices to be at the forefront of partnerships was a priority of many of this study's participants.

> You're not there to change their culture, or you might not even need to understand the culture, you just have to let it be. – P1

> We respect their culture, we respect them as people, we respect all that they stand for, and we don't insert ourselves in and really dominate in a way that's an adverse situation. We rather would work and plan to be collaborative with them in all of these endeavors. – P12

Cultural humility also played a significant role for many participants in overcoming the legacies of colonialism, described above.

> I think you overcome the issues of colonialism by partnering with people on the ground and ensuring you're doing so in a culturally respected way, recognizing that you are partners, and that you are not there to replace [them]. – P11

Reflexivity and adaptability

Participants focused on the 'right and wrong' ways to engage in global surgery partnerships. They emphasised the importance of coming into partnerships prepared to engage meaningfully.

> I would strongly recommend for people to educate themselves, like read books […] on how global health is actually done and governed globally, because otherwise you're going to enter a world that you don't know, and you don't know what role you have to play into it. – P4

In doing so, participants felt they were well-positioned to do the ongoing, necessary work of being flexible to the progression of the relationship.

Diligence and consistency and really toughing it out and, honestly, a good dose of being able to adapt. When you see that some things are not quite working, think about it. Did I use the right approach? What should I modify? Is it my unconscious bias that is preventing me from moving forward? Do I understand the context of the people that I am working with? – P10

Of note, virtual programmes were touted as a key enabler for flexibility, but not without their drawbacks.

We decided to make it online, and we're really lucky we made that decision, because then the pandemic hit […] it's available everywhere in the world, and trainees can actually access it whenever they want […] but it was a little hit or miss, with the time difference, and the things that were going on there, they had some episodes of violent conflict […] we lost contact with them […] there's definitely pros and cons to implementing something from a distance. – P4

Planning for sustainability

Planning should ensure that efforts are sustainable and that their impact can be carried forward by community members. As such, conducting a needs assessment is crucial.

[Everything] is best started with an understanding of the local site. […] One solution does not fit all, and there needs to be a very important level of field work or assessment of local need. – P10

The definition of long-term sustainability, however, differed between surgeons; some argued that it meant becoming unneeded, while others felt success would mean that these collaborations never end.

Ultimately the goal is to get them to be self-sufficient. – P2

People talk about success as we've come up with a self-sustaining program, so we no longer need the collaboration, or we no longer need the partnership. That's something that's always kind of stuck in my throat a little bit. When is [HIC university] wrapping up their relationship with Harvard, […] Cleveland, […] Chicago, […] Oxford? We're not! Sustainability doesn't mean we can pack up and leave, sustainability means we will all move on together. – P15

DISCUSSION

With global surgery becoming increasingly recognised as a legitimate academic pursuit,[22–24] this study offers a novel Canadian perspective on the factors that surgeons from HICs perceive to be fundamental to a successful global surgical education partnership with LMICs. Our qualitative approach integrates opinions from influential leaders in a variety of subspecialties at Faculties of Medicine across Canada, including programme directors, leaders of humanitarian organisations and a politician.

Our analysis yielded a simple thematic framework that can be easily replicated to new projects. We identified four interacting themes for success: facilitative infrastructure (theme 1) supports both a longitudinally committed HIC surgeon (theme 2) and a local LMIC champion (theme 3) in a relationship mediated by interpersonal humility (theme 4). Each of these components is supported by a necessary aptitude for relationship-building (figure 2). Combined with a previously developed ethical framework, these themes produce a comprehensive checklist that can be leveraged by HIC institutions.[25]

Publications in the field of global surgery are limited, mostly describing singular experiences with previous programmes and global surgical electives.[26–28] Many have also called for the development of standardised metrics.[29 30] The results presented here are well in line with this literature. Like our surgeons' responses, one study highlighted a lack of funding, inadequate support systems and unsafe environments as barriers to participation by surgeons.[31] Another systematic review identified seven challenges to global surgical programmes, including funding issues, insufficient acumen for surgical teaching and weak stakeholder relationships—aspects foundational to our theoretical framework.[32] Of note, relationship-building has been a very strong undercurrent across the literature.[33–35] Trust and personal friendships are often the strongest, and sometimes the only, enabler of local empowerment and inclusivity, catalysing the effective transfer of clinical acumen and long-term programme success. Finally, literature has highlighted the duplication and fragmentation of service that can often arise in global surgical efforts.[36 37] The use of robust needs' assessments and the collaboration with organisations already on-the-ground when starting out in global surgery, as identified by the stakeholders interviewed in this study, may be a potential solution to this challenge.

Our study is nonetheless limited in that it only delineates considerations for when a surgeon or institution first embarks on a partnership. How to manage a partnership thereafter remains unclear, including the best metrics to measure success. Here, lessons learnt from the Toronto Addis Ababa Academic Collaboration, despite being primarily focused on non-surgical training, can be particularly relevant. Their four-step approach to developing a programme (initiation, partnership development, programme design and transition to local delivery), and the responsibilities of each partner at each step can be easily adapted to a global surgical setting.[38] As others mention, programme assessment would be multifaceted and focused on long-term sustainability, with one component being the programme's ability to retain surgeons by being 'locally relevant'.[29 35 39]

Our study is additionally limited by its sampling strategy and the heavy representation from the University of Toronto. This was likely due to two reasons: the high number of global surgery faculty at the University

of Toronto, and the author's affiliations to this institution making local recruitment easier. Moreover, by focusing solely on the academic leadership of global surgery programmes increasingly influenced by concepts of equity and diversity, there may have been a predisposition in our data towards prioritising cultural sensitivity and longer-term partnerships.

Consequently, several important perspectives may have been inadequately represented, including those of trainees, community surgeons and Francophone leaders across the country. Non-academic surgeons may bring a fresh rural perspective to the table, as is often needed in LMIC contexts, and Francophone leaders may be able to delineate unique facilitators and/or barriers as compared with Anglophone perspectives. Trainees, additionally, can bring a commitment to equity and diversity to global surgery work, as well as lived experiences in LMICs. By including their perspectives in a future study like this that defines factors for success for global surgery, we can encourage their lifelong commitment to addressing health advocacy and disparity.[23]

One must also recognise that global surgery, given its historical tendencies, can devolve into another enabler of colonialism, propagating Western ways of thinking as a tool for domination and control.[40 41] The field of global surgery is also prone to exploitation to short-term HIC-focused opportunities, such as LMIC electives for students, many of which are motivated by a desire to travel to exotic places, see 'tantalising' disease presentations or partake in less safe approaches to surgery not generally considered standards of care in HICs (eg, open vs laparoscopic approaches). We must therefore be careful as this field becomes more accessible to HIC trainees—along with many of our colleagues in global health, it is important that we continue to call for closing of the 'door on parasites and parachutes'.[41 42] Indeed, past qualitative research using Delphi consensus methods have largely held HIC institutions responsible, advocating for the completion of pre-departure training and post-return debriefing on cultural humility in global surgical care delivery.[43] This responsibility not only means establishing dedicated training time, but also creating comprehensive teaching materials, fostering an academic environment that encourages diversity (eg, as a criterion for funding programmes) and involving appropriate mentors to facilitate learning.

Finally, we are cognizant that this study only offers perspectives of the higher-income partner, and that, as one commentary puts it, any training programme 'crafted without the participation of the primary consumers of global surgery (LMICs) is doomed to fail'.[44] A parallel study that highlights the perspectives of the LMIC partners is critical to a more complete understanding of what it truly means for a programme to be successful, and how HIC partners can contribute towards decolonising the field of global surgery.

CONCLUSIONS

This is the first paper that qualitatively explores the experiences of Canadian global surgeons in their partnerships with LMICs for surgical capacity-building. Surgeons highlighted the importance of longitudinal commitment with a local LMIC champion, enabled by interpersonal humility, facilitative infrastructure and strong cross-cultural relationships. The insights from this study provide a theoretical framework for global surgery programmes across Canada to guide planning and execution of their projects. This data should be paired with reciprocal perspectives from LMICs who have partnered in developing surgical capacity-building projects.

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