

# Indigenous mental health research in the context of climate change: methodological reflections on language and barriers to cultural practice

Samrawit Gougsa ,<sup>1</sup> Victoria Pratt,<sup>2</sup> Daniel Kobei,<sup>3</sup> Sylvia Kokunda,<sup>4</sup> Siwakorn Odochao,<sup>5</sup> Jenni Laiti,<sup>6</sup> Babitha George,<sup>7</sup> Jessica Sim,<sup>2</sup> Nicole Redvers<sup>8,9</sup>

<sup>1</sup>Minority Rights Group International, London, UK  
<sup>2</sup>Invisible Flock, West Yorkshire, UK  
<sup>3</sup>Ogiek Peoples Development Program, Nakuru, Kenya  
<sup>4</sup>Action for Batwa Empowerment Group, Buhoma, Uganda  
<sup>5</sup>Lazy Man Coffee, Ban Nong Tao, Thailand  
<sup>6</sup>Independent Artist, Jokkmokk, Sweden  
<sup>7</sup>Quicksand, Bangalore, India  
<sup>8</sup>Western University Schulich School of Medicine & Dentistry, London, Ontario, Canada  
<sup>9</sup>Arctic Indigenous Wellness Foundation, Yellowknife, Northwest Territories, Canada

## Correspondence to

Samrawit Gougsa, Minority Rights Group International, London, UK; samrawit.gougsa@gmail.com

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## ABSTRACT

Climate change creates unique forms of psychological distress for Indigenous Peoples whose identities and cultural practices are often intrinsically connected to ancestral lands, yet research on culturally appropriate methodologies for studying Indigenous mental health in the context of climate change remains limited. This perspective paper presents methodological reflections from Land Body Ecologies research collective, which collaborates with Ogiek (Kenya), Batwa (Uganda), Iruliga (India), Pgak'you (Thailand) and Sámi (Sápmi) Indigenous Peoples to explore climate change-related mental health impacts through the lens of solastalgia. Through participatory dialogues conducted during in-person gatherings, team members reflected on three years of community-based participatory research and identified two critical methodological challenges underexplored in the existing literature: (1) language and concept translation difficulties, where terms such as 'mental health' and 'climate change' lack direct cultural equivalents and may carry stigmatising connotations and (2) barriers to cultural practices, where climate change and conservation-related legislation restricts Indigenous Peoples' access to ancestral lands and traditional practices essential for well-being. These challenges reflect deeper epistemological tensions between conventional research approaches and Indigenous holistic worldviews that understand land, body and ecosystems as interconnected. It concludes that meaningful mental health research with Indigenous Peoples demands active recognition of Indigenous cultural rights and self-determination, collaborative approaches that honour Indigenous knowledge systems and systemic changes that normalise Indigenous timelines, relationality and knowledge sovereignty within research institutions.

## INTRODUCTION

Global mental health literature exists on the challenges of conducting studies with trauma-affected populations. Despite this, research on the use of appropriate methodologies tailored to Indigenous Peoples in some regions is limited. This limitation is especially prevalent in mental health-related research in the context of climate change. Land Body Ecologies (LBE) is a transdisciplinary research collective focused on understanding the mental health impacts of climate change through the lens of 'solastalgia' (ie, the personal distress that is produced by environmental change connected to one's home environment<sup>1</sup>); a concept particularly

relevant for Indigenous Peoples whose identities and cultural practices are often intrinsically connected to ancestral lands. Climate change disrupts interconnected relationships with sacred lands that sustain Indigenous health across mental, physical, spiritual and cultural dimensions. This disconnection creates unique forms of distress that cannot be understood through Western biomedical frameworks. Existing scholarship additionally demonstrates how conventional research has been used as a tool of colonisation,<sup>2</sup> often missing the emphasis on relational accountability and cultural approaches that can reshape research practices for Indigenous Peoples.<sup>3</sup>

LBE uses Indigenous and community-based participatory research methodologies and collaborates with Ogiek (Kenya), Batwa (Uganda), Iruliga (India), Pgak'you (Thailand) and Sámi (Sápmi) Indigenous Peoples. Research in each region is led by local teams, ensuring community-centred and community-led approaches.<sup>4</sup> The reflections in this perspective paper emerged from LBE participatory dialogues conducted during in-person gatherings in October 2024, where team members reflected on the collective's research activities over a 3-year period. Through these discussions, complemented by virtual consultations with researchers unable to attend, common methodological challenges underexplored in the existing literature were identified: (1) language translation and (2) cultural practice restrictions. The reflections build on broader decolonising research frameworks that challenge Western academic research frameworks. While LBE encountered several common challenges in implementing its research (eg, institutional ethics requirements imposing risks to community researchers' safety, documenting informed consent and mistrust of research), this perspective paper focuses on the two identified methodological challenges thought to be most relevant to future research.

## LANGUAGE AND CONCEPT TRANSLATION

Language is a means to construct our experiences of the world, reality and the self and gives meaning to experiences and the social and cultural factors that determine them. The relationship between language and mental health is complex and manifests at different levels, including characterising how distress or well-being are conceptualised across contexts.



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'Mental health' is rooted in European and Anglo-American systems of thought<sup>5</sup> and lacks direct equivalents across many cultural contexts. For example, in Rutwa, spoken by Batwa Peoples, similar terms primarily connote severe mental illness which, conceptually, is interchangeable with 'craziness'. Given the stigma associated with mental illness, this mistranslation could significantly affect participant responses and engagement with research questions. In other cases, mental health concepts are described through symptoms, such as substance abuse. To address these gaps, LBE worked with communities to explore how their own languages and frameworks describe experiences of climate change-related mental health and well-being. This approach sought to honour Indigenous knowledge systems and create space for communities to articulate lived experiences on their own terms. Similar challenges arose when translating 'climate change'. For example, in Ogiek, the closest expression 'waleet op emeet' ('the behaviour of the land') only partially captures the concept. These translation difficulties reflect fundamental differences between Western frameworks and Indigenous worldviews that can impact data collection, skew findings, as well as their relevance, and create transferability challenges to other contexts.

Beyond the direct translation of concepts, the meaning behind Indigenous words may have multiple layers that can add complexity to research processes. For example, Indigenous Peoples often view the land, body and ecosystems as one interconnected system, presenting a holistic worldview that contrasts with Western frameworks that compartmentalise the mind, body and environment as separate entities. As Diaz illustrates:

In Mojave thinking, body and land are the same. The words are separated only by the letters 'i' and 'a': 'iimat for body, 'amat for land... We often use a shortened form for each: mat-. Unless you know the context of a conversation, you might not know if we are speaking about our body or our land.<sup>6</sup>

This interconnected understanding of well-being opposes colonial systems that treat land as a commodity, and as separate from the body and the mind. The disconnection from land, culture and traditional knowledge systems imposed by colonisation can itself be understood as a form of illness that manifests as climate change, environmental degradation and psychological distress. When research imposes Western categorical thinking onto Indigenous experiences and knowledge, it risks perpetuating this colonial illness by further fragmenting the relationships that Indigenous Peoples regard as essential to well-being.

While Indigenous wellness philosophies take holistic approaches that integrate spiritual, emotional, mental and physical aspects,<sup>7</sup> Western psychology and medicine traditionally separate mind from body.<sup>8</sup> Given this, what may seem like an innocuous process of crafting English language research questions derived from Western worldviews can lead to validity issues within the research findings. With this, inherent challenges exist when working with Indigenous languages and knowledge systems that need to be considered when developing research protocols. These linguistic complexities also showcase deeper epistemological challenges that go beyond translation into how Indigenous knowledges are expressed and practised. While language barriers can be addressed through meaningful community collaboration and leadership, Indigenous research methodologies also face structural barriers that restrict the very cultural practices that are central to Indigenous ways of knowing.

## BARRIERS TO CULTURAL PRACTICES

LBE uses creative methodologies to surface expressions of solastalgia within specific cultural contexts.<sup>4</sup> For Indigenous Peoples whose identities are often anchored in relationships with nature, cultural expressions offer critical insights into the changing relationships with Indigenous lands in the face of climate change. For example, climate change-induced declines in bee populations in the Mau Forest in Kenya impact Ogiek Peoples, whose culture and identity are deeply connected to bees and honey. To understand beekeepers' mental health experiences, LBE held dialogues during traditional beehive construction, making the research process culturally immersive and participatory.<sup>4</sup> Some participants sang, some spoke, others stayed silent—all being equally valuable expressions to receive.

While coherence in mental health narratives has been widely debated,<sup>9</sup> the act of constructing a narrative itself is an important form of agency. Expressions manifest through various forms—verbal and non-verbal—including songs, symbols and rituals. These, in turn, are encoded expressions that draw heavily from cultural and land-based contexts. Traditional knowledges are often embedded in oral traditions or spoken discourse, but many concepts remain unspoken.<sup>10</sup> Consider the knowledge held in crafting a beehive or harvesting medicinal herbs—these hyper-local and non-verbal ways of knowing present a unique challenge in climate change-related mental health research. Paying attention to diverse cultural expressions of climate change impacts through tailored creative and culturally sensitive methodologies is essential for developing appropriate mental health interventions.

Culturally embedded research approaches, however, require contexts where Indigenous Peoples can freely practise their culture and traditions. Yet, many communities face legal restrictions on their cultural practices through conservation and climate change policies that limit access to their lands, consequently violating Indigenous Peoples' rights.<sup>11</sup> Table 1 presents examples of legislation blocking well-being-linked cultural practices of Indigenous Peoples involved in LBE's research.

While research methods can adapt to contextual restraints, the direct and indirect legislative barriers preventing the practice of Indigenous cultures in some regions limit the ability of research endeavours to understand Indigenous climate-attributable mental health experiences on their own terms. Indigenous Peoples must have the freedom to remain rooted in their lands and cultures to maintain their worldviews and ways of knowing.<sup>7</sup>

Direct and indirect barriers and disruptions to Indigenous cultural practices also lead to identity erosion and disrupted intergenerational cultural transmissions.<sup>12</sup> The Batwa Peoples, for example, were assimilated into other communities following their eviction from their ancestral lands in southwest Uganda, with both the loss of traditional practices and internalised stigma within their context of assimilation.<sup>13</sup> As one community member stated:

The culture is not there. So basically, there may not be Batwa in the future because even our children don't have peace.<sup>13</sup>

Meaningful mental health research with Indigenous Peoples requires going beyond methodological adaptations—it demands an active recognition of, and advocacy for, Indigenous Peoples' right to maintain their cultural practices and relationships with land. The creation of barriers (legal or otherwise) to the practising of Indigenous cultures not only violates their rights but also undermines researchers' ability to understand Indigenous experiences of climate change and mental well-being through Indigenous ways of knowing. Researchers must acknowledge

**Table 1** Legislations affecting Indigenous well-being-linked cultural practices

Legislation	Legislation purpose	Indigenous Peoples affected	Well-being-linked cultural practices affected
Act on temporary prohibition on salmon fishing in the Tana River watercourse (2023) <sup>15</sup>	Establishes rules prohibiting the fishing of salmon ( <i>Salmo salar</i> ) in salmon-bearing parts of the Tana River watercourse. It also prohibits the use of certain fishing gear	Sámi (Sapmi)	Fishing of the culturally significant Atlantic salmon in Deatnu (Tana) river
Forest Act, B.E. 2484 (1641) <sup>16</sup>	To control and manage state forests, including regulating the logging and collection of forest products, and timber and forest product transportation	Pgak'yau (Thailand)	Traditional rotational farming (including rice blessing and harvesting ceremonies), visiting sacred sites and trees, and controlled burning practices (soil preparation) for the prevention of forest fires
The Uganda Wildlife Act (2019) <sup>17</sup>	To conserve wild animals and plants, sustainably manage wildlife, protect endangered species, control problem animals, regulate wildlife imports, exports and re-exports	Batwa (Uganda)	Collecting traditional herbal medicine, paying respects to ancestors at burial sites, conducting religious rituals and consuming a traditional diet that includes meat and honey
The Forest Conservation and Management Act (2016) <sup>18</sup>	To provide for the sustainable development, conservation and rational utilisation of all forest resources to support Kenya's socioeconomic growth	Ogiek (Kenya)	Traditional beekeeping, hive building, honey making and accessing traditional medicines
The Wild Life (Protection) Act (1972) <sup>19</sup>	To provide for the protection of wild animals, birds and plants and for matters connected to this. The act stipulates that virtually no human activity can take place in a national park except those which are in the interest of wildlife conservation	Iruliga (India)	Harvesting bamboo, beeswax and honey, visiting sacred sites and collecting medicinal herbs and firewood

that truly ethical and effective health-related research methodologies cannot exist separately from the broader struggle for Indigenous cultural rights and self-determination.

Implementing culturally appropriate methodologies requires scaling successful practices across research systems. While some institutions have started restructuring funding mechanisms and ethics review processes to accommodate Indigenous research approaches, wider systemic change is needed to normalise Indigenous timelines, relationality and knowledge sovereignty. This includes, for example, expanding institutional support for Indigenous knowledge systems and community-led approaches as valid research frameworks and increasing funding for Indigenous-led research initiatives. Mainstreaming these practices alongside advocating for the protection of Indigenous cultural rights is essential to support needed methodological adaptations.

These challenges are deeply rooted in colonial research structures, systemic oppression and Indigenous Peoples' marginalisation. This is additionally reflected by the continued privileging and assumed superiority of Western-centric knowledge systems over Indigenous ones.<sup>14</sup> This assumed superiority also sets the benchmark for what is determined to be 'valid' research approaches, including determining how data should be collected and analysed, and who holds authority and expertise. These structures remain incompatible with Indigenous knowledge systems, forcing Indigenous research to conform to Western standards rather than having them emerge from Indigenous epistemologies, which ultimately diminishes knowledge plurality.<sup>14</sup>

## CONCLUSION

Addressing the identified gap in culturally appropriate methodologies for Indigenous climate change and mental health research requires confronting practical barriers and colonial structures that continue to shape research processes. LBE's experience with language translation difficulties and legislative restrictions on cultural practices demonstrates how seemingly separate methodological challenges are interconnected manifestations of

colonial research structures. Meaningful methodological adaptation requires working with communities to honour Indigenous knowledge systems, using creative approaches that accommodate diverse cultural expressions and advocating for Indigenous cultural rights as prerequisites for ethical research. Cultural expressions are crucial for understanding Indigenous worldviews and mental health experiences, but unless Indigenous Peoples can practise their culture on their own terms, research cannot fully understand their mental health and well-being appropriately or respectfully. To achieve this, researchers must interrogate power dynamics that inhibit Indigenous cultural practices while supporting community healing and self-determination through research processes themselves.

✉ Samrawit Gougsa @SamGougsa and Nicole Redvers @DrNicoleRedvers

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## ORCID iD

Samrawit Gougsa <http://orcid.org/0000-0002-1364-4919>

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