

Climate Change and Health: Intercultural Dialogue Strategies between Primary-Care Physicians and Patients – A Systematic Review

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Citation

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REVIEW TITLE AND BASIC DETAILS

Review title

Climate Change and Health: Intercultural Dialogue Strategies between Primary-Care Physicians and Patients – A Systematic Review

Condition or domain being studied

Primary Care Professional; Healthcare Professional ; Patient; Vulnerable population; Environmental Exposure; Health equity; Communication strategy; Communication skills; Resilience; Cultural Competence Education; Patient knowledge ; Primary healthcare services; Community Care; Community-centred approach; Healthcare quality; Patient care

This review focuses on the intersection between climate-related health challenges and intercultural dynamics in primary health care. It examines how general practitioners and other primary care professionals engage in intercultural dialogue with adult patients from diverse sociocultural backgrounds, in the context of health issues directly or indirectly linked to climate change (e.g., heat-related illness, food and water insecurity, forced displacement, and other ecological stressors). The review aims to identify strategies that foster effective communication, promote adaptation and resilience, and contribute to reducing the health impacts of climate change in culturally diverse communities.

Rationale for the review

Climate change represents one of the most serious global threats to public health, with growing impacts on morbidity, mortality and health inequalities. These effects are not evenly distributed, and people and communities in greater social and cultural vulnerability are generally the most affected. At the same time, health services face growing challenges related to the socio-cultural

diversity of their users, especially in primary health care, where the first contact with the system is established.

Although the scientific literature recognises the importance of intercultural communication in the quality of care, there remains a critical gap in research that systematically explores how intercultural dialogue strategies have been thought through and applied in the context of the health impacts of climate change. Most existing studies treat these dimensions - healthcare, intercultural dialogue and climate change - in a fragmented way, without considering their intersection or combined effects on equity and community resilience.

This fragmentation requires the review to be conducted based on three thematic blocks linked to each other: healthcare, intercultural dialogue and climate change. This mapping by blocks will make it possible to identify the existing contributions in each axis separately, and then explore their convergences, gaps and potential for integration. Recognising this dispersion, this review takes a critical and reflexive approach from the outset, seeking to build an analytical cartography of the field, sensitive to the methodological and epistemological diversity of the studies included.

Review objectives

This systematic review aims to map and understand the intercultural dialogue strategies developed between primary healthcare doctors and users from different socio-cultural backgrounds, in the context of the health impacts of climate change. The aim is to identify how these strategies have been conceptualised and described in the literature, and to what extent they can promote community resilience and reduce health inequalities.

The review will be guided by the following research questions, formulated based on the PEO model:

What intercultural dialogue strategies have been developed between doctors and users from different socio-cultural backgrounds in primary healthcare?

How can these strategies—or their guiding principles—be adapted and mobilised to tackle the health impacts of climate change and promote community resilience?

Within this framework, the PEO structure applied to the review is as follows:

Population (P): primary health care physicians (with an emphasis on general and family medicine) and adult users (+18 years) from different socio-cultural backgrounds.

Exposure (E): impacts of climate change on health, mentioned directly or indirectly (such as heat stress, extreme weather events, food insecurity, forced displacement or ecological vulnerability).

Outcome (O): intercultural dialogue strategies developed and/or implemented, with particular attention to their contribution to mitigating the impacts of climate change on health and promoting community resilience.

Keywords

Climate change; Health impacts; Primary health care; General practitioners; Intercultural Dialogue; Intercultural communication; Culturally diverse patients ; Community resilience; Ecological vulnerability; Health equity; Forced displacement

Country

Portugal

ELIGIBILITY CRITERIA

Population

Included

This review will include studies focusing on primary health care professionals, particularly general and family medicine physicians (general practitioners) and adult patients (aged 18 and over) from diverse sociocultural backgrounds.

Intervention(s) or exposure(s)

Included

Environmental Adaptation; Environmental Management: Community; Communication Interventions; Face-to-face communication; Cultural Competence Education; Health equity

Impacts of climate change on health, addressed directly or indirectly, including phenomena such as heat stress, extreme weather events, food insecurity, forced displacement, or other forms of ecological vulnerability. This includes consideration of how these exposures are recognised and responded to through face-to-face communication between healthcare professionals and patients, and how intercultural communication strategies, cultural competence education, and equity-oriented practices contribute to adaptation and community resilience.

Comparator(s) or control(s)

This review does not have any comparators

Study design

Only nonrandomized study types will be included.

Included

The review will include empirical studies (qualitative, quantitative, or mixed methods), theoretical or conceptual contributions, and literature reviews, provided they directly address the intersection between primary health care, intercultural dialogue, and the health impacts of climate change. Eligible designs include interviews, focus groups, surveys, ethnographic studies, case studies, conceptual analyses, and systematic or scoping reviews. No restrictions will be applied regarding methodological approach, as long as the study offers insights aligned with the objectives of the review. Given the fragmented nature of scientific production in this area, the review will use a structure based on three interrelated thematic blocks: healthcare, intercultural dialogue, and climate change. This approach allows for the inclusion of studies that address at least two of these domains, even if not all three are explicitly combined. The aim is to map existing contributions within each block and explore their intersections, gaps, and potential for integration. This methodological strategy is designed to avoid unnecessary exclusion of relevant studies and foster a more comprehensive and connected understanding of the field.

Additional characteristics:

Context: Preferably conducted in primary healthcare settings. However, studies undertaken in other contexts (e.g. hospitals or community-based services) will be considered if their findings are relevant to the doctor–patient relationship at the first level of care.

Publication period: From 2007 to 30 April 2025, reflecting the growing recognition of relationship between climate change and public health.

Languages: Portuguese, English, and Spanish.

Document type: Published scientific articles, book chapters, master's dissertations, doctoral theses, and research reports, including accessible academic and grey literature.

Excluded

Studies will be excluded if they do not meet thematic scope or fail to provide sufficient information on intercultural interactions in healthcare settings. Specifically, the following will be excluded:

- Studies that do not address at least two of the three central dimensions of the review: healthcare, intercultural dialogue, and climate change.
- Studies that do not explicitly or implicitly explore interactions between health professionals and users—particularly in the context of primary care—or that provide insufficient information to infer relevant aspects of clinical dialogue in culturally diverse settings.
- Publications in languages other than Portuguese, English, or Spanish.
- Documents for which the full text is not accessible.

Context

The review focuses primarily on primary healthcare settings, where initial contact between health professionals and users takes place and where intercultural dialogue is especially relevant. Studies conducted in other healthcare or community-based contexts—such as hospital outpatient services, migrant health units, or community health programmes—may also be included if their findings offer transferable insights into doctor–patient communication in primary care. The context must involve situations in which sociocultural diversity shapes interactions between professionals and patients. Studies that address vulnerabilities related to climate-sensitive conditions—such as displacement, food insecurity, or environmental risk—may be considered even if they do not explicitly mention climate change.

TIMELINE OF THE REVIEW

Date of first submission to PROSPERO

12 May 2025

Review timeline

Start date: 10 May 2025. End date: 30 November 2025.

Date of registration in PROSPERO

13 May 2025

AVAILABILITY OF FULL PROTOCOL

Availability of full protocol

A full protocol has been written but is not available because:

The full protocol will be made publicly available on the Open Science Framework (OSF) after registration is completed in PROSPERO. A link to the OSF record will be added to this entry once available.

SEARCHING AND SCREENING

Search for unpublished studies

Both published and unpublished studies will be sought.

Main bibliographic databases that will be searched

The main databases to be searched are *PubMed* and *Scopus*.

Other important or specialist databases that will be searched

Web of Science add to main source; SciELO, RCAAP, and Google Scholar will be searched for Ibero-American and grey literature.

Search language restrictions

The review will only include studies published in English, Portuguese and Spanish.

Search date restrictions

Databases will be searched for articles published from 1 January 2007 and before by 30 April 2025.

Other methods of identifying studies

Other studies will be identified by: *looking through all the articles that cite the papers included in the review ("snowballing"), reference list checking and searching dissertation and thesis databases.*

Additional information about identifying studies

Additional studies will be identified through citation chasing, screening of reference lists from included articles, and targeted hand-searching of key journals (e.g., The Lancet Planetary Health, BMJ Global Health). All retrieved references will be exported to Rayyan for de-duplication and screening.

Link to search strategy

A full search strategy is available in the full protocol as described in the *Availability of full protocol* section

Selection process

Studies will be screened independently by at least two people (or person/machine combination) with a process to resolve differences.

Other relevant information about searching and screening

The search strategy was developed using the PEO framework and refined through iterative testing in selected databases. A critical and reflexive approach will guide the screening and analysis process, ensuring alignment with the review's interdisciplinary and exploratory aims.

Decisions regarding inclusion, coding, and interpretation will be documented throughout, with attention to epistemological and contextual diversity across the included studies. The protocol follows PRISMA-P and PRISMA-S guidelines, and the full version will be made publicly available on the Open Science Framework (OSF) following PROSPERO registration.

All references retrieved from the searches will be imported into Rayyan, where duplicates will be identified and removed. Title and abstract screening, followed by full-text screening, will be conducted by one reviewer. Each exclusion will be independently verified by a second reviewer, with any disagreements resolved through discussion with a third member of the review team. A spreadsheet in Excel will be used to track decisions and reasons for exclusion. The final set of included studies will then be imported into Zotero for bibliographic management, annotation, and citation during analysis and writing. MAXQDA will be used for thematic coding, and a PRISMA 2020 flow diagram will document the screening process and exclusion criteria at each stage.

DATA COLLECTION PROCESS

Data extraction from published articles and reports

Data will be extracted independently by at least two people (or person/machine combination) with a process to resolve differences.

Authors will not be contacted for further information.

Study risk of bias or quality assessment

Data will be assessed by one person (or a machine) and checked by at least one other person (or machine).

Additional information will **not** be sought from study investigators if required information is unclear or unavailable in the study publications/reports.

Reporting bias assessment

Risk of bias due to missing results will not be assessed

Certainty assessment

Certainty of findings will not be assessed

OUTCOMES TO BE ANALYSED

Main outcomes

The main outcome of this review is the identification and characterisation of intercultural dialogue strategies developed and/or implemented between primary health care professionals and adult patients from diverse sociocultural backgrounds. These strategies will be examined in terms of their relevance to addressing health challenges linked—directly or indirectly—to climate change, and their potential contribution to community resilience, health equity, and culturally responsive care.

Given the qualitative and exploratory nature of the review, no standardised measurement instruments or time points are required. Instead, the review will analyse how such strategies are described, justified, and contextualised across different studies. Emphasis will be placed on the

communicative processes, cultural mediators, professional practices, training approaches, and institutional adaptations reported.

The synthesis will adopt a thematic approach, identifying recurring patterns, contextual specificities, and epistemological tensions within the literature. No quantitative effect measures will be used. Instead, analytical attention will be given to how intercultural communication practices respond to socio-environmental vulnerabilities and promote inclusive care in the context of climate-sensitive health risks.

Additional outcomes

Additional outcomes will include:

The identification of key thematic dimensions underpinning effective intercultural dialogue strategies, such as the relevance of cultural competence training for health professionals, the role of patient-centred approaches, and the contribution of community-based initiatives;

The extent to which these strategies enhance understanding of climate-related health impacts and promote trust between patients and providers, particularly in culturally diverse settings;

The practical potential of identified strategies to inform health policy and contribute to more culturally responsive and resilient primary care services;

Theoretical and conceptual frameworks used to ground, interpret, or support the development of such strategies.

Given the qualitative nature of the review, no standardised measurement instruments or effect measures will be applied. The analysis will focus on how these additional dimensions are described and theorised within the included studies. A thematic synthesis approach will be used to examine commonalities, variations, and contextual relevance across the evidence base.

PLANNED DATA SYNTHESIS

Strategy for data synthesis

Given the qualitative and integrative nature of the review, a thematic and narrative synthesis will be conducted. The synthesis will be structured around three interconnected thematic blocks: healthcare, intercultural dialogue, and climate change. Using inductive thematic analysis in MAXQDA 24, the included studies will be coded and grouped into emerging analytical categories. These categories will then be interpreted in relation to the review objectives, with particular attention to sociocultural, epistemological, and contextual dimensions.

In addition, a descriptive quantitative summary will be conducted, including counts of studies by methodology, publication date, geographic location, and other relevant characteristics such as thematic focus, type of health professionals involved, and sociocultural profiles of the populations studied. This mapping will support the interpretation of patterns and gaps across the evidence base. Findings will be presented narratively and, where appropriate, summarised in thematic tables and visual overviews.

CURRENT REVIEW STAGE

Stage of the review at this submission

Review stage	Started	Completed
Pilot work	✓	✓
Formal searching/study identification	✓	
Screening search results against inclusion criteria		
Data extraction or receipt of IPD		
Risk of bias/quality assessment		
Data synthesis		

Review status

The review is currently planned or ongoing.

Publication of review results

Results of the review will be published in English and Portuguese.

REVIEW AFFILIATION, FUNDING AND PEER REVIEW

Review team members

Dr Nidia Ponte (review guarantor and contact) ORCID: 0000-0002-6024-9364. Centre for Functional Ecology – Science for People & Planet (CFE), University of Coimbra, and Department of Social Sciences & Management, Universidade Aberta, Portugal. Portugal.

No conflict of interest declared.

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No conflict of interest declared.

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No conflict of interest declared.

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Additional non-commercial funding information

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Peer review

The protocol will be reviewed internally by the two academic supervisors (Prof Fátima Alves and Dr Diogo Guedes Vidal) for methodological rigour and completeness before journal or pre-print submission. No external peer-review process is planned at this stage.

ADDITIONAL INFORMATION

Additional information

This review addresses an emerging interdisciplinary gap at the intersection of climate change, health, and intercultural communication. It underpins a PhD project at Universidade Aberta / University of Coimbra entitled "Climate Change and Health: Intercultural Dialogue Strategies between Primary-Care Professionals and Patients" (2024–2028). The review protocol follows PRISMA-P and PRISMA-S guidelines and will be registered on OSF. Full search strings and data extraction templates will be made openly available via OSF (DOI to follow). Reference management: Zotero; screening: Rayyan.ai; qualitative coding and mixed-methods integration: MAXQDA 24. The MAXQDA project file and codebooks will be made available upon request or after publication, to safeguard the originality of the analysis and prevent premature reuse.

Review conflict of interest

Declared individual interests are recorded under team member details.. No additional interests are recorded for this review.

Medical Subject Headings

Climate Change; Primary Health Care; General Practitioners; Family Practice; Community Health Services; Physician-Patient Relations; Health Inequities; Cultural Competency; Social Determinants of Health; Resilience, Psychological; Extreme Weather; Water Insecurity; Qualitative Research

SIMILAR REVIEWS

Check for similar records already in PROSPERO

PROSPERO identified a number of existing PROSPERO records that were similar to this one (last check made on 10 May 2025). These are shown below along with the reasons given by that the review team for the reviews being different and/or proceeding.

- A systematic review and meta-analysis on the relationship of climate and ecological emotions on the mental health and wellbeing of young adults [published 24 February 2023] [CRD42023396117]. The review was judged **not to be similar**
- A Rapid Review of Integrated Care Models Involving Health and Social Care Professionals for Children Attending Primary Care Settings [published 23 April 2025] [CRD420251035821]. The review was judged **not to be similar**

- Systematic Review and Meta-Analysis of Health and Wellbeing Outcomes in Children Affected by the Syrian Conflict: Post-Crisis Realities [published 16 January 2025] [CRD42025634285]. The review was judged **not to be similar**
- Impact of Climate Change on Health and Environment in West Africa: A systematic review [published 8 November 2024] [CRD42024607399]. The review was judged **not to be similar**
- Unveiling Climate Distress: Examining the Psychological Effects of Climate Change in India: A Systematic Review [published 21 December 2024] [CRD42024625718]. The review was judged **not to be similar**
- The use of behaviour change theories in dietetic practice: a systematic review [published 26 November 2018] [CRD42018103743]. The review was judged **not to be similar**

PROSPERO version history

- [Version 1.0, published 13 May 2025](#)

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