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Commentary

In-situ at a distance? challenges and opportunities for health and place research methods in a post-COVID-19 world

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ABSTRACT

In-situ methodologies, including go-along and photo-elicited interviews, are ideal for harnessing people's lived experiences of place and their meanings for health and health equity. Their immersive nature means that the COVID-19 pandemic has impacted their use. Physical distancing measures combined to anxiety over the sharing of physical space have created ethical and practical challenges to the conduct of in-person in-situ methodologies. However, in-situ methodologies are precisely needed to gain deeper understandings of people's changing relationships to place post-COVID-19. In this commentary we discuss emerging challenges, highlight questions researchers should ask before engaging in these methods in the future, and explore adaptations and alternatives to traditional in-person in-situ methodologies.

“Given the physical distancing requirements due to COVID-19 and potentially long-lasting consequences of the pandemic, is it even possible to conduct “in-situ” research anymore?”

This was the question posed to one of the authors in response to an ethics application she recently submitted. Her project proposed using go-along interviews to understand the impact of urban revitalization on health inequities. Go-along interviews are one example of an “in-situ” methodology, others of which include place-based photo-elicited interviews and mobile focus groups. What these methods share is the immersion in place and real-time interaction with context. In-situ methodologies – data collection approaches conducted with participants as they move through settings that form the context of the research question – are ideal for harnessing people's lived experiences of place and their meanings for health (Dennis et al., 2009; Foley et al., 2020; Alexander et al., 2014). They are particularly well-suited for exploring place-based inequities and understanding the daily lives of people whose interactions with their environment are frequently marginalizing (Glenn et al., 2017; Wang and Burris, 1997).

The COVID-19 pandemic has undoubtedly brought significant changes to how people relate to each other and to their social and physical environments. This is particularly true in places where the virus continues to spread, like Canada and France where the authors live.

While the pandemic certainly places constraints on how in-situ research can be conducted, we argue that qualitative methods in general (Teti et al., 2020), and in-situ methodologies in particular, are precisely needed to allow for deeper understandings of how our changing relationships to place are experienced in the COVID-19 context. For instance, in-situ methods would be well-suited to understand the underlying place-based inequities which created the conditions for the new coronavirus to disproportionately affect marginalized populations (Bambra et al., 2020). Indeed, the pandemic and associated public health measures inequitably affected people's daily lives including how and where they live, work and socialize (Roser et al., 2020a). Given these varied and situated experiences of the pandemic, in-situ methods would be perfect to understand such inequities as they permit the researcher to immerse themselves in the participant's world. This is a multi-sensory shared experience that includes smell, touch, sight, and sound. These sensations are embodied – that is, they are experienced and understood through the body. As such, in-situ methods prioritize the body as lived-through (i.e., the phenomenological body) as the site of knowledge and understanding. Taking an immersive embodied approach can be especially useful for untangling how some populations or neighbourhoods (e.g., those characterized by socio-economic disadvantage, overcrowding, systemic racism, precarious employment, and low access to outdoor spaces) were hardest hit by the virus (Berkowitz

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et al., 2020; Abedi et al., 2020; Daras et al., 2021) and the impact this has had on people's lives.

We return now to the question posed at the start of this commentary: is it even possible to conduct in-situ research anymore? Yes, we argue, albeit differently. Here we outline the emerging practical and ethical challenges researchers face, why in-situ methodologies are an important tool for understanding health and place in a post-COVID-19 world, and how they can be adapted. Although we offer alternatives, we focus more on reflective questioning as a way of promoting further discussion, adaptation, innovation, and creativity.

1. Advantages of in-situ methodologies

In-situ methodologies have been used in a variety of contexts, such as outdoors while walking, cycling or driving with participants (Carpiano, 2009) to gather data on topics such as neighbourhoods and smoking (Glenn et al., 2017) or walkability (Dean et al., 2020), Indigenous gravesites and death systems (Kroik et al., 2020) or socio-spatial risk factors for malaria (Bempah et al., 2020). They have also been used indoors, such as in grocery stores to explore low income earners' food shopping practices (Thompson et al., 2013). In-situ methodologies have many characteristics which make them uniquely suited to studying experiences of marginalization and health in relation to place (Wang and Burris, 1997; Ross et al., 2009). By emphasizing participant leadership and contextually rich, situated knowledges and lived experiences (Evans and Jones, 2011), they are anti-oppressive, participatory and empowering, thereby lessening power differentials between researchers and participants (Carpiano, 2009; Finlay and Bowman, 2017; Catalani and Minkler, 2010). They also help participants expand their autonomy and control in relation to their future spatial capabilities by creating maps of their local spaces, pointing out cherished or avoided spots, or visiting new places in their neighbourhoods or other setting of interest (Glenn et al., 2017; Eisenberg et al., 2012). Furthermore, as multi-sensory embodied approaches (Low, 2015), in-situ methodologies have been shown to provide richer, more nuanced accounts of place and health relationships than more conventional interviews, and as such provide extremely valuable knowledge to the field of health and place (Carpiano, 2009; Kroik et al., 2020; Hitchings and Jones, 2004).

2. Challenges of in-situ methodologies during and post-COVID-19

In-situ methods are immersive by definition and rest, to some extent, on a shared closeness between researchers and participants as they experience a given setting together. Lockdown and physical distancing measures implemented to prevent the spread of the new coronavirus in many jurisdictions across the globe therefore make in-situ methods – typically conducted in-person – rather impractical and possibly unethical. Despite the heterogeneity of prevention measures worldwide (ews. Coronavirus: Th, 2020; Roser et al., 2020b), in the short- and medium-term in many countries, non-essential outings will remain discouraged, prohibiting researchers and participants from meeting in public spaces. Even when prevention measures are relaxed, researchers will need to mitigate risks to participants as long as COVID-19 is with us. This will be vital when conducting research with populations particularly high risk for spreading COVID-19 such as those living in overcrowded households and/or vulnerable to its most extreme health consequences such as older or immunosuppressed individuals.

Despite the pandemic's temporary nature, physical distancing guidelines will likely be in place for months if not years to come (Kissler et al., 2020), rendering most in-situ data collection methods difficult even in the long-term. Asking and responding to questions and recording conversations with distancing restrictions in place would be challenging, particularly when the topics are sensitive in nature and/or people are wearing face coverings. While in-situ methodologies can reduce the hierarchy between researcher and participant, having to keep

a significant distance would introduce a new type of barrier to the embodied closeness that is one of the method's great strengths. It would also present practical challenges related to the hearing and telling of stories. Finally, the pandemic and the associated prevention measures have created general anxiety over the sharing of physical and social space. In the long-term people are likely to continue to fear the virus and, to some extent, each other (Person et al., 2004; Statistics Canada, 2020; Hawryluck et al., 2004) which will impact how they experience the outside world. Adjusting to ways of living that are imbued with new fears and anxieties may mean a greater resistance to participating in research that involves walking next to another person for an interview. While there are other options available for conventional qualitative data collection, such as online or phone interviews, in-situ methods have generally required in-person interactions.

3. Reimagining in-situ methodologies

Despite the challenges the pandemic has created for in-situ methodologies they should not be discarded altogether. In fact, we argue that they are particularly relevant at this time as a means of studying the new and fragile lived experiences of place (Honey-Rosés et al., 2020) and the social and health inequalities that are being exacerbated or newly developed (Bambra et al., 2020). This however requires researchers to rethink their use of in-situ methodologies and examine adaptations and alternatives which still maintain epistemological congruence with traditional in-situ methods (CQ, 2020).

Faced with reimagining in-situ methodologies, researchers may ask themselves the following questions to guide their choice of an alternative. Responses to these questions may lead to the development of innovative and creative in-situ approaches that will be applicable now and into the future.

- What role(s) does the researcher need to play to facilitate meaningful and robust data collection: interviewer, observer, both?
- How can the added value of in-situ methodologies (e.g., immersion in context, embodiment, sounds, smells, emotions, playfulness) be preserved?
- How can the closeness and reduced hierarchical divide between researcher and participant that characterizes in-situ methodologies be preserved?
- How can we prevent reproducing social inequalities (in health) if using alternative, mostly digital technologies which may be impractical for marginalized groups or those less familiar with technologies?

Our reflection on these questions led us to identify several possibilities for adapting in-situ methodologies that include options characterized as either "real-time" or "asynchronous" (based on whether participants and researchers experience the context concurrently) and either "in-person" or "virtual" (based on whether the researcher is physically on site with the participant or connected digitally). These could be adapted for different contexts (e.g., indoor/outdoor, urban, rural), with different restrictions, and among diverse groups. Our goal is not to prescribe what to do in which situation, but rather to encourage reflection on what might work best for the particularities of the research context. We describe these alternatives, some of which have previously been used in various fields of research. We suggest ways in-situ methods at a distance might preserve the advantages of traditional in-situ methods, but also how the possible reproduction of social inequalities can be prevented. Pertinent here is the commitment of the researcher to facilitate interactions with participants while maintaining the in-situ advantages.

Go-along interviews conducted the requisite distance apart. The researcher follows the participant at a distance while asking questions over the phone with them. If the conditions allowed (i.e., quiet, secluded), this could also be done without a phone. This real-time in-

person approach allows the researcher to be both observer and interviewer. Immersion in context is preserved for the participant and the researcher and power relations are redressed given that the participant leads the way. Having to conduct the interview over the phone could however be distracting and affect participant and researcher safety. This method might also work better in less crowded spaces, allowing the researcher and participant to go-along together (rather than one following the other), while maintaining distance.

Photo, voice-memo or video elicited interviews. In this asynchronous virtual approach the participant goes on a solo walk through the place of interest and takes photos, voice memos or videos based on prompt(s) provided beforehand by the researcher (Dennis et al., 2009). Alternatively, the entire walk could be narrated and recorded by the participant. In either case, the interview takes place after the data have been collected by the participant. In this approach, the participant still assumes leadership while being immersed in the research context. They can decide when to do the walk and for how long, and perhaps feel less pressure from the researcher being present. The range of technologies that can be used (i.e., from digital voice recorder to video camera) also caters to more and less tech-savvy participants. However, the researcher's role is limited to that of interviewer after the walk, and the inability to ask follow-up questions in real-time may hamper a thorough understanding of the participant's experiences as they are lived.

Virtual walk around the place of interest. In this real-time virtual approach a participant wears a mounted camera around their chest or uses a hand-held device to 'show' the researcher around (Bempah et al., 2020). The researcher is at her computer allowing for two-way live interaction. This can also be done asynchronously, with a guided interview being conducted while the researcher and participant watch the video recording together to gather stories (Pink et al., 2017). Here again the participant lead is maintained. She experiences the context of interest firsthand with sights, sounds and smells triggering thoughts and emotions that are central to in-situ methodologies. While not immersed in place, the researcher can have a partial real-time sensory experience, providing for a more complete interviewer-observer experience. Wearing a mounted camera device may be uncomfortable for some, however, so flexibility may be required such as by allowing participants to walk along with someone from their COVID-19 "bubble" who can provide technical support if needed. Participant confidentiality may also be hard to preserve when such equipment is used, so caution is warranted (Breslin et al., 2019).

Geographically-explicit ecological momentary assessment. In this asynchronous virtual approach, general questions (e.g., "Where are you" and "How do you feel") are answered by a participant via a smartphone app. If combined with GPS tracking of the participant's movements through space, a follow-up interview can gather further details on experiences connected to specific places (Boettner et al., 2019). Leadership is shared between the researcher, who takes on an interviewer role and programs the questions and when they are to be sent, and the participant who can choose if and when to answer them. The participant is immersed in context, but unlike the alternatives described above, the rather close-ended "question and answer" format makes little space for recounting rich stories, memories and experiences anchored in place.

We acknowledge that the above suggestions require that participants rely on some form of technology. To prevent reinforcing social and spatial inequity by excluding individuals who may not be as tech-savvy as others, researchers should therefore carefully consider the practical and ethical implications of each approach when designing their studies (Breslin et al., 2019; Fuller et al., 2017). Researchers should also implement appropriate safety measures and strive for adequacy between data collection tools, context (e.g., indoor or outdoor, crowded or not), and participant characteristics, including their potential fear of leaving their home and engaging in interactions in public spaces.

4. Conclusion

We have all had to adapt in response to COVID-19 – in our lives and in our research. In-situ methods are no exception. Given their frequent dependency on close in-person interactions, the challenges are clear. In this commentary we approach them as an opportunity to reflect deeply on ethical and practical questions about how to move forward with in-situ research on health and place during COVID-19 and beyond. Our own reflective work has led us to conclude that the immersive, anti-oppressive, participatory nature of in-situ methodologies warrants preservation. We have outlined several possibilities to do so; however, we are early in our re-imagining and the suggested approaches have yet to be attempted or rely on techniques and technology that require deeper consideration, especially with regards equity and inclusion. COVID-19 will be with us for some time, and what the world will look like in the future is uncertain. What is apparent is that we will need to carry on pivoting in response. Let us continue to share our learnings, ideas, and concerns so we can re-imagine in-situ methodologies that foster inclusion and add to the toolbox of more traditional in-situ methods.

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Declaration of competing interest

The authors declare they have no conflict of interest.

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