



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Re-thinking global and public health projects during the COVID-19 pandemic context: Considerations and recommendations for early- and not-so-early-career researchers



Jessica Spagnolo^{a,b,*}, Lara Gautier^{c,d,e}, Mathieu Seppey^{d,f}, Nicole Anne D'souza^g

^a Département des sciences de la santé communautaire, Faculté de médecine et des sciences de la santé, Université de Sherbrooke, Canada

^b Centre de recherche Charles-Le-Moyne-Saguenay-Lac-St-Jean sur les innovations en santé, Campus de Longueuil, Université de Sherbrooke, Canada

^c Département de Gestion, Évaluation et Politique de Santé, École de Santé Publique, Université de Montréal, Canada

^d Centre de recherche en santé publique, Université de Montréal et CIUSSS du Centre-Sud-de-l'Île-de-Montréal, Canada

^e Department of Sociology McGill University, Canada

^f Département de Médecine Sociale et Préventive, École de Santé Publique, Université de Montréal, Canada

^g Division of Social & Transcultural Psychiatry, Department of Psychiatry, McGill University, Canada

ARTICLE INFO

Keywords:
COVID-19
Researchers
Global health
Public health

ABSTRACT

This commentary aims to provide a glimpse into some of the early and continuing impacts of the COVID-19 pandemic on our global and public health projects: research in low-resourced settings; research with vulnerable populations, such as asylum seekers, Indigenous communities, children, and mental health service users; and research with healthcare professionals, frontline workers, and health planners. In the early context of restrictions caused by COVID-19, this commentary highlights our research setbacks and challenges, and the ways in which we are adapting research methodologies, while considering ethical implications related to the pandemic and their impacts on conducting global and public health research. As we learn to become increasingly aware of some of our limitations in the face of the pandemic, some positives are also worth highlighting: we are mobilizing our training and research skills to participate in COVID-19 projects and to disseminate knowledge on COVID-19, including through papers such as this one. However, we do acknowledge that these opportunities have not been equitable. Each thematic section of this commentary concludes with key recommendations related to research in the early and continuing context of the COVID-19 pandemic that we believe to be applicable to early- and not-so-early-career researchers working in the global and public health fields.

1. Introduction

The COVID-19 (Coronavirus disease) pandemic has caused strict physical distancing and hygiene measures (Anderson, Heesterbeek, et al., 2020 WHO, 2020a) in many countries across the globe and the halt of all non-essential travel (WHO, 2020a). Amidst this backdrop, many global and public health projects have been interrupted, with research activities involving travel, study recruitment, and data collection coming to a temporary halt and/or needing to be rethought (Daniel, 2020). At the start of the pandemic, some institutional review boards of ethics and university departments advised the temporary halt of new participant recruitment and data collection involving patients and healthcare professionals.

The repercussions of temporarily halting projects and having to rethink them impact researchers differently. While such repercussions impact senior researchers through funding competition postponements or changes in project timelines (CIHR, 2020a; CIHR, 2020b; CIHR, 2020c; Daniel, 2020), additional burdens fall on early-career researchers (i.e., graduate or postgraduate scholars who have completed their PhDs within five years) (CIHR, 2020d) who may not have secure academic positions and/or funding. For example, this precariousness in the pandemic context is accentuated by their limited decision-making abilities, strict obligations in meeting deadlines which are instrumental to personal gains such as graduation or career advancement, and salary uncertainty, as income is often fuelled by larger projects submitted to funding competitions that may have been postponed (CIHR, 2020a;

* Corresponding author. Département des sciences de la santé communautaire, Faculté de médecine et des sciences de la santé, Université de Sherbrooke, Canada.
E-mail addresses: jessica.spagnolo@usherbrooke.ca (J. Spagnolo), lara.gautier@umontreal.ca (L. Gautier), mathieu.seppey@umontreal.ca (M. Seppey), nicole.dsouza@mail.mcgill.ca (N.A. D'souza).

<https://doi.org/10.1016/j.ssaho.2020.100075>

Received 29 April 2020; Received in revised form 25 September 2020; Accepted 17 October 2020

Available online 21 October 2020

2590-2911/© 2020 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

CIHR, 2020b; CIHR, 2020c; Yan, 2020).

This commentary aims to provide a glimpse into some of the early and continuing impacts of the COVID-19 pandemic on our global and public health projects: research in low-resourced settings; research with vulnerable populations, such as asylum seekers, Indigenous communities, children, and mental health service users; and research with healthcare professionals, frontline workers, and health planners. In the context of restrictions caused by the COVID-19 pandemic, this commentary highlights our research setbacks, challenges, and opportunities, as well as the ways in which we are adapting research methodologies, while considering ethical implications related to the pandemic and their impacts on conducting global and public health research. As we learn to become increasingly aware of some of our limitations in the face of the pandemic, we are mobilizing roles based on our research skills and training to participate in COVID-19 projects and to disseminate knowledge on COVID-19. We acknowledge that there have been opportunities in the COVID-19 context for some researchers, including the authors. For example, some researchers have had opportunities to publish about the pandemic and to contribute to COVID-19 projects given a surge in funding specifically allocated to researching aspects of the pandemic. Yet, we also question which researchers are benefiting from these opportunities. These discussions are essential as they can help to identify existing inequities in academia.

Each thematic section of this commentary concludes with key recommendations related to research in the early and continuing context of COVID-19. While based on our respective experiences as early-career researchers working in the global and public health fields, we believe that some of our proposed recommendations may also be applicable more largely to not-so-early-career researchers. This commentary elevates the voices of early-career researchers in the hopes that continued discussions can be had on the impacts of the COVID-19 pandemic on global and public health research.

1.1. Description of research projects and programs

JS and ND are Postdoctoral Fellows, with PhDs in Public Health from Université de Montréal (JS) and Psychiatry from McGill University (ND). MS is a Doctoral Candidate at the School of Public Health at Université de Montréal. Since September 2020, LG is Assistant Professor at the School of Public Health at Université de Montréal.

JS's research is centred on evaluating, using quantitative and qualitative methods, the implementation and impact of interventions that aim to increase access to quality mental health care in Canada and internationally. At the heart of JS's research is close collaboration with healthcare professionals, mental health service users, and health planners to generate recommendations based on evidence and used to inform mental health practice and policy.

LG's research aims to assess the health status and needs of unaccompanied minors (UMs) awaiting judicial decision to determine their status and ensuing access to child protection schemes in Paris and Montréal. The research relies on data collection from UMs' clinical records, self-administered survey questionnaires completed by UMs, and semi-structured interviews conducted with UMs, frontline workers (including social and health workers), and policymakers. Data collection began in early 2020 in Paris and is currently ongoing in close collaboration with the French non-governmental organization (NGO) *Médecins du Monde* (MdM).

MS's research project aimed to better understand the sustainability of an insurance scheme program in Mali, a country in West Africa, which was implemented to help increase population access to health services. To assess the barriers and facilitators of the program's sustainability, qualitative methods (i.e., individual interviews and focus groups) were planned with different stakeholder groups: health planners, program managers, healthcare professionals, and funding agencies. This project was developed to encourage discussions among stakeholder groups on program improvement and sustainability. Currently, MS is considering a

change in research topic: to assess how sustainability is included in Canadian development aid allocated to LGBTIQ2S+ communities.

ND is engaged in an evaluation research project on a community-driven, culturally adapted, mental health intervention for Indigenous youth and families across five provinces in Canada. The program is rooted in the principle that family wellbeing is the cornerstone of individual and community wellness. ND works closely with community partners using community-based participatory research methods to follow and document the processes involved in the implementation of the program at different stages and in diverse settings.

1.2. Conception of the paper

At the beginning of the pandemic (March 2020), JS and LG discussed their concerns about data collection and academic productivity, especially during the transitional stage of their careers. They reached out to MS and ND, whom they knew were involved in international global and public health work, also as post/doctoral researchers. Upon meeting, we realized that despite having different training and research interests, we shared some common struggles and questions related to navigating the new academic landscape in the context of COVID-19. Hence, prior to the conception of the paper, our reflexive discussions were intended as a support system, since at the time (March and April 2020), we found there to be very little formal support given to early-career researchers by our institutions. In these early stages of the pandemic, we also found few examples of early-career researchers' experiences in the COVID-19 context.

We decided to share, in the form of a commentary, the many emerging topics and questions that we had (and continue to have) during our peer-support sessions. We virtually met five times, on March 24, 2020, March 27, 2020, March 31, 2020, April 10, 2020, and April 23, 2020. We also met on September 2, 2020 to address the reviewers' comments on our commentary and to touch base on changes in our current work (if any).

2. Discussion

Our reflexive group discussions resulted in the emergence of three themes that we elaborate below, based on our experiences during the context of COVID-19.

2.1. Methodological considerations

Global and public health research includes ongoing partnerships, research contextualization, capacity-building activities, and data collection techniques and tools that very often require face-to-face contact to facilitate interviews and group discussions, engage in collaborative decision-making about research, and organize and facilitate interactive workshops. Faced with critical issues in working with study partners and accessing study participants given physical distancing measures and travel restrictions, global and public health researchers are now tasked with employing different data collection techniques and methodologies in the changing context of the pandemic, including: individual and group interviews via web-based platforms, digital surveys and online questionnaires, and participant-led methods (Lupton, 2020). These adaptations may encourage research to continue "as planned" and facilitate research participation for those with access to technology, yet they require many discussions and thought. For example, due to the inability to conduct in-person interviews during the COVID-19 pandemic, in close collaboration with MdM program focal points, LG discussed with prospective respondents (i.e., MdM program volunteers, namely social workers, general practitioners, and psychologists) options to participate in the research, so as to document in flexible ways how frontline workers have been reorganizing their services to respond to UM's needs in the context of the pandemic. The first option was through filling - by hand or electronically - weekly diaries using an electronic template (Alaszewski,

2006). The second option was participating in video or phone interviews at a date and time convenient to participants. Similarly, in her work with First Nation communities across Canada, ND and the research team have adapted their community-based participatory intervention to facilitate ongoing collaboration across diverse communities. A central aspect of this process is engaging community partners in regular check-in meetings via Zoom or telephone to ensure their needs and priorities are being respected and represented in the research, including in the context of the COVID-19 pandemic. Additionally, community partners have guided the development of new approaches to facilitate the delivery of the intervention via online platforms.

Alternative digital data collection techniques and research engagements are promising avenues for gathering new sources of information but can also pose challenges. For example, will study participants be responsive to requests for online interviewing? For ND's study, engagement with digital platforms may be challenging for communities marked by inequities in access to built digital infrastructure due to geographic isolation, limited or unstable internet connections, and lack of digital technologies at home (e.g., computers, tablets). These challenges can potentially cause selection bias in the research: participants without technology may not be able to participate (and thus be represented) in the research, yet their health needs, preoccupations, and perceptions might be different than participants who have access to these technologies. In addition, studies show that this digital divide may aggravate already pre-existing health and social inequities (Makri, 2019; Mitchell et al., 2019; Rains, 2008).

Other methodological concerns consist of ensuring research rigor in data collection and analyses, and accounting for representation of research participants' perspectives and views. The data LG is collecting will likely be variable in comparison to the content of an in-person, semi-structured interview originally planned. The use of diaries as a data source may thus prove challenging for analysis. However, participants engaging in self-reported research methods that consider their opinions, experiences, and perspectives can provide insightful information conventional approaches like interviews may sometimes overlook. For example, the complementary data in LG's study highlighted unexplored information on ways of framing perceived challenges and success stories in the context of COVID-19, from the participants' perspectives (Gautier & Quesnel-Vallée, 2020). Although these two options were offered as means of adjusting to the needs and contexts of prospective respondents, all participants preferred video or phone interviews. Most lasted approximately 1.5 h, given that participants expressed a need for social interaction, which interviews encourage. Additionally, in working with First Nation communities across Canada, ND's engagement with participatory models of research allows the team to continually integrate Indigenous practices, beliefs, and theories to inform ongoing intervention efforts, and to utilize culturally grounded knowledge to make decisions for health, education, and resource allocation (Bartlett et al., 2012; Kirmayer et al., 2011; Potvin et al., 2003). In the context of the current pandemic, this bi-directional movement of hybrid knowledge is invaluable in informing appropriate responses to community needs. These examples highlight the necessity of including research participants' perspectives and voices in the research process (e.g., in deciding what data to collect and how, as well as in remaining flexible and mindful of their needs and preferences).

A remaining question in the rapidly digitizing COVID-19 context is: How do digital techniques to collect data consider the contexts in which research participants spend time? This is an important component of in-person interviewing. For example, JS and MS originally planned to interview healthcare professionals and health planners in their respective work settings (i.e., clinics, hospitals, etc.). These visits can help researchers better understand the study context (ex.: infrastructure characteristics, location, service access, etc.). Online techniques for interviewing will inevitably omit this field visit that often accompanies in-person interviewing. In-person interviews to collect data may also be more sensitive to non-verbal cues, hints to help gauge whether questions

may be sensitive for participants. Reading these non-verbal cues may be more challenging when using digital techniques.

With our experiences, we developed a table (Table 1) to highlight the adaptations to our respective projects' data collection techniques, the challenges and opportunities that we identified thus far, and the remaining considerations that we believe would merit ongoing and larger discussion.

Recommendations. Key recommendations based on our experiences as early-career researchers and related to research methodologies, data collection techniques, and study adaptations include: 1) mobilizing new data collection tools and techniques to respect the constraints of the pandemic and that can be used digitally or through web-based platforms; 2) considering the potential impacts of new data collection techniques and tools (i.e., via web-based platforms) on research participant accessibility and engagement; 3) ensuring that adaptations made to projects are deemed appropriate by research collaborators and participants before re-submitting to institutional review boards of ethics for approval; and 4) practicing humility in understanding our research limits when engaging with new methods and data collection tools without sufficient training. While these recommendations are based on our respective experiences as early-career researchers, we believe that they can also be helpful to other not-so-early-career researchers engaged in global and public health projects.

2.2. Ethical implications

In the changing context of the COVID-19 pandemic, Canadian funding agencies have created new funding competitions specifically related to COVID-19, while also postponing previous calls for research competitions (CHIR, 2020a,b,c), including competitions specifically targeting doctoral and postdoctoral students (CIHR, 2020e), and granting extension periods to account for research delays (CIHR, 2020d; Daniel, 2020). Hence, the changing funding landscape for global and public health research in the early stages of the COVID-19 pandemic presents important ethical and moral challenges to consider (WHO, 2020b).

One ethical dilemma researchers may face is the decision to continue ongoing research, implementing modifications to consider the restrictions caused by the COVID-19 pandemic, or to pause current projects. How should researchers proceed in making these research decisions? Are they simply based on institutional review boards of ethics or faculty/department heads' instructions? What happens when recommendations differ across academic institutions or government agencies (e.g., when some encourage adaptations to be made to continue "research as usual," while others suggest the immediate and temporary halt of research)? Alternatively, should decisions also consider the perspectives of research collaborators (for example, often in different settings and countries) and study participants? Much of the funding for global health research comes from high-income countries (Hasnida et al., 2017). Although many of these grants are joint collaborative partnerships between high-income and lower-income countries, there is a lack of clarity on who decides if a study stops or continues. What if research collaborators and study participants want to continue "research as usual"?

A second ethical dilemma is related to methodological changes in data collection processes. As researchers move data collection processes online (e.g., web-based interviews, surveys, questionnaires), ethical issues surrounding these alternate forms of data collection merit discussion, namely related to issues of confidentiality, data storage, consent, and use of information, to name a few (Hand, 2018; López, Qanungo, Jenkins, & Acierno, 2018). Are institutional review boards of ethics and researchers well-versed in the implications of using these different web-based data collection techniques? Are there similar ethical standards related to using these methods in different settings (e.g., a lower-resource setting versus a higher-resource setting)? While these discussions are increasingly becoming important in the context of COVID-19 given rapid and widespread digitization, including for health care delivery and teaching (Ray & Srivastava, 2020; Wosik et al., 2020), they will continue

Table 1
Data collection adaptations, challenges, opportunities, and remaining considerations.

Data collection (before)	Data collection (after)	Challenges	Opportunities	Remaining considerations
In-person interviews and/or group interviews	<u>Data collection tool 1:</u> Virtual interviewing (using technology like web-based means or telephones) <u>Data collection tool 2:</u> Digital group discussions (talking circles) <u>Data collection tool 3:</u> Weekly diaries using electronic templates	- Lack of access to technologies leading to greater inequities and selection bias - Lack of personal presence leading to the misunderstanding of non-verbal cues and the interviewees' contexts, as well as harder trust building - Less control over the collected data, which is self-reported without any interaction with the researcher - Greater variability of data leading to analytical challenges	- May provide more flexible research participation and may be more affordable (limiting travel) - Consultation with participants to understand what data collection technique would better work for them, promoting a more participatory vision - A deeper <i>emic</i> point of view emerging from a less controlled interview context, encouraging the expression of participants' opinions, experiences, and perspectives through writing - These weekly diaries provide unexplored information on ways of framing perceived challenges and success stories in the context of COVID-19	- Participants' and researchers' appreciation of these virtual techniques - Issues of data storage, data confidentiality, and data ownership - How detailed should the electronic diary templates be to help provide a structure for participants?

to be essential post-COVID-19.

A third ethical dilemma concerns the emergence of new research projects on COVID-19. Since the COVID-19 pandemic was declared, funding opportunities have become increasingly available to better understand the virus and disease, to prevent the virus spread, to better prepare health system capacity for detection, treatment, and management of the disease, and to address the repercussion of the disease on populations, healthcare resources, and personnel (Daniel, 2020). Amidst this backdrop, some funding calls have been delayed, including receiving competition results (CIHR, 2020a,b,c,e) and new funding opportunities have emerged. Ethical questions arise: Who decides what funding opportunities are considered valuable during COVID-19? How are these decisions made? What are the repercussions of this current COVID-19 research surge post-pandemic? For example, how will prioritizing and funding COVID-19 related projects affect other key areas in global and public health (IPRC, 2020; Pai, 2020; WHO, 2020c)? What will be the short-, medium-, and long-term implications of delaying funding competitions on ongoing collaborations and needs in global and public health? What are the repercussions and ethical implications of researchers who may be “shifting gears” to COVID-19 related research when this area might not be their expertise (IPRC, 2020; Pai, 2020)? We do acknowledge that while new COVID-19 funding can certainly help researchers' careers, we do question, however, who is benefiting from these grants? Are they led by women (Minello, 2020; Staniscuanski et al., 2020) and researchers from the Global South (Iyer, 2018) (to name a few) (Maas et al., 2020)? Specifically (and as discussed bearing our post/doctoral status at the time of writing this paper), we questioned how would we, as early-career researchers, be affected by this funding shift? Additionally, some research protocols in response to rapid funding calls on COVID-19 will be fast-tracked for ethical review, but this seems to be institution-dependent. Will the same level of rigor be maintained by institutional review boards of ethics during this fast-track (Gravel, 2020; London & Kimmelmann, 2020)? Also, what are the social and work implications for reviewers who assess the new influx of COVID-19 projects?

Finally, some research interests are focused on the health and experiences of frontline healthcare practitioners and other actors within the health system during the pandemic. This interest also becomes an ethical issue. While health systems' efforts are primarily allocated to resolving issues related to COVID-19, including its impact on health, mental health, system capacity, and health inequities, the research may strain health systems and contribute to psychological distress. For example, JS is exploring the perspectives of healthcare workers and health planners on a mental health intervention, including in the COVID-19 context. As a global and public health researcher, it is also important to consider the consequences and impacts of this type of research on already overburdened and scarce resources: Will the longer-term benefits of

evaluating this mental health intervention outweigh the short-term consequences (additional distress, working longer hours) on healthcare professionals and health planners as participants in the development and implementation of this type of research during a pandemic? In a pandemic-context where resources are already stretched, can researchers ensure that support and services are offered to study participants who may experience psychological distress throughout the research process (Townsend et al., 2020)? Another example stems from MS's research. He is working closely with healthcare professionals (among others) to evaluate an insurance financing scheme in Mali. In the context of global and public health, it is also important to consider the researcher's presence within local communities where research is being conducted. MS paused his data collection in Mali and has returned to Canada, where he has been since the onset of the pandemic, as not to burden the healthcare system in Mali. This is especially important during crises when health care systems have a higher risk of being overwhelmed.

Recommendations. Key recommendations in relation to ethical issues in research during the COVID-19 pandemic include: 1) ensuring that the benefits of an ongoing research project outweigh the risks of mobilizing needed and scarce resources; 2) engaging in discussions not only with institutional review boards of ethics, faculty/departments heads, and funding agencies on whether it is “research as usual” or if new types of research related to COVID-19 should be conducted, but also with study collaborators and research participants (Johnson, 2020; Zarowsky, 2011); 3) ensuring that digital methods to conduct data collection uphold high levels of personal data protection (Panel on Research Ethics, 2020); and 4) understanding that research ethics and ethical decision-making must move beyond concerns about procedural ethics and engage with relational ethics (D'souza et al., 2018; Ellis, 2007; Johnson, 2020), which involves ongoing discussions with research collaborators and partners.

2.3. Initial training, research skills and knowledge translation

Researchers, through their training, have developed skills that can be transferred to other settings beyond the research realm, and these may be useful in the context of the pandemic. For example, some researchers may wear more than one professional hat. JS is a licensed social worker, with a Bachelor's and Master's of Social Work. In September 2020, she completed training to become a support hotline worker, to help address rising psychological distress (United Nations, 2020; Vigo et al., 2020). In addition, JS's social work experience has equipped her with experiential knowledge about frontline mental health care and the realities that may be experienced in providing such care. This information has been critical in fuelling her postdoctoral project to help identify at-risk people/-populations navigating the health system, including during the pandemic.

Some authors have training and/or interest in knowledge translation, which they may mobilize during the pandemic. Early-career researchers in the Global North have access to resources that can help facilitate knowledge exchange with research partners in the Global South. Working in collaboration with ongoing research partners, early-career researchers can use their skills and accessibility to research resources (e.g., library databases). For example, access to large university library databases can facilitate efforts to mobilize knowledge in contexts where there may be different and competing news sources that prove difficult for debunking non-scientific news communication. Working in partnership must be bi-directional. The literature on “epistemic injustice” encourages experts and professionals like researchers to listen to the stories and the health representations of local communities and of people with lived experience, prior to formulating recommendations and/or drawing definite conclusions (Carel & Kidd, 2014; Fricker, 2007). Working in partnership to understand local ways of conceiving and representing disease and infectious risk(s) and using evidence-based sources to support these understandings is key to securing health and well-being.

Knowledge translation activities can include the creation of user-friendly papers, infographics, and webinars tailored to study participants, practitioners, health planners, and policymakers. For example, we grouped and shared through this commentary our respective experiences in research during the early and continuing stages of the pandemic, in the hopes of generating larger discussions around the impacts of the COVID-19 pandemic on global and public health projects, for early- and not-so-early-career researchers. LG and ND are using their research skills to share evidence on ways COVID-19 affects vulnerable populations, and MS and JS are using their research skills to help generate and share evidence to help build system capacity to care for these populations during COVID-19. Given their public health background, LG gave two webinars on COVID-19, events organised by a Montréal community-based organisation that supports migrants, MS is reviewing literature for the Montréal Public Health Department to assess its preventive interventions in Montréal-Nord and LG and JS are teaching an online public health course in which they organized a COVID-19 forum to share and discuss up-to-date and emerging COVID-19 evidence. In ND’s project, community implementation of the family intervention is slowly shifting online and has included webinars on intervention delivery and training for program facilitators, as well as topic discussions with project participants on themes that have become relevant during the pandemic (e.g., the effects of online bullying on mental health). Co-constructing and/or widely disseminating these resources to communities and project collaborators will encourage project sustainability, and further the reach of information to a wider audience.

For early-career researchers whose projects have come to a temporary halt or may move more slowly in the upcoming months, this “pause” can be an ideal time to use existing skills or learn new research skills, fill in theoretical and knowledge gaps in research, work on mobilizing knowledge in collaboration with research partners (Tulley, 2020), share respective experiences with knowledge translation strategies (Spagnolo et al., 2020) and with COVID-19 (such as this commentary), and/or join larger research teams working on COVID-19 projects. For example, instead of collecting data in Mali, MS is conducting literature reviews and framing theoretical aspects related to his topic for an eventual return to data collection. Future data collection will then be more theoretically-based, thus enabling the research results to be more exhaustive (Gregor, 2006). LG is working closely with Québec-based partners to plan for the most appropriate time to conduct her research and to co-develop adequate tools for data collection with frontline workers in the context of COVID-19. JS has opted to learn new quantitative methods, finalize papers, and collaborate on a COVID-19 project. ND is working with community partners to analyse data and finalize writing projects that were pushed to the bottom of the priority list in previous months due to hectic job responsibilities of program delivery in local communities (Tulley, 2020).

While there have been many research setbacks due to the COVID-19

context, there have also been new opportunities for researchers, including many that we have personally benefited from: writing and publishing commentaries to share COVID-19 experiences and/or findings (including this one); engaging with students and/or other groups to share COVID-19 evidence; and joining research teams to collaborate on COVID-19 related projects. However, we do want to highlight the larger issues regarding these opportunities. Specifically, we question who is benefiting the most from the new research opportunities created by COVID-19 (new funding, publishing opportunities, including in high-ranking journals, increased media coverage, etc.)? Studies show that during the COVID-19 pandemic, women were under-represented as first and last authors on peer-reviewed papers (Anderson, Wullum Nielsen, et al., 2020; Pinho-Gomes et al., 2020). This inequity mirrors the pre-COVID-19 context: in an analysis of publications, female first and last authors were also the minority (Filardo et al., 2016; Nature, 2018). Studies also show that scholars from the Global South are severely under-represented in leading academic journals from Europe and the United States, independent of the pandemic (Medie & Kang, 2018). Authors share concerns that these inequities will be apparent and exacerbated during the COVID-19 pandemic (Büyüm et al., 2020). Lastly, with the astronomical surge in publications since the start of the pandemic, there are questions related to quality of these submissions and of the peer-review process (Safiedine & Radwan, 2020). These topics would be valuable avenues to explore in more depth, as opportunities during the COVID-19 pandemic may reflect and reinforce broader systemic problems in academia felt prior to the pandemic.

Recommendations. We drafted what we believe to be key recommendations related to mobilizing skills and engaging in knowledge translation. These recommendations are based on our experiences as early-career researchers. However, we believe that they can also be applicable to not-so-early-career researchers. These include: 1) using complementary skills to refocus attention on other facets of research and practice (e.g., clinical skills to help directly, or to use towards research/knowledge generation); 2) building new skills or shifting focus to other areas of research projects (e.g., writing articles, reviewing manuscripts, collaborating on COVID-19 projects) (Tulley, 2020); 3) engaging in knowledge translation to mobilize communicable, easily understandable knowledge; 4) facilitating bi-directional knowledge exchange and collaboration, keeping a focus on issues of epistemic injustice in the generation of knowledge in global and public health research; and 5) promoting the work of early-career researchers, Global South researchers, women (among others), even though there might be a “pause” in ongoing research (for example, by fast-tracking their peer-reviewed publications (Population, 2020) or having calls specifically for under-represented groups in academia (Medical Research Council, 2020)).

3. Conclusion

Early and continuing lessons learned from these unprecedented pandemic times have taught researchers, including early-career researchers, to critically analyze the context in which research is being conducted: is the research we had planned to conduct timely and necessary? If so, how can it be adapted given the context at hand and what are the ethical implications of this adaptation? If research merits a pause, just as some activities throughout the rest of the world have been put on hold in the early and continuing phases of the pandemic, then what can be the role of early-career researchers? The pandemic can also give researchers opportunities to apply the skills they have developed in their training to generate and translate knowledge, including on topics related to COVID-19. In the pandemic context, we also acknowledge the opportunities to publish and to lead and/or join COVID-19 projects given increased funding calls related to the pandemic, but these can reinforce pre-existing inequities entrenched in academia and merit immediate and ongoing discussions and solutions. We hope that this commentary, informed by our respective experiences and recommendations, sheds

light on these above topics and generates larger discussions among other global and public health early-career and not-so-early-career researchers.

Submission details

The authors declare that this commentary (or parts of it) was not submitted nor published elsewhere.

Author contributions

JS conceptualized the idea for the commentary. JS, LG, MS, and ND wrote the commentary and critically reviewed its content. All authors approved the final version of the commentary.

Funding

None.

Declaration of competing interest

The authors declare that they have no conflict of interests.

References

- Alaszewski, A. (2006). *Using diaries for social research*. London: Sage.
- Anderson, R. M., Heesterbeek, H., Klinkenberg, D., & Hollingsworth, T. D. (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? *The Lancet*, 395(10228), 931–934.
- Anderson, J. P., Wullum Nielsen, M., Simone, N. L., Lewis, R. E., & Jagsi, R. (2020). COVID-19 medical papers have fewer women first authors than expected. *Elife*, 9, 358807.
- Bartlett, C., Marshall, M., & Marshall, A. (2012). Two-eyed seeing and other lessons learned within a co-learning journey of bringing together indigenous and mainstream knowledges and ways of knowing. *Journal of Environmental and Social Sciences*, 2(4), 331–340.
- Büyüm, A. M., Kenny, C., Koris, A., Mkumba, L., & Raveendran, Y. (2020). Decolonising global health: If not now, when? *BMJ Global Health*, 5, Article e003394. <https://doi.org/10.1136/bmjgh-2020-003394>
- Canadian Institutes of Health Research (CIHR). (2020a). Cancelling the Spring 2020 project grant competition. Available here: <https://cihr-irsc.gc.ca/e/51927.html> (Accessed 11 April 2020).
- Canadian Institutes of Health Research (CIHR). (2020b). Resuming strategic funding opportunities. Available here: <https://cihr-irsc.gc.ca/e/52156.html> (Accessed 23 September 2020).
- Canadian Institutes of Health Research (CIHR). (2020c). Update on the spring 2020 project grant competition. Available here: <https://cihr-irsc.gc.ca/e/51987.html> (Accessed 23 September 2020).
- Canadian Institutes of Health Research (CIHR). (2020d). Supporting early career researchers affected by COVID-19: Temporarily “pausing the clock” for ECRs. Available here: <https://cihr-irsc.gc.ca/e/52132.html> (Accessed 23 September 2020).
- Canadian Institutes of Health Research (CIHR). (2020e). Health system impact fellowship – delayed. Available here: <https://www.researchnet-recherchenet.ca/rnr16/vwOprrntyDtls.do?prog=3203&printfriendly=true> (Accessed 23 September 2020).
- Carel, H., & Kidd, I. J. (2014). Epistemic injustice in healthcare: A philosophical analysis. *Medicine, Healthcare & Philosophy*, 17(4), 529–540.
- Daniel, A. (2020). As COVID-19 research gets fast-tracked, other projects shut down. University Affairs. Available here: <https://www.universityaffairs.ca/news/news-article/as-covid-19-research-gets-fast-%09tracked-other-projects-shut-down/>. (Accessed 8 April 2020).
- D’souza, N. A., Guzder, J., Hickling, F., & Groleau, D. (2018). The ethics of relationality in implementation and evaluation research in global health: Reflections from the dream-A- world program in Kingston, Jamaica. *BMC Medical Ethics*, 19(1), 50.
- Ellis, C. (2007). Telling secrets, revealing lives: Relational ethics in research with intimate others. *Qualitative Inquiry*, 13(1), 3–29.
- Filardo, G., da Graca, B., Sass, D. M., Pollock, B. D., Smith, E. B., & Martinez, M. A.-M. (2016). Trends and comparison of female first authorship in high impact medical journals: Observational study (1994–2014). *BMJ*, 352, i847.
- Fricke, M. (2007). *Epistemic injustice: Power and the ethics of knowing*. New York: Oxford University Press.
- Gautier, L., & Quesnel-Vallée, A. (2020). Health and social needs of unprotected unaccompanied minors in Paris in the context of COVID-19. *European Journal of Public Health*, 30(Issue Supplement_5). <https://doi.org/10.1093/eurpub/ckaa166.296>
- Gravel, P. (2020). La crise n’est pas une raison pour assouplir les normes scientifiques et éthiques, selon des experts. Available here: https://www.ledevoir.com/societe/science/577560/la-crise-n-est-pas-une-raison-pour-assouplir-les-normes-scientifiques-et-ethiques?fbclid=IwAR305pjhHmR_SpYWo2rTJVDT6f3PZVxW86v2JnDhNqJQAcgv_sbaBHyLpk (Accessed 26 April 2020).
- Gregor, S. (2006). The nature of theory in information systems. *MIS Quarterly*, 30(3), 611–642.
- Hand, D. J. (2018). Aspects of data ethics in a changing world: Where are we now? *Big Data*, 6(3), 176–190.
- Hasnida, A., Borst, R. A., Johnson, A. M., Rahmani, N. R., van Elsland, S. L., & Kok, M. O. (2017). Making health systems research work: Time to shift funding to locally-led research in the South. *The Lancet Global Health*, 5(1), E22–E244. [https://doi.org/10.1016/S2214-109X\(16\)30331-X](https://doi.org/10.1016/S2214-109X(16)30331-X)
- Imperative to Preserve Research Capacity (IPRC). (2020). An open letter to donors, funders and research councils. Available here: https://erspaudect983.owncloud.online/s/YiZgY6b2pqCUuuc?fbclid=IwAR1tljizE_Bnw_Snl3yfM6c0ALi7x7hCYg4QFbK7MMIaBw8cRtu6pjO2VumU (Accessed 25 April 2020).
- Iyer, A. R. (2018). *Authorship trends in The Lancet Global Health*, 6(2), E142. [https://doi.org/10.1016/S2214-109X\(17\)30497-7](https://doi.org/10.1016/S2214-109X(17)30497-7)
- Johnson, S. B. (2020). Advancing global health equity in the COVID-19 response: Beyond solidarity. *Bioethical Inquiry*. <https://doi.org/10.1007/s11673-020-10008-9>
- Kirmayer, J. L., Dandaneau, S., Marshall, E., Phillips, M. K., & Williamson, K. J. (2011). Rethinking resilience from Indigenous perspectives. *Canadian Journal of Psychiatry*, 56(2), 84–91.
- London, A. J., & Kimmelman, J. (2020). Against pandemic research exceptionalism. *Science*. <https://doi.org/10.1126/science.abc1731>
- López, C. M., Qanungo, S., Jenkins, C., & Acierno, R. (2018). Technology as a means to address disparities in mental health research: A guide to “tele-tailoring” your research methods. *Professional Psychology: Research and Practice*, 49(1), 57.
- Doing fieldwork in a pandemic (crowd-sourced document). (2020). In Lupton, D. (Ed.), (2020). Available here: https://docs.google.com/document/d/1clGjGABB2h2qbdUtgfqrIBHmog9B6P0NvMgVui_HZCl8/edit?ts=5e88ae0a#. (Accessed 15 April 2020).
- Maas, B., Grogan, K. E., Chirango, Y., Harris, N., Viévano-Latorre, L. F., McGuire, K. L., ... Toomey, A. (2020). Academic leaders must support inclusive scientific communities during COVID-19. *Nature Ecology & Evolution*, 4, 997–998. <https://doi.org/10.1038/s41559-020-1233-3>
- Makri, A. (2019). Bridging the digital divide in health care. *The Lancet Digital Health*, 1(5), 204–205.
- Medical Research Council. (2020). Joint global health trials (JGHT) call 11 - outline stage. Available here: https://mrc.ukri.org/funding/browse/joint-global-health-trial-s-jght-call-11/joint-global-health-trials-jght-call-11-outline-stage/?utm_medium=email&utm_source=govdelivery (Accessed 25 September 2020).
- Medie, P. A., & Kang, A. J. (2018). *Global South scholars are missing from European and US journals. What can be done about it?* 99570. (Accessed 24 September 2020).
- Minello, A. (2020). *The pandemic and the female academic*. Available here: <https://www.nature.com/articles/d41586-020-01135-9>. (Accessed 23 September 2020).
- Mitchell, U. A., Chebli, P. G., Ruggiero, L., & Muramatsu, N. (2019). The digital divide in health-related technology use: The significance of race/ethnicity. *The Gerontologist*, 59(1), 6–14.
- Nature. (2018). Nature’s under-representation of women. *Nature*, 558, 344.
- Pai, M. (2020). ‘Covidisation’ of academic research: Opportunities and risks. *Microbiology*. Available here: https://naturemicrobiologycommunity.nature.com/users/20892-madhukarpai/posts/65638-covidisation-of-academic-research-opportunities-and-risks?fbclid=IwAR2dyGLDA8TfGUE_7erLV_9Aac9YHVdgou6QxOhNnMvEYpQ_IQKc-pv9W9U (Accessed 25 April 2020).
- Panel on Research Ethics. (2020). Tri-council policy statement: Ethical conduct for research involving humans - TCPS 2 (2018). Available here: https://ethics.gc.ca/eng/policy-politique_tcps2-epct2_2018.html (Accessed 11 April 2020).
- Pinho-Gomes, A.-C., Peters, S., Thompson, K., Hockham, C., & Ripullone, K. (2020). Where are the women? Gender inequalities in COVID-19 research authorship. *BMJ Global Health*, 5, Article e002922. <https://doi.org/10.1136/bmjgh-2020-002922>
- Population. (2020). Young author’s prize. Available here: <http://www.journal-population.com/young-authors-prize>. (Accessed 23 September 2020).
- Potvin, L., Cargo, M., McComber, A. M., Delormier, T., & Macaulay, A. C. (2003). Implementing participatory intervention and research in communities: Lessons from the Kahnawake schools diabetes prevention project in Canada. *Social Science & Medicine*, 56(6), 1295–1305.
- Rains, S. A. (2008). Health at high speed: Broadband internet access, health communication, and the digital divide. *Communication Research*, 35(3), 283–297.
- Ray, S., & Srivastava, S. (2020). Virtualization of science education: A lesson from the COVID-19 pandemic. *Journal of Proteomics and Proteomics*, 1–4. <https://doi.org/10.1007/s42485-020-00038-7>
- Saffiedine, M., & Radwan, K. (2020). COVID19 and the race to publish: An ethical issue. *British Journal of Surgery*, 107(11). <https://doi.org/10.1002/bjs.11966>
- Spagnolo, J., Gautier, L., Champagne, F., Leduc, N., Melki, W., N’Guessan, G., & Charfi, F. (2020). Reflecting on dissemination strategies from global health research projects in Tunisia and the Republic of Côte d’Ivoire. *International Journal of Public Health*, 1–12. <https://doi.org/10.1007/s00038-020-01502-3>
- Stanislauski, F., Reichert, F., Werneck, F. P., de Oliveira, L., Mello-Carpes, P. B., Soletti, R. C., ... Kmetzsch, L., & Parent in Science Movement. (2020). Impact of COVID-19 on academic mothers. *Science*, 368(6492), 724. <https://doi.org/10.1126/science.abc2740>
- Townsend, E., Nielsen, E., Allister, R., & Cassidy, S. A. (2020). Key ethical questions for research during the COVID-19 pandemic. *The Lancet*, 7(5), 381–383.
- Tulley, C. (2020). Resetting your research agenda. Available here: <https://www.insidehighered.com/advice/2020/04/02/how-continue-push-your-research-forward-while-staying-home-during-pandemic-opinion> (Accessed 27 April 2020).

- Vigo, D., Patten, S., Pajer, K., Krausz, M., Taylor, S., Rush, B., ... Yatham, L. N. (2020). Mental health of communities during the COVID-19 pandemic. *Canadian Journal of Psychiatry*, 1-7. <https://doi.org/10.1177/0706743720926676>
- World Health Organization (WHO). (2020a). Coronavirus disease (COVID-19) advice for the public. Available here: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public> (Accessed 25 April 2020).
- World Health Organization (WHO). (2020b). Ethical standards for research during public health emergencies: Distilling existing guidance to support COVID-19 R&D. Available here: <https://apps.who.int/iris/bitstream/handle/10665/331507/WHO-RFH-20-1-eng.pdf>. (Accessed 25 April 2020).
- World Health Organization (WHO). (2020c). WHO urges countries to ensure the continuity of malaria services in the context of the COVID-19. Available here: <https://www.who.int/news-room/detail/25-03-2020-who-urges-countries-to-ensure-the-continuity-of-malaria-services-in-the-context-of-the-covid-19-pandemic> (Accessed 27 April 2020).
- Wosik, J., Fudim, M., Cameron, B., Gellad, Z. F., Cho, A., Phinney, D., ... Tchong, J. (2020). Telehealth transformation: COVID-19 and the rise of virtual care. *Journal of the American Medical Informatics Association*, 27(6), 957-962. <https://doi.org/10.1093/jamia/ocaa067>
- Yan, W. (2020). Early-career scientists at critical career junctures brace for impact of COVID-19. Available here: <https://www.sciencemag.org/careers/2020/04/early-career-scientists-critical-career-junctures-brace-impact-covid-19> . (Accessed 25 April 2020).
- Zarowsky, C. (2011). Global health research, partnership, and equity: No more business-as-usual. *BMC International Health and Human Rights*, 11(Suppl 2), S1. <http://www.biomedcentral.com/1472-698X/11/S2/S1>.