

CONVERGE COVID-19 Working Groups for Public Health and Social Sciences Research

Research Agenda-Setting Paper

This paper was written to help advance convergence-oriented research in the hazards and disaster field. It highlights areas where additional research could contribute new knowledge to the response to and recovery from the pandemic and other disasters yet to come. Questions about the research topics and ethical and methodological issues highlighted here should be directed to the authors who contributed to this paper.

Working Group Name:

Indigenous and Earth Sciences Knowledges and Practices in COVID-19

Working Group Description:

COVID-19 is having specific and devastating impacts, yet it is already spurring resilient responses among Indigenous populations due to unique histories, cultures, geographies, and capacities. The Working Group on Indigenous and Earth Sciences Knowledges and Practices in response to COVID-19 foregrounded Indigenous perspectives in defining research questions for potential intercultural collaboration between Indigenous and Earth sciences to drive urgent, culturally relevant, and appropriate responses to COVID-19. The Working Group included intercultural, intergenerational, and interdisciplinary representatives from the Rising Voices Center for Indigenous and Earth Sciences, a nation-wide network of over 650 scientists, educators, students, and community leaders and organizers. To identify priority research areas and emerging questions, the Working Group hosted a webinar discussion and fielded a questionnaire with the Rising Voices community as well as utilized their own perspectives and expertise.

Priority Research Topics and Specific Research Questions:

All communities are experiencing the effects from the coronavirus; yet Indigenous peoples have experienced an exacerbation of issues that stem from the government shutdown. For Indigenous cultures, the relationship to place is paramount. Turning to the resilience and wisdom of their Indigenous ancestors continues to be a strategy used during all manner of disasters. The following topics were identified by the Working Group on Indigenous and Earth Sciences Knowledges and Practices in response to COVID-19 through community discussion and analysis of the community questionnaire. Fifty-three people responded to the questionnaire which investigated topics including:

- Where respondents live;
- Any challenges the respondents and/or their communities are experiencing that are exacerbating the impact of COVID-19 or hampering responses to COVID-19;
- What has gone well in respondents and/or their community's responses to COVID-19 including how Indigenous Knowledges and/or practices can be helpful;
- Any observations that respondents have made or heard about the coronavirus and COVID-19 related to climate or other environmental factors; and

- What questions respondents have about the coronavirus and COVID-19 related to climate or other environmental factors.

The priority research topics and emerging questions throw into stark relief the disparaging differences between Indigenous peoples and non-Indigenous peoples. They also encapsulate positive solutions in dealing with a worldwide outbreak by showing how to revert to traditional practices in times of need. The results from the questionnaire highlight four dynamics that Indigenous Peoples are facing in present day due to the coronavirus outbreak, including several emerging questions:

Food Security and Safety

Food security is a top concern due to the government not allowing access to certain areas and sites where traditional foods can be found. Traditional foods are obtainable through hunting, gathering, and hiking in the mountains and backcountry. These foods connect to the well-being of a person spiritually, mentally, and physically and their absence is detrimental on health when not obtainable. Another element to food security highlights the tribes and nations that live in the desert and other remote locations and their access to traditional sustenance is cut off. The only other option is to drive miles away to grocery stores. Because of stay at home and quarantine orders, however, this option is forbidden. This dynamic puts families at risk for unsafe and unhealthy eating practices. Some families are risking their health by eating what is obtainable even if out of sync with when the food is traditionally consumed; for example, shellfish consumed in certain places this time, of year can contain biotoxins potentially resulting in Paralytic Shellfish Poisoning for the consumer.

Pre-Existing Conditions

The many different disparities that Indigenous peoples endure during their daily lives are underlined and exacerbated at times of emergencies such as the novel coronavirus. Many of the results from the questionnaire highlighted concerns such as the high rates of poverty that are seen through housing security and limited resources that affect education, health, and financial stability. The lack of not having a job leads to a profound lasting effect on families and their individual members. Throughout the questionnaire, the need to raise attention to the continued biases and racism against Indigenous Peoples set a tone for the distrust of the U.S. government, thereby not taking the directives of stay-at-home seriously. What comes out of this discussion is the need to have reliable information and communication channels, which is challenging during physical isolation due to a lack of internet and computer access for many tribal members.

Turning to Resilience and Wisdom

The common denominator throughout the questionnaire results highlighted families navigating back to cultural and traditional practices. This finding highlights cultural practices of Indigenous Peoples that displays the entire family unit living together. These multifamily/multigenerational homes of more than ten members makes physical distancing difficult. Isolation and/or living alone is not common and strays from the philosophy of community over individual for Indigenous Peoples. The physical distancing hinders people's practices by not having family members together, much less during a time of a pandemic. Resilience and wisdom is found in the family unit. Together, a focused relationship on land and place occur simultaneously. Turning to the resilience and wisdom of ancestors for strategies used during similar events allows Indigenous peoples in modern times to become resilient based upon the knowledge from their ancestors. There are more people returning to traditional practices in medicines, food sources, gardening, and farming practices. In unity with the family and community, spaces have open in which the community networks and aids provide meals to youth, elders, and members that do not know where their next meal will

come from. The need to farm and garden appears to be the most common response to food security for most families.

Emerging Questions at the Nexus of Indigenous Wisdom and Knowledge and Earth Sciences

The questionnaire results include an array of answers that help to define research questions for potential intercultural collaborations between Indigenous and Earth Sciences to drive urgent, culturally relevant, and appropriate responses to COVID-19. The following questions are main ideas that came out of the questionnaire results for possible future projects.

- What role does temperature/humidity play in increasing or decreasing the spread of the coronavirus?
- What role do high levels of air pollution play in the spread of the coronavirus?
- As the climate and temperature changes, how does this effect exposure to new viruses?
- How can traditional practices, such as not eating predator animals or not disturbing soil in certain places with names that may include related information, prevent virus transmission to humans?

Ethical / Methodological Considerations:

By valuing Indigenous observations, knowledge, wisdom, and practices equally with Earth Sciences, this work contributes to decolonizing Earth Sciences, disaster management, and public health. Further, it works to mitigate the particular threats and impacts that Indigenous communities and populations face from COVID-19. Doing so addresses injustices in Earth Sciences and disaster management and in the disproportionately adverse impacts of COVID-19 on Indigenous communities. These different approaches occur because of the different worldviews that come with being an Indigenous person. A collective, co-informed understanding of these concerns and themes allows for a different perspective and thereby different solutions based on ancestral knowledge.

Ethically, research to address the impacts—whether of COVID-19, climate change, or any other disaster—with Indigenous populations must be driven by Indigenous communities and engage Indigenous partners, at all steps of the process and proceed only with free, prior, and informed consent. Methodologically, research in this vein must begin with approval from Institutional Review Boards and, only once approval is granted, go on to utilize Indigenous methodologies that value relationships of trust and reciprocity.

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