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Methodological and Practical Considerations in Rapid Qualitative Research: Lessons Learned From a Team-Based Global Study During COVID-19 Pandemic

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Abstract

Rapid qualitative research (RQR) studies are increasingly employed to inform decision-making in public health emergencies. Despite this trend, there remains a lack of clarity around what these studies actually involve in terms of methodological processes and practical considerations or challenges. Our team conducted a global RQR study during the COVID-19 pandemic. In this article, we provide a detailed account of our methodological processes and decisions taken related to ethics, study design, and analysis. We describe how we navigated limitations on time and resources. We draw attention to several elements that operated as facilitators to the rapid launch and completion of this study. Rendering methodological considerations and rationales for specific RQR studies explicit and available for consideration by others can contribute to the validity of RQR, support further discussion and development of RQR methods, and make findings for particular studies more credible.

Keywords

rapid qualitative research, COVID-19, pandemic, global health, interdisciplinary, qualitative methods

Introduction

Rapid qualitative research (RQR) studies are increasingly valued as part of public health emergency response efforts (Baxter et al., 2018; Démolis et al., 2018; Johnson & Vindrola-Padros, 2017). RQR involves the adaptation of traditional social science research methods and are essentially defined by their duration, as the name suggests (Johnson & Vindrola-Padros, 2017; Vindrola-Padros & Johnson, 2020). In the midst of specific public health emergencies, RQR studies can generate important and nuanced insights about behaviors, challenges, and social, political, economic, and/or health impacts in particular contexts with the speed required to inform timely and crucial decision-making. For example, during the 2013–16 West Africa Ebola outbreak, several organizations, including SONAR-GLOBAL and the World Health Organization (WHO), launched special calls to hire social scientists to design and lead rapid qualitative studies (Enria et al., 2016; Johnson & Vindrola-Padros, 2017). Findings from RQR studies carried out in the three most affected countries during that outbreak consequently served to advance understanding of fears, rumors, and transmission modes and support development of more widely accepted and effective infection control measures (Anoko, 2014; ERAP, 2014; Faye, 2015; Desclaux & Anoko, 2017; Marí Saéz et al., 2015). The

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COVID-19 pandemic has been the impetus to dozens of RQR studies (Jia et al., 2020; Liu et al., 2020; Papagiannis et al., 2020; Rhodes et al., 2020; Tan, Yu, et al., 2020; Williams et al., 2020; Kackin et al., 2020), designed to rapidly inform decision makers on a wide range of behaviors, challenges, and impacts of the pandemic.

RQR is an umbrella term for studies utilizing rapid methodologies and techniques for data collection and analysis. At its outset in the 1980's, RQR was developed by social scientists and, in particular, by anthropologists. It has since been adopted as a method in clinical research fields, including medicine, nursing, and social work, and since the '00s, RQR has become a recurring part of complex and public health emergency response efforts (Johnson & Vindrola-Padros, 2017; Vindrola-Padros & Johnson, 2020). Beyond their condensed time frame, RQR studies usually include an objective of supporting real time decisions, are iterative in their design, and rely on team-based development, implementation, and analysis (Vindrola-Padros & Johnson, 2020). Often, they are developed in dialogue with one or more organizations involved in the response that recognize a need for and are positioned to help disseminate and make use of findings (Tan, Lim, et al., 2020).

Many over the years have proposed strategies or techniques to improve the rapidity of qualitative research while maintaining rigor. These include, for example Rapid Ethnographic Assessment (Bentley et al., 1988), Rapid Assessment Process (Beebe, 2001), Quick Ethnography (Handwerker, 2001), Rapid Assessment Response And Evaluation (Brown et al., 2008), Focused Ethnography (Cruz & Higginbottom, 2013), Rapid Qualitative Inquiry (Beebe, 2014), and Rigorous and Accelerated Data Reduction (Watkins, 2017).

However, as noted by Vindrola-Padros and colleagues in their recent review of RQR for use in public health emergency responses, there remains significant variation amongst RQR studies, and some lack of consensus about what exact characteristics must be present for a study to be defined as an RQR (Vindrola-Padros et al., 2020). Furthermore, and of particular interest to our team, very few researchers have provided more than cursory detail about their experiences, challenges, and practical solutions conducting an RQR, or insight on how and why the methods they ultimately adopted were selected for the purposes of a specific rapid study (Vindrola-Padros et al., 2020).

Understanding the methodological decisions, challenges, and practical solutions made by researchers can contribute to the validity of the method, make findings more credible, render methodological considerations and rationales explicit and available for consideration by others embarking on RQR studies, and lead to the development of recommendations for methodological practice (Vindrola-Padros et al., 2020). Therefore, the aim of this article is to present key methodological decisions and lessons learned by our team in the process of conducting an international RQR study between March and July 2020. We begin by providing a summary of the study we conducted and its methods. Setting the stage for the discussion to follow in this way, we then detail the rationale, considerations, and concerns underlying our study's design. We describe and explain seven elements of our study's design and implementation that we regard as key enablers to the successful launch and completion of this study. These elements are (1) the set-up and functioning of an interdisciplinary and trainee-reliant team; (2) the decision of where to seek ethics approval in a global multi-country study; (3) the recruitment of COVID-19-involved clinical staff for interviews during a global pandemic; (4) rapid data collection; (5) rapid data extraction and analysis; (6) the juxtaposition of rapidity and rigor; and (7) dissemination of findings.

Triaging Care During COVID-19: A Case Study of Rapid Qualitative Research Study

The RQR study upon which this article is based is the: "Triaging Care during COVID-19: Global Preparedness, socio-cultural considerations, and communication" (Nouvet et al., 2020). Exploratory and international in scope, the aims of the study were to: (1) build evidence that could inform governments and healthcare organizations in their development and implementation of realistic and socially, culturally sensitive COVID-19 triage and triage communication strategies; (2) clarify what individuals positioned to be on the front lines of healthcare delivery regard as ethically crucial to the care and treatment of patients who would not be prioritized for critical care during the COVID-19 pandemic; and (3) contribute to debate and discussion on the perceived benefits, difficulties, and contextual differences that need to be taken into account when sharing information about pandemic plans for the triage of seriously ill patients (Nouvet et al., 2020).

The potential value of this study was first identified by the project leader and then confirmed in dialogue with WHO Covid-19 social sciences working group and in conversations with colleagues in West Africa (see Figure 1 for a timeline of the study). RQR studies are usually conducted in partnership with organizations and, in our case, the WHO social sciences working group and co-investigators proposed an additional focus on communication, that was not in the original proposal but did ultimately become one of the most unique contributions of this study.

The study is descriptive in nature and theoretically grounded in the critical realism paradigm (Bhaskar, 2011; Danermark, 2002; Sayer, 2010). Critical realism posits that reality exists beyond empirical knowledge and reductionism, is mediated through interpreted human experience and is a valuable foundation from which complex social phenomenon can be understood (Fletcher, 2017). Within this framework, and keeping in mind they are not mutually exclusive, our design of the data collection methods, interview guide, and analysis was informed by the intention to move quickly. Therefore, this study involved key features of RQR studies, which will be expanded upon in the following sections, mainly: shorter than usual time frame from launch to

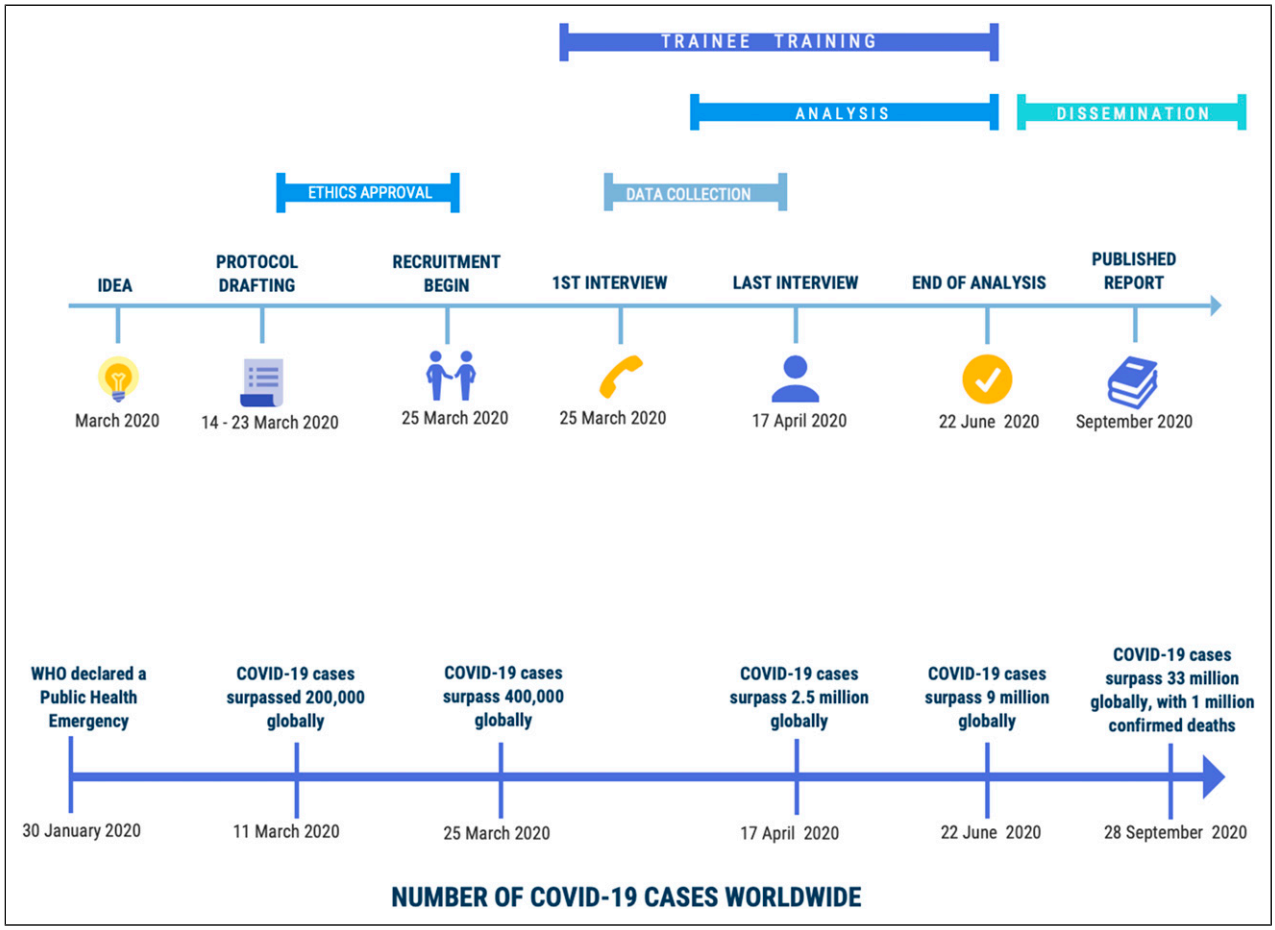

Figure 1. Graphical representation of study timeline.

dissemination of findings; an objective of rapidly gathering global input on insiders' perspectives; and the development and use of a data extraction and analysis approach designed specifically to accelerate the research process.

Sample and participants. Purposeful and snowball sampling were used to recruit participants positioned to treat or already treating patients diagnosed with COVID-19. Recruitment followed the principle of maximal diversity in participant role and expertise. We sought representation across all the five WHO regions, high-, middle-, and low-income countries, gender, professional background, and degrees of experience with COVID-19.

The main inclusion criterion was current or potential involvement in the implementation of triage guidelines during the current COVID-19 pandemic. Secondary inclusion criteria involved a willingness to reflect on care and treatment plans and on possible best practices for those seriously ill patients who were or could potentially become ineligible for critical care due to pandemic stresses on healthcare resources. A total of 67 respondents were recruited, with 15 providing written responses and 52 participating in semi-structured interviews. The majority of participants were physicians (51%) followed by nurses (24%). The majority of participants were located in the Americas (n=25), Europe (n=18), and Africa (n=15) (Nouvet et al., 2020).

Data collection. Data were collected from 52 in-depth semi-structured interviews and from online open-ended surveys from 15 others over 3.5 weeks in April 2020. Participants were asked to review and sign a consent form before the interview and asked to complete a demographic questionnaire. Interviews were conducted by phone or via Zoom (Zoom Video Communications, 2020) in English, French, or Italian, according to the participant's preferences and digitally recorded with the participants' permission. Interviews were led or supervised by co-investigators (EN, PS, and ML) with extensive qualitative and interview-based research experience. Participants were asked: (I) Whether there was a specific plan about the allocation of critical care to COVID-19 patients in their workplace; (II) What care could and should be provided for patients triaged out of critical care; (III) Who should have the authority to make critical care triage decisions when the system is overwhelmed; (IV) Should triage criteria and plans

be shared transparently with patients and families as well as with the general population; and (V) What are potential difficulties of sharing such triage criteria guidelines and plans.

Analysis. Data were analyzed using a team-based descriptive thematic analytic approach (Braun & Clarke, 2006). Thematic Analysis was chosen because of its flexibility, wide range of applications, its coherence with the critical realism framework (Clarke & Braun, 2017), and overall coherence with our aims and methodology (Luciani et al., 2019). Analysis was concurrent with data collection, and findings were checked among data collection methods and sources, against themes, and back to the original data set (Braun & Clarke, 2006). First, trainees listened to the audio of interviews to extract and record responses to key questions with supporting quotes to an interview summary table (Table 1). This summary table was provided in advance to the trainees and designed alongside the interview guide before data collection began, to facilitate rapid and systematic recording and comparison of participant responses to key study questions. Completed summary tables were double-checked by co-investigators against the original audio to guarantee accuracy.

All the summary tables were collated in a data extraction spreadsheet, with one row per participant. Each column of the spreadsheet included one row of the data extraction summary tables (Table 1), in the same order. So, for example, column S contained participants recommendations about communication and column T the significant quotes transcribed verbatim. Furthermore, each row was color coded to easily recognize the preparedness stage of the participant and if they were from high-, middle-, and low-income countries.

The project leader (EN) worked in parallel with 1–2 co-investigators for each data column to analyze the content captured in the data extraction spreadsheet. Emerging patterns in the data were noted, and eventually consensus on key findings was achieved through weekly team Zoom meetings. These Zoom meetings were an opportunity to discuss and resolve discrepancies in interpretation. For written responses, two co-investigators (SdL and PS) worked in parallel to reach consensus on the key themes in these data. They observed no significant differences between the content and implications for practice of interview versus written responses, so that these findings were layered into the results from the interviews. Finally, all co-investigators reviewed key findings and discussed implications for practice. The analysis phase duration was 3 weeks (Figure 1).

Ethics. Ethics approval (approval number 115716) was obtained from the Western University Research Ethics Committee (London, Canada). For the interviewees, written or recorded verbal informed consent was collected. Participants were provided with the consent form ahead of the interview, with some receiving the interview questions in advance of the interview upon request. Consent, if verbal, was obtained and recorded the day of the interview. For those participating in the study through a written response, consent was embedded within the Qualtrics online written response platform (Qualtrics, 2020).

Considerations for Rapid Qualitative Research Study Design Processes

We have identified seven issue that we believe are important to maintain methodological integrity of the study. The considerations for each issue are explained in great detail for the readers to extrapolate and verify the trustworthiness we enacted conducting this study and, therefore, its validity. As a guiding principle in terms of time allocation to the various parts of the study, we chose, as depicted in Figure 1, to save time by having research tasks happen simultaneously and not to wait until one was complete before we moved to the next. Therefore, key principles were integration, coordination, and communication among the team and commitment to the study from all team members.

(1) The set-up and functioning of an interdisciplinary and trainee-reliant team. Rapid qualitative research studies are often team-based (Vindrola-Padros & Johnson, 2020). Our team included an international, interdisciplinary, and interprofessional team of 10 co-investigators and 10 trainees. The co-investigators included three nurses, a global health expert also trained as a physician, an ethicist, and two anthropologists. This interdisciplinary composition facilitated development of a protocol attentive to the ways in critical care triage could be shaped by diverse mechanisms and factors exerting their influence at multiple levels (Danermark, 2002). Our interdisciplinary team included complementary expertise in the power of social values and norms to guide behavior and rationales, priority-setting in public health emergencies, and the realities of bedside care and triage. Co-investigators held extensive and diverse expertise in the design and conduct of qualitative research methods. Furthermore, the international connectedness of the team and strong collegial networks through our combined decades of work in global health and critical care research, allowed recruiting participants in all the WHO regions and within different professions.

Trainees were key to supporting study processes and productivity. Trainees were predominantly undergraduate health sciences students from Western University, but also included two Masters candidates and a doctoral candidate studying with the PI. The research team was committed to creating opportunities for trainees in general. The onboarding and training of 10 trainees did require time and thinking through of supervisory relationships. Three trainees were supervised in the conduct of their first interviews, which required the project leader to allocate time to do so. The involvement of trainees in data extraction also implied training and supervision, achieved through auditing by a co-investigator for quality and completeness. If one has the

Table 1. Summary data extraction table.

Participant ID & Country	
Workplace setting during pandemic (COVID-19 only, mixed hospital, mixed community)	COVID treatment center/hospital Healthcare center caring for seriously ill COVID-19 patients amongst others No location—Expert/consultant for development of guidelines re: triage and care Other
1. What is the population this individual normally serves? (Cancer patients, homeless, migrants, general) Bullet points please.	
2. Is there a plan for the triage of critically ill patients (who will be prioritized for intensive care) in that context?	Yes No or not yet
3. What care is currently available to patients who are **seriously ill** with COVID-19 symptoms in the participant's work context? Bullet points please.	ICU if needed Limited ICU/vent (describe): Other:
4. Does the participant think about prioritizing some patients over others based on pre-determined criteria such as age will work?	Age based criteria in place or makes sense Age based criteria will not work Other:
Any Quotes?	
5. What **other than age** could inform which patients gets priority for critical care in this context?	Gender Money Social role/connections Other: _____ Summarize point made on those factors (2–4 sentences)
6. Is there a plan for patients will not (as a result of resource shortages) receive intensive/critical medical attention?	No, not at present Yes (If yes describe plan briefly)
Any Quotes?	
7. Recommendation for care of the critically ill triaged out of life-saving/intensive care in worse case scenario. What can or should be done for these patients or their families, in the participant's view? What would help and why?	1. 2. 3.
8. Do they express concern for the mental well-being of the frontline workers?	No Yes (If yes, please summarize concerns in 1–2 sentences)
Any Quotes?	
9. What other concerns do they mention?	1. 2. 3.
10. Who do they should decide which patients are prioritized? Explain briefly.	Hospital-based committee Hospital teams on case-by-case basis Community Other: Explain their view (3–5 sentences):
Any Quotes?	
11. What are the participant's recommendations *with respect to communication* about COVID-19 triage and care plans, in summary?	Maximum 3 sentences.
12. What needs to be taken into account, when engaging in these communications, (with patients, families, communities), in summary?	1. 2. 3.
13. Do any past experiences or overarching concerns seem to be informing the participant's responses in this interview in general, or to particular questions?	Maximum 4 sentences.
Any Quotes?	

possibility, recruiting and hiring students who have some experience is a good option within the context of an RQR, as this would alleviate already intense time pressures on supervising co-investigators. Trainees faced a steep learning curve, but also found their experience rewarding (Salam et al., 2020). Furthermore, having a large team meant less time for each researcher for the data immersion process, which was important for the rapidity of the method.

Of note is that the global nature of the pandemic meant that research team members were also experiencing ever changing and significant effects of the pandemic in Canada and Italy. We were, and are, living and conducting research in this context of

Table 2. Summary of challenges and recommendations.

Challenges	Recommendations
Specific to RQR	
Rapid proposal development	Develop relationships with stakeholder and decision makers. Work in team to optimize time. Work in interdisciplinary team, to support development of protocols where these are intended to advance understanding of complex and emergent phenomena. Gain rapid access to resources (e.g., funds, team members, and trainees).
Rapid (expedited) ethics review	Expedited ethics review procedures in place prior to pandemic and/or responsive ethics committee that will adapt to research context created by pandemic If not in a pandemic or if ethics committee does not have an expedited process, design your activities and task allocating time for ethics committee approval process time.
Quality control to maintain rigor in rapid research processes	Digitally record interviews to enable re-checking of analysis comprehensiveness and accuracy at the end Plan for close supervision of less experienced researchers by senior, experienced members of the team to ensure consistent quality of analysis. Weekly full team meetings to address emerging questions related to data collection and analysis and to ensure all shared tasks are operating based on shared understandings and approaches. Commit time for significant, intense immersion in data gathering and analysis within short time frame. Have at least one investigator (ideally the PI) have a detailed overview over every step, task, and activity.
Rapid data collection	We do not advise to reduce any time allocated for data collection. To shorten the overall data collection time, have it overlap with other activities, for example recruitment and analysis. Identify team members willing and able to prioritize data collection over other responsibilities for the duration needed.
Rapid data extraction and analysis	Design a data extraction spreadsheet and analysis process specifically to accelerate the focus of data extraction. Clear outlining of responsibilities and timelines to co-investigators at outset, to support full team participation and timely completion of analysis. Use rapid analysis techniques and methods, such as RADaR or avoiding full interview transcription. If in need of transcribing, make use of artificial intelligence transcribing software (e.g., Zoom and Otter.ai).
Access to technology that supports all research processes	Have more than one possible technology (e.g., phone and Zoom) approved and available for data collection. Save files in password protected Cloud file to allow access for all the investigators at all time.
Inexperienced trainees	Provide training sessions for trainees with designated research team methods experts. One supervisor available for trainee supervision and mentoring 24/7 during data collection. Recruit and hire students who have some experience with RQR and who can commit to short project immersion. Select trainees who are focused on learning about international/global study methods.

(continued)

Table 2. (continued)

Challenges	Recommendations
Participant representation sought across all five WHO regions, high-, middle-, and low-income countries	Create and optimize conditions to make participating as easy as possible. Design your study with equity, diversity, and inclusion in mind. Draw on previously established relationships from existing networks of research team members to identify key informants and possible participants. Offer choice of interview in real time or online written response platform. Have team members fluent in language other than English.
Preferred language of participants	Having only English-speaking researchers could hinder the uptake of the study from participants. Diversify language fluency of team members. Design your study with equity, diversity and inclusion in mind
Establish diverse invested research team	Develop positive, diverse, and global relationships and networks.
Ethics review by different countries or home institutions	Recognize access to participants in various regions and/or country of practice may be limited if ethical approval not received in their home institution or country. Evaluate on a case-by-case basis. Specific to health emergency/pandemic situation.
Pandemic-related increase in pressures placed on already-busy participants	Increase availability of interviewers to fit into participant availability. Do not underestimate the need for people to share their voice and to take time to reflect upon their experience.
Need to tolerate and respond to pervasive uncertainty created by dynamic pandemic context in the professional and personal lives of researchers and participants	Expect and respond to sudden new and unforeseen issues. Relationship building and maintenance requires understanding and kindness of team members to one another: group problem-solving for frequent unforeseen logistical challenges and stepping up/in to help when plan changes.

uncertainty that is at once global and proximal. Personal and professional difficulties and challenges during the pandemic, such as an increased workload related to transitioning university teaching fully online, home schooling, and the pressures of navigating lockdowns and risks of infection complicated the conduct of the study as compared to our usual research schedules. Members of the team were committed to the short timeline and available to help meet milestones at the start of the study, but with the rapidly changing context and overall uncertainty, those commitments were at risk of being destabilized at any moment. Had any unexpected additional demands on time or sickness affected a team member or family member, we were ready to shift responsibilities according to current availability while maintaining the integrity of the team. The background of the co-investigators as qualitative researchers provided some preparedness for this possibility, given that they are used to being nimble and working with unknowns. The pre-existing relationships of trust and collaboration amongst the co-investigators also merit mention. Research is about relationships within the team. Especially with demanding timelines and within uncertain contexts, good relationships among team members can play an important role in facilitating RQR.

(2) The decision of where to seek ethics approval in a global multi-country study. We sought approval from a Research Ethics Board (REB) at Western University. COVID-related studies were granted priority and benefitted from an accelerated review process that decreased the time of the entire review process including responses and amendments. We did not seek REB review from other universities where co-investigators were embedded, as it is the norm to do so only for the University of the PI.

Since we were recruiting participants from around the world, it remains unresolved whether REB approval would be required in each country or jurisdiction where potential recruitment would take place. In the current study, one colleague researcher we reached out to felt they were not able to help with recruitment because we did not have local approval in the country where they were based. We did not insist, understanding that different jurisdictions do have different rules and expectations when it comes to ethics approval for a study such as ours, and these must be respected. Our team subsequently did discuss whether we needed approval in all countries involved. Coherently with our experience doing international studies and previous recommendations from REBs, our team agreed that it was unrealistic and arguably unnecessary to seek approval in a country for 1–2 interviews that is part of a 50+ interview and multi-country data set. This is consistent with some research ethics policy interpretations, including of the Canadian Policy Statement on multi-jurisdictional research, which reports that "if recruitment and/or data collection

involving an institution's members as prospective participants is done through other means that do not involve the resources of the institution, the research would not fall under its auspices and would not be subject to review by its REB" (Government of Canada, 2016). This reasoning is also coherent with the ethical concepts of beneficence and justice (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979): risks to participants were evaluated as minimal by the PI's local research ethics committees. Assured that we minimized the risks as far as possible, we reasoned that the potential benefits to the findings of the research of having multi-jurisdictional perspectives justified making practical sacrifices. Nevertheless, we were explicit about this and respected any choice not to participate as a result. The decision to limit approvals to the primary investigator's country and institutional base is certainly also pragmatic in the context of a rapid study. We do not endorse cutting corners; however, it is a reality that if RQR studies were expected to seek REB approvals in multiple countries, this would significantly delay a study's initiation, and compromise its ability to be rapid.

This raises the question, which we still have not answered: what is the threshold, if there is one, for seeking individual country REB reviews on a multi-national qualitative study? Each jurisdiction has potentially unique considerations for its population. Every review holds potentially valuable insights for their jurisdiction and others, and a right of sovereignty to determine what research will take place in their context. Still, when 1–2 interviews are sought in several different countries, the practicalities of applying for a review in each place, with no guarantee of recruiting there, would be impracticable. We eventually decided to refrain from asking institutional contacts such as hospital human resources offices in different jurisdictions for assistance sharing the recruitment information. Instead, we relied on word of mouth and informal networks to share information about the study, clarifying that sharing the invitations, like participation, was voluntary.

(3) Recruitment of COVID-19-involved clinical staff for interviews during a global pandemic. Unlike others (Vindrola-Padros et al., 2020), we did not ask: "to research or not to research." We asked: "how we can do it ethically?" and reflected, in general, on the ethics of research in a public health emergency. An ongoing ethical concern was of the burden that participation might impose on already strained frontline workers. Therefore, we offered an alternative by designing an online response platform to complement our qualitative approach based on interviews. We considered that allocating time for an interview might be too time consuming, while answering the same questions in writing could take considerably less for those who preferred it, albeit canceling the researchers' possibility to probe and ask further questions. Written responses took 15–20 min, while interviews had a mean of 45 minutes. By offering the opportunity for online written responses, we aimed to increase participation of those for whom COVID-19 had created chaos and demand for their services and that made committing to an interview difficult and an asynchronous possibility more appealing.

We did reflect about the busyness of individuals who fit our inclusion criteria, and the ethics of interrupting responsibilities with interviews, especially for those in the frontline of care. As we write, and to our knowledge, there is a lack of research pertaining to the ethical viability of interviewing, and subsequently occupying the time of, frontline health employees during a public health crisis such as COVID-19. However, we also anticipated the potential quarantine situation of some colleagues who might have extra time to contribute while at home. This, in reality, did not happen in our sample. What did occur is that people wanted to talk and support a discussion on resource allocation; they appreciated to the opportunity to voice their experience and most were eager to talk. We know that qualitative interviews have the potential to be therapeutic for those participating (Rossetto, 2014). Despite the aim of only collecting information, qualitative research interviews have a "side-effect" of letting participants share their experience and reflect on it in a non-judgmental setting. This may have positive effects in that interviews may serve to reduce stress, increase self-awareness, and help create meaning associated with the situation (Rossetto, 2014). Therefore, despite the fact we did not have compensation to offer the participants, we believe participation to this study was a medium for them to give back to the global community, make their voice heard, and reflect on their experience.

We drew on extensive personal, clinical, and research networks in which we have established credibility to advertise the study. The interviewers were flexible around time and mediums of the interview (e.g., phone or Zoom) in order to convey respect for the participants' individual contexts. Interviews were conducted in one of three languages according to participant preference to optimize participation from several non-English speaking countries. Our interviewers were available 24/7. In retrospect, this utter flexibility in the interviewers' schedule may have acted as a burden or constraint on voluntariness for participants. It is easier to politely decline an invitation to a study when interviewers have limited availability, while it might be harder to decline in the face of total interviewer flexibility. As a team, we discussed the tension that existed between leveraging our personal networks and exploiting their goodwill. We respected any concerns or hesitancy about participating by those who were worried about how an employer would perceive and possibly restrict their involvement. Although as researchers we were committed to optimizing the number and diversity of participants within a very short time, we were also cognizant of the potential harm that could result from perceptions of undue pressure to participate. Consequently, there were multiple potential participants that refused to participate despite full anonymity. If a participant expressed concerns or stated they did not have time, we did not insist in any way.

(4) Rapid data collection. Among all the steps in the study, data collection was the most traditional and conventional of all. The rationale was that having high quality data is of the utmost importance and is worth spending more time on. In fact, when designing the study and deciding where to save time, we determined not to adapt, reduce or compromise data collection, especially the time allocated per participant. Instead, we designed strategies to reduce the overall data collection time frame moving it to weeks instead of months. We did this by having a large availability of interviewers, both in numbers and in time allocated per day, having multiple data collection sources (interviews and open-ended surveys), having multiple languages to collect data in (English, French, and Italian), and multiple technologies (phones and internet). Furthermore, while it is a common feature of qualitative research in general, we used concurrent data collection and analysis. This overlapping of activities allowed us to save additional time.

A practical consideration about data collection in our study entailed the use of telephone technology. For participants with limited internet connectivity and for whom Voice over Internet Protocol was impossible, the interviews were conducted using cellular or landline phones. This had implications in some cases on the budget and workload distribution. Due to COVID-19 restrictions, researchers had to work from home and use their own phones. Because phone calls to landlines and cell phones often surpassed $100 USD per interview, the PI assumed responsibility for the conduct of interviews, instead of having trainees conduct them, incurring these costs. The result was that the PI absorbed $1000 USD in costs personally until reimbursement several weeks later.

Published experiences about conducting interviews via Voice over Internet Protocol, phone, or web video services highlighted positive aspects such as accessibility, the possibility to reach geographically distant participants, increased participation for busy individuals, and an increased perception of privacy (Archibald et al., 2019; Farooq & de Villiers, 2017; Gray et al., 2020). While we recognize these benefits, we believe remote interviewing holds its challenges as well. In some low-income countries settings in particular, internet and even phone connectivity was at times very difficult. When this is the case, many potential research participants could be excluded if their participation depends on access to technology. Furthermore, we do not assume that in-person meetings hold the same significance everywhere, but there are certainly contexts where socially and culturally, the possibility of trust-building seems to hinge on face-to-face interactions. Our use of snowball sampling allowed our team's researchers to be vouched for by someone else participants knew and trusted. This method of recruitment may have facilitated trust-building despite the impossibility of meeting face-to-face. Furthermore, the use of Zoom (Zoom Video Communications, 2020), with its audio and visual potential, allows for nonverbal cues and body language to strengthen interviewer–participant trust and optimize interview data (Archibald et al., 2019).

(5) Rapid data extraction and analysis. To ensure a rapid analysis, we significantly streamlined the transcription production, as others have done (Halcomb & Davidson, 2006; Watkins, 2017; Vindrola-Padros & Johnson, 2020). Selected verbal data were transcribed into the data extraction summary table (Table 1) which were then collated in a data extraction spreadsheet. Unlike others (Giesen & Roeser, 2020), we did not use a codebook or a qualitative data analysis software, but instead, collated extracted data in a spreadsheet. This allowed us to extract data focusing on our key research question, noted as an advantage in the RADaR technique (Watkins, 2017). During weekly team meetings, some team members expressed concerns about the possible decontextualization when data excerpts were removed from the broader context of the interview. We also were aware of the possibility to introduce researcher bias in the choice or interpretation of excerpts (Vindrola-Padros & Johnson, 2020). We used different strategies to overcome these challenges. Firstly, we used a team-based approach to the analysis. Two co-investigators (EN and PS) assumed responsibility for becoming extremely familiar with the whole dataset by listening to all interviews at least once and reviewing all data extraction summaries. Additional members of the team involved in the conduct of or data extraction from specific interviews became very familiar with particular interviews. All co-investigators assumed responsibility for analysis within a particular section of the data spreadsheet, becoming experts about data on a particular theme. Finally, weekly meetings allowed for reflective and critical discussion regarding interpretation and emergent links between themes.

Quality control at all points was a priority. We employed processes to ensure clear instruction about the data extraction, analysis, and expectations and needs for reporting (Nouvet et al., 2020). Having two persons extremely familiar with the whole dataset was also critical to an effective rapid analysis process. This enabled an understanding of specific data in the context of the entire set, but also because this facilitated identification of potential points of similarity or difference in the absence of coding software and reduced the bias which might have stemmed from co-investigators working only on specific themes. The report was directed at decision-makers and WHO working groups, and it is publicly available. Furthermore, intermediate objectives helped achieve a rapid and timely conclusion of the study. These strategies are coherent with previous experiences of team-based analysis (Giesen & Roeser, 2020).

(6) The juxtaposition of rapidity and rigor. Traditionally, rigor in qualitative research has been associated with the length of time regarding immersion with data; however, the development of RQR indicates that rigorous findings can be also developed rapidly (Gale et al., 2019; Johnson & Vindrola-Padros, 2017). Still, time, context, and the rapidity of the study processes posed their own challenges and constraints. The study was conducted during a rapidly transforming global COVID-19

related context. The research team needed to take into account that data could have become outdated before the study completion and dissemination of findings. The design, data collection, and analysis needed to be fast paced (Figure 1). To ensure rigor and utility of findings, we considered immersion in the study and data as a priority for research team members who could allot time and meet short deadlines, therefore substituting singular length of time immersion with more people allocating time for it. Furthermore, during the analysis we used weekly meeting to discuss reflect on and challenge interim analysis in order to conduct mini-audits and perform multiple analytic cycles.

Because our team was trainee-reliant, trainees were provided continuous training to coordinate recruitment and interviews across time zones and languages. To promote rigor, trainees shadowed the co-investigators during early interviews with participants, took part in virtual research meetings and deliberations, and had an assigned co-investigator audit their extraction tables and investigators' notes. While training took time, competent trainees were crucial given the labor demands of this RQR study and the limited funds at hand to hire a team of professional interviewers and analysts. It is important to recognize the privilege we have of being university based and having, through our positions as co-investigators, access to students who wanted the experience and were willing to participate in this study. Other researchers, who may not have access to these resources, may need to rely on the voluntary collaboration of others who have less training.

In conclusion, there were many critical decisions made during the course of this RQR that allowed us to find a balance between rapidness and rigor. First, related to the request for expedited reviews from REBs, an ambitious recruitment plan and the reliance on personal, clinical, and research networks. Then, a diverse and committed research team allowed for quick data collection, data immersion, database cleaning, concurrent data collection and data analysis, and weekly meetings to discuss findings, debrief, and reflect on rigor and processes.

(7) Dissemination of findings. The primary objective for dissemination in RQR is to make findings rapidly available to decision makers. This informed our decision to prioritize an open access detailed report, available in French and English and target peer review publication as secondary. Currently, our work has been disseminated primarily through circulation of this report via our networks and participants' networks (Nouvet et al., 2020), webinars (World Association for Disaster and Emergency Medicine, 2020), and oral communication at the July Global Research and Innovation Forum of the WHO (World Health Organization, 2020) and the International Association for Communication in Healthcare (Strachan et al., 2020). However, while all of these dissemination strategies are useful to reach an audience of decision makers and scientists and respond to the primary objective of rapid dissemination, they might have disadvantages. In fact, the decision to postpone the scientific journal publication process, because of the length of the procedure and the timing out of our control, made our dissemination products so far fall under the gray literature umbrella, which could make it less discoverable to other scientists and decision makers who are not purposefully looking for it.

Conclusion

This paper provides a methodological description, reflection and a guide to assist researchers who want or need to conduct a RQR study. It provides a transparent step-by-step description of the research process and explicit discussion of the challenges and lessons learned. Finally, we proposed some strategies to deal with the challenges, hence advancing this otherwise opaque and very subjective approach. The context in which we conducted our study is particular and determined key aspects of our design, such as our heavy reliance on virtual meeting software and the phone. Nevertheless, aspects of our study's design and RQR can be used to build evidence quickly for decision makers in any context marked by a pressing need and emerging issues, both within a local and a global context, despite a health emergency status. Our considerations provide a solid basis on which to identify the resources needed to design the study, apply for grants, and allocate these resources rationally. We also encourage shared understanding and dissemination about the limits and guidance for this kind of research to ensure robust, methodological, and respectful practices for future rapid research.

Some elements of design or processes identified may be useful to consider even in non-rapid studies, as summarized in Table 2. We would stress the value across research projects in general of having co-investigators able to bring different professional and disciplinary lenses to bear on data, and the value of frequent feedback among researchers in all the phases of the study. Our adoption of structured data collection, extraction, and analysis procedures allowed us to confidently conduct a team-based study; however, we recognize it is not usable in every qualitative design. We also believe that, regardless of the length of time available for data immersion, methodological rigor and reflexivity must always be priorities in the conduct of qualitative studies. Issues pertaining to ethics, such as the recruitment of healthcare professionals who may already be overburdened by clinical duties, responsibilities to render findings accessible to the wider public, and the matter of REB approvals, are relevant outside public health emergency research contexts, though these may be particularly important to reflect upon in such contexts.

While we see the value of rapid research in some settings, we would not endorse it for all emergency situations. In the case of a new pathogen and the first pandemic in generations, we thought it would be justifiable to learn as early as possible to provide insights on where gaps in guidance were emerging. However, we would encourage anyone thinking about doing the same to reflect and seek other views about the justification

of RQR during a crisis. Furthermore, we acknowledge RQR studies, especially if on a global scale, are not equitable in the sense that by being so resource-intensive the ability to conduct them is limited to those with extended capacity to allocate time and money. However, most qualitative research methods can be useful in uncertain times due to their intrinsic quality of adjusting to uncertainty and remaining nimble throughout the research processes, useful during rapidly changing contexts.

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