Introduction

This paper aims to contribute to the discussion on how global health research (GHR) mentorship initiatives can best help prepare the next generation of GH researchers. To this end, the authors, a group of emerging researchers, share their experiences and perspectives of participating in the Global Health Research Capacity Strengthening (GHR-CAPS) program, a multidisciplinary GHR training and mentorship program in Quebec, Canada.

Discussion

Based on their experiences, what is deemed most beneficial is interfacing with a diverse group of peers, learning and being guided from a community of mentors, actively engaging in research activities, having mentorship specific to GH, and being financially supported, especially through bursaries. Areas were also noted to better guide and support GHR emerging researchers. These included providing more support for navigating career transitions and developing a program of research, and removing geographical restrictions to access financial resources, including bursaries and small grants which can directly support the research of students and junior researchers. Overall, the trainees felt that participation in a mentorship program like GHR-CAPS yields multiple benefits including greater academic productivity, network expansion, increased professional confidence, and enhancement of knowledge and skills. It also provides a sense of belonging to something official and important and gives visibility to trainees' work.

Conclusion

There is value-added to have mentorship programs like GHR-CAPS. GHR mentorship is optimized by having multiple sources of support for trainees and by implementing diverse strategies to meet trainees' needs and strengthen their capacity.

Global health research (GHR) training and mentorship are essential for developing the next generation of researchers who will produce, translate and transfer knowledge towards improving health worldwide. Support, resources and opportunities for GHR capacity strengthening however, can be variable or insufficient across university graduate and postdoctoral programs and supervisors. Early-career researchers may also face similar challenges. To address these gaps a number of GHR mentorship initiatives have emerged.

As mentorship programs evolve and new initiatives arise, it will be essential that they continue to consider the perspectives of students and junior researchers and that they adapt to the expectations of incoming mentees. It will also be imperative to assess whether these programs are achieving their desired effects. In this paper, we, a group of emerging researchers, share our experiences and perspectives of participating in the Global Health Research Capacity Strengthening (GHR-CAPS) program, a GHR training and mentorship program in Quebec, Canada, with the goal to: 1) highlight the key aspects of the program that in our view have been the most beneficial to the advancement of our GHR capacity; and 2) describe some of the challenges and areas that we feel may require more emphasis to better guide and support GH emerging researchers in the future.
WHO WE ARE

Each author was formally involved in GHR-CAPS during the period of 2009-2015; six of us were doctoral students and two were postdoctoral fellows at the time. Two authors were also involved as program coordinators. All of us continue to participate and actively engage in GHR-CAPS as part of a community of practice (CoP).

Together we represent a range of disciplines (nursing, public health, cultural psychiatry, epidemiology, political science, health economics, socio-anthropology and environmental health), with varied research interests (migrant health, infectious diseases, maternal and child health, political economics and health services, policy-making, environmental exposures, food security, social protection and global mental health). Our research spans a range of countries, including Canada and a number of low and middle-income nations (eg, Burkina Faso, Cameroon, Mali, Jamaica, Brazil). We also have diverse backgrounds, in terms of our origins, cultures/ethnicities, languages spoken and professional histories.

GHR-CAPS

GHR-CAPS was launched in 2008. It was developed and initially led by researchers at four Quebec universities and was publicly funded through the Canadian Institutes of Health Research (CIHR) Strategic Training Program in Global Health Research and the Quebec Population Health Research Network; the latter was/is funded by the Fonds de recherche du Québec-Santé (FRQS). CIHR is the federal funding agency for health research in Canada, while the FRQS is the provincial funding agency for health research in Quebec. Funding from CIHR ended in 2015 and GHR-CAPS no longer offers bursaries, but funding through the Quebec Population Health Research Network supports scholarly activities (e.g., research days), projects selected by the steering committee (e.g., publications on cross-cutting topics), and projects led by emerging researchers through calls for applications.

The key aspects of GHR-CAPS that we feel have contributed to advancing our GHR capacity, and the benefits, are summarized in Table 1.

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<thead>
<tr>
<th>Competency areas</th>
<th>Seminars</th>
<th>Summer schools</th>
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<tr>
<td>A global health perspective</td>
<td>What is Global health?</td>
<td>Ecosystem approaches and ethics</td>
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<td>Critical and interdisciplinary approaches</td>
<td>Knowledge translation in global health</td>
<td>Mixed methods</td>
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<td>Diversity and inclusion</td>
<td>Participatory research in global health</td>
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<td>Ethics and professionalism Partnerships</td>
<td>Challenges in global mental health</td>
<td>Globalization and health</td>
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<td>Research planning, financing and management</td>
<td>Ethics of global health research</td>
<td>Urban health</td>
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<td>Scientific communication Leadership</td>
<td>Refugee health</td>
<td>Social enterprise</td>
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<td>Knowledge translation</td>
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**Table 1. Competency areas and examples of the Global Health Research Capacity Strengthening (GHR-CAPS) Program seminar and summer school topics**

**ENHANCING OUR GHR CAPACITY**

The key aspects of GHR-CAPS that we feel have contributed to advancing our GHR capacity, and the benefits, are sum-
marized in Table 2.
Table 2. The Global Health Research Capacity Strengthening (GHR-CAPS) Program key training and mentorship strategies and benefits

<table>
<thead>
<tr>
<th>Training/mentorship strategies</th>
<th>Reflections</th>
<th>Benefits</th>
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| Interfacing with a diverse group of peer researchers | “...while my work relies on quantitative methods and medical sciences, I was able to critically read and learn from works on qualitative research done by fellows of social studies.” | • Mutual learning  
• Exposes us to new topics, research methods and ways of thinking  
• Stimulates our thinking regarding the definition of global health  
• Broadens our perspective of research areas in global health  
• Gives us a different perspective on our work  
• Is a source of peer support  
• Provides a sense of belonging  
• Connects us to others to form new collaborations  
• Increases our productivity |
| Engaging with a community of mentors | “I presented a manuscript to test the acceptability of a new concept. After witnessing my peers’ reactions, I decided it was best to adapt my methods.” |  
“Both my mentor and the senior trainees were available to answer my questions and stimulated my thinking... the interactions with the invited researchers helped me consolidate my theoretical knowledge.” | • Exposes us to new topics, research methods and ways of thinking  
• Broodens our perspective of research areas in global health  
• Stimulates our thinking regarding the definition of global health  
• Inform us of “who’s who” and who’s doing what in global health  
• Connects us to researchers to form new collaborations  
• Gives access to experts to inform our work |
| Training activities specific to global health | “So not only was GHR-CAPS instrumental in strengthening our research skills, it also critically opened up our academic network.” | “Before having a seminar on it, I had never consciously thought about the definition of global health or the history of the field.” | • Stimulates our thinking regarding the definition of global health  
• Broodens our perspective of research areas in global health  
• Sensitizes us to real-life challenges of conducting global health research  
• Raises our self-awareness on prejudices and stereotypes that we hold  
• Helps us develop our humility  
• Inform our research and better equis us for conducting global health research |
| Active involvement in global health research | “A summer school on Minimum maintenance of health services in conflict zones, organised in May 2015, was extremely interesting and helped define my own PhD research topic in a much better way.” | “I organized a seminar on social enterprise with a renowned expert in the field from Scotland.” | • Allows Encourages us to contribute to the dialogue and debates in global health research (dilemmas, challenges, approaches, etc.)  
• us to apply and develop/hone our research skills  
• Encourages and supports us taking on leadership roles  
• Develops our confidence and independence |

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<tbody>
<tr>
<td>Access to financial resources</td>
<td>“I really appreciated the financial support. It covered my tuition and my living costs in Canada, which was really helpful since I am from Burkina Faso.”</td>
<td>• Permits us the time to focus on global health research</td>
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<td>“GHR-CAPS’ funds under the ‘north-south research collaboration scheme’ helped me implement a project in Bangladesh to assess research, program and policy priorities for migrant workers to address their HIV/AIDS vulnerabilities.”</td>
<td>• Enhances our competitiveness for awards, bursaries, scholarships, grants and positions</td>
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<td></td>
<td>• Provides access to bursaries for those who would otherwise not have access (ie, international trainees)</td>
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<td></td>
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<td>• Supports our work, including the establishment of collaborations</td>
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<td>• Increases our productivity</td>
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<td></td>
<td></td>
<td>• Encourages and supports us taking on leadership roles</td>
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<td></td>
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<td>• Gives visibility to our work (and our name)</td>
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INTERFACING WITH A DIVERSE GROUP OF PEER RESEARCHERS

Through GHR-CAPS we have interfaced with a diverse group of peer researchers. This has allowed us to be exposed to a broad scope of disciplinary work as well as different methodological and theoretical frameworks. This has expanded our understanding on the various ways that GH can be studied and has allowed us to view our own work in a different light. It has provided us an opportunity for learning between peers and for receiving feedback from one another. The exposure to different research topics has also given us a better appreciation of the range of areas being studied in GH and has allowed us to reflect further on what constitutes GH.

Coming together has been an opportunity to establish relationships with peers whom we otherwise would not have known or come in contact with (different institutions, languages, disciplines, countries, research interests). It has increased our awareness of the similarities as well as the differences in our academic trajectories, especially between Canadian and international trainees. We have shared our experiences with one another and have offered each other advice regarding our research process, career decisions and on more personal matters as well (e.g., challenges with colleagues; work-life balance). Exchanging on our experiences has also been validating since as young researchers we have sometimes felt isolated and wondered whether our experiences were ‘normal’. Being a trainee of GHR-CAPS has also provided a sense of belonging as well as a feeling that we are part of something important.

Another benefit has been the chance to work jointly on interdisciplinary projects, especially on topics that were beyond our thesis/postdoctoral research. For instance, we co-authored commentaries following our participation in one of the summer schools; wrote-up case studies following a course on GHR ethics; partnered together to publish a special issue on GHR and ethics and also worked together on broader topics related to academia. It has also led to collaborations beyond GHR-CAPS activities.

ENGAGING WITH A COMMUNITY OF MENTORS

Meeting mentors and other invited researchers from a range of backgrounds and expertise also opened us up to a variety of work and approaches in GHR. It has also been an opportunity to know who is conducting what work in GH. It has also been a privilege to learn from, and to have our thinking stimulated by experts in the field. Having experts’ time and attention during seminars, summer schools and on an individual basis has been valuable to informing and furthering our work and personal development. It has also exposed us to a variety of role-models.

GHR-CAPS has also been a key facilitator for expanding our networks. It has allowed us to connect with researchers beyond our supervisors and research groups and teams. Activities and events have served as forums where we can easily approach senior researchers to introduce ourselves and to create contacts for future collaborations.

TRAINING ACTIVITIES SPECIFIC TO GH

Seminars and summer schools specific to GH have given us the opportunity to debate the definition of GH, to discuss our role as GH researchers, and it has sensitized us to some of the real-life challenges in conducting GHR. We have also had many exchanges regarding power differentials and approaches on developing meaningful and collaborative relationships, and on accountability to our partners and participants, especially in LMICs. We have also had the opportunity to reflect on our prejudices and biases. For example, we once had a seminar where we shared and discussed preconceived ideas and stereotypes in GH.

Training specific to GH has helped us feel more confident, but also to have more humility; to understand that there is much to be learned from others. We are now more self-aware and reflexive and feel better equipped for conducting GHR. It has also given us some tools on how to navigate some of the complex issues that can arise and to apply them in our work. Many of us have even presented or written about what we have learned and applied (eg, “protecting confidentiality while disseminating locally”; “ethical tensions in GH fieldwork”; a definition of GH for nursing; “how can the voices of French-speaking researchers be better heard” and “Community involvement in biomedical research in GH”).

ACTIVE INVOLVEMENT IN GHR

We have had hands-on learning in an assortment of ways. Presenting our research and conducting peer review of each other’s work; presenting as a keynote speaker or in workshops at conferences; writing applications for funding; organizing and/or leading seminars; assisting in the planning and/or presenting at the summer schools, including one held in Cuba; writing articles as a result of summer schools, seminars or other initiatives; and being actively involved in planning and running the Canadian Conference on Global Health Research in 2015 (abstract review, program development, chairing sessions). We also had experiential learning during the summer schools, for example we visited a local Quebec farm that employed migrant workers from Mexico; and during the summer school in Cuba we visited healthcare centers and met with local stakeholders to gain a better understanding of a healthcare system in a resource-limited country. The internships were also a mechanism to gain complementary applied skills in a specific area; for example, one trainee spent a four-month period at a center for addiction and mental health to further develop competencies in psychotherapies, skills needed for her doctoral work in Uganda. And finally, acting as a coordinator of the GHR-CAPS program was an opportunity to acquire administrative and research management skills.

The benefits of these various activities are multiple. It has helped us advance our writing and presentation abilities, and to have a better understanding of research processes (funding, publishing). We have worked in new teams and honed our organizational, planning and communication skills. We have also developed the capacity to give constructive feedback and to receive it. In planning, coordinating, presenting and being first authors, we’ve assumed leadership roles, which has increased our self-confidence. Publishing and presenting has helped us build our CVs and being active in GHR has also given us, and our work, greater visibility. All of this has had the ripple effect of making us more competitive for awards, bursaries and grants and also for employment.

ACCESS TO FINANCIAL RESOURCES

Receiving bursaries was advantageous in many ways. For international trainees, it increased their access to funding within Canada since non-Canadian residents have limited eligibility for scholarships/fellowships. For all trainees, bursaries lessened the financial burden and therefore allowed us to focus on our research activities. The bursaries also served as a stepping stone for obtaining competitive provincial and federal fellowships.
The awards and small grants have directly supported our research. For example, some senior trainees benefitted from travel awards to present at conferences or received monies to support Open Access publications. Some trainees were also recipients of small grants to participate in an internship or to develop partnerships in LMICs. Most recently, a number of small projects/initiatives were also funded through a call for applications. Having financial resources has helped us advance our work, increased our productivity, facilitated the creation and sustaining of collaborations, created opportunities to be principal investigators, and contributed to building our research profiles.

CHALLENGES AND FUTURE AREAS TO ADDRESS

There are two key areas that we feel could be better addressed in the future. The first is in regards to navigating the transition phase from doctoral student, to postdoctoral fellow to a more permanent position. While we could/can access mentors for career advice, there has generally been less emphasis on this aspect within GHR-CAPS. As doctoral students, many of us were/are unaware of what a postdoctoral fellowship should entail or how to go about choosing who to work with. As postdoctoral fellows and early-career researchers the challenges are twofold; one, there are few tenure-track positions available and so we are not always aware of alternative career options and how to find and access these. And two, for those of us who choose the academnic route, we need more guidance and support in decision-making and towards building our research portfolio. More specifically, during this critical period, we are expected to construct the foundation of our programs of research. We need to identify our area of expertise, carve out a clear focus that is separate from the work of our PhD and postdoctoral supervisors, and articulate the objectives of our program of research. We must also develop a research plan for the coming years, and often we need to formulate this for career award applications. The transition phase can be very short, and nowhere do we learn how to conceptualize and organize our work into the form of a program of research. Additionally, mentorship can be lacking as we assume a new position, especially if no one in our department or faculty works in GH, thus leaving us uncertain on how to make certain decisions (e.g., which projects and activities to commit to) that would be in the best interest for our professional advancement. In this phase of our career, working with a senior researcher who can act as a co-principal investigator or include us on grants and/or participate on our grants is also extremely valuable.

The second issue relates to funding support. While GHR-CAPS activities and events are inclusive, there has been, and continues to be geographical restrictions for accessing funding. Because GHR-CAPS was initially a Quebec inter-university initiative, and because CIHR requires funds to be held within Canada, bursaries when provided, could only be attributed to students and fellows affiliated with Quebec institutions. Similarly, for small grants issued under this early-funding structure, they too needed to be held by researchers at a Quebec institution. In the current structure, as per FRQS guidelines, the requirement for small grants to be held by Quebec researchers’ remains, and with the exception of travel expenses, all expenses must also be incurred within the province. These financial restrictions reduce the participation of researchers from outside of Quebec, especially those from LMICs. This in turn diminishes the reach and impact of the program.

CONCLUDING REMARKS

Relationships are the cornerstone to effective and successful mentorship. Our interactions across a number of individuals including our peers, mentors and also the broader group of researchers that we interfaced with, provided different sources for meeting our needs including coaching, role-modeling, encouragement, knowledge and skills’ development and psychosocial support. These relationships also fostered a sense of belonging and were validating. This is an especially important outcome in the context of GH, where students and researchers have often reported feeling isolated. Also critical to our experiences, were opportunities to apply skills and to take on leadership roles, which also aligns with what others have recommended as key aspects to mentorship. Moreover, activities specific to GH and access to funding responded to the need for more tailored interdisciplinary mentorship and provided access to resources in an ever-growing competitive funding environment.

The research capacity-building benefits that we expressed have been noted previously, including greater productivity, network expansion, increased professional confidence, and knowledge and skills’ enhancement. Furthermore, it also strengthened our sense of community and put GHR, including our work, on the map. Our experiences therefore add to the body of literature that highlights the value-added of such mentorship programs.

Our view that more support is needed to help navigate the career trajectory is not unique to GH. It is now widely recognized that emerging researchers, including those who have assumed academic positions, need mentoring in this regard. In GH, a number of mentorship programs have begun to implement strategies to address this need. Our experiences highlight the importance to not only provide career advice, but also to provide assistance with formulating and building a program of research and early decision-making in order to properly lay the foundation for a research career.

The primary target of GHR-CAPS are students and junior researchers in Quebec, however the participation of a diversity of researchers, especially from LMICs, is imperative to ensure that the program contributes to enhancing the research and health and healthcare capacity in LMICs and that it does not reinforce postcolonial patterns and further amplify 'North/South' inequalities. GH mentorship programs, irrespective of their location, therefore have a responsibility to ensure their scholarships/fellowships and funding schemes are accessible to scholars in LMICs.

GHR-CAPS has transformed over time. Initially it was a formal program whereas now it operates in the form of a CoP. The advantages of the former included the structured activities, the guaranteed access to at least one mentor, and the bursaries. Within this format mentors and mentees were expected to partake in activities and actively contribute and so this also assured sustained and dynamic involvement over time.

There are also many benefits of a CoP, most importantly is that those who are the beneficiaries of the program are involved in the decision-making and planning, which is an empowering process. Also advantageous, is its flexibility in who participates and how, and on which activities are organized, which allows for the program to be maintained with less financial resources. However, moving forward, this approach will require a greater investment of time and efforts to expand the CoP and to ensure an active, ongoing participation, including the involvement of more senior re-
searchers. Preferences for formal versus informal mentorship vary and the challenges and benefits of both have been documented. As suggested by others, flexibility is essential and the best approach for a mentorship program should be determined by the context, resources available and the mentors and mentees of those involved. This paper reports the viewpoints of a small group of trainees involved in GHR-CAPS and the process was not systematic or evaluative. This reflective piece was meant to provide some insight from the perspective of the mentees, on the key aspects of a mentorship program that contribute to global health research capacity and to add to the discussion on how such programs may be developed or adapted in the future to best prepare emerging, global health researchers.

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