Health observatories and their contributions to occupational health regarding COVID-19: scoping review protocol

Eliana Napoleão Cozendey-Silva[1,2]
ORCID: 0000-0003-4093-4732

Martha Silvia Martinez-Silveira[3]
ORCID: 0000-0002-1004-1784

Rita de Cássia Oliveira da Costa Mattos[1]
ORCID: 0000-0002-0523-7467

Liliane Reis Teixeira[1]
ORCID: 0000-0003-2460-0767

[1]Oswaldo Cruz Foundation, National School of Public Health Sergio Arouca, Center for Worker Health and Human Ecology, Rio de Janeiro, RJ, Brazil
[2]Federal University of Catalao, Institute of Biotechnology, Medical School, Catalão, GO, Brazil
[3]Oswaldo Cruz Foundation, Gonçalo Moniz Intitute, Salvador, BA, Brazil

Editors:

Ana Carla Dantas Cavalcanti
ORCID: 0000-0003-3531-4694

Paula Vanessa Peclat Flores
ORCID: 0000-0002-9726-5229

Patricia dos Santos Claro Fuly
ORCID: 0000-0002-0644-6447

Corresponding author:
Eliana Napoleão Cozendey-Silva
Email: ensilva.silva@gmail.com

ABSTRACT

Objective: To identify publications that address, present findings, or analyze methodologies, objectives, and purposes of health observatories related to COVID-19 and their contribution to the field of Worker's Health. **Method:** This scoping review protocol has been registered with the Open Science Framework. It follows the Joanna Briggs Institute and PRISMA-ScR guidelines. Initial relevant article search conducted in PubMed for review framework. In addition to scientific databases, the search will be expanded to include websites and health observatories mentioned in retrieved documents. Two or more independent reviewers will conduct data screening, with a third reviewer involved if necessary. The screening will be based on eligibility criteria that focus on documents that analyze, evaluate, or present data on the approaches and purposes of health observatories related to COVID-19 and that contribute to worker health and safety. A pilot test and preliminary assessment of the data extraction tool will be conducted to evaluate its effectiveness. A thematic analysis will systematically code and categorize data into predefined themes. Narrative summaries will accompany the tabular data, maps, or charts, clarifying relevance. The expectation is to identify and address gaps in occupational health communication, which could be addressed by a Brazilian observatory of infectious diseases in the workplace.

Descriptors: COVID-19; Health Communication; Health Observatory; Occupational Health; Pandemic.

INTRODUCTION

Health observatories in the context of public health provide trustworthy data in a short span of time and the answers drawn from it further support decision making[1]. The observatories gather and place data, belonging to various sources – websites, agencies, organizations – within a system[2-3], approaching it with an analytical and coordinate treatment. Moreover, they also organize and showcase original research, to make their data available in a single virtual place designed to fulfill the need for specialized information, which makes it a website of information and communication on health-relatedsubjects[1,3].

Regarding people's political agendas and goals/purposes, health observatories can also be seen as virtual spaces where exchanges between people and institutions with common goals take place, showcasing their networking capabilities. They can also take on the dual roles of assembling those with shared goals and gathering data[4]. Therefore, the observatories tend to be relatively autonomous and, because of that, are capable of developing their own agendas to address specific needs[1,4-5], which serves the purpose of supporting decision-making.

The COVID-19 pandemic, caused by the SARS-CoV-2 virus, began in December 2019 in the city of Wuhan, China, and quickly spread worldwide, being declared a pandemic by the World Health Organization (WHO) in March 2020. Since then, the global impact of the pandemic has been profound, broadly affecting healthcare systems, economies, and societies[6]. Since the declaration of the COVID-19 pandemic, the Brazilian Worker's Health field has been committed to informing and communicating issues

related to workers' health and exposure to SARS-CoV-2 in Brazil. It is crucial to emphasize that, beyond lethality, COVID-19 can lead to persistent symptoms, sequelae, and other medical complications[7-9].

Worker's Health (WH) in Brazil is the field of public health dedicated to multiprofessional, interdisciplinary, and interinstitutional strategic practices and knowledge, aiming to promote, protect, and rehabilitate the health of workers through epidemiological and sanitary surveillance against occupational hazards and diseases[10-11].

The field of WH is grounded in the principles of the Italian labor movement[12]. It recognizes the importance of social movements, such as workers' organizations, in implementing actions to mitigate the new challenges that have emerged since the declaration of the COVID-19 pandemic.

In Brazil, no health observatories on communicable diseases in the field of WH have been identified. A preliminary search was conducted in the Medical Literature Analysis and Retrieval System Online (MEDLINE)/Public Medical (PubMed) database and in specialized registration platforms for review protocols, including PROSPERO and Open Science Framework. No current or ongoing systematic reviews or scoping reviews on the topic were identified. Therefore, the objective of this protocol is to identify the content of publications that address, present findings, or analyze the methodologies and objectives of health observatories, as well as the purposes of these observatories concerning COVID-19 and their contribution to the field of WH. This includes what health observatories reveal about the field of WH in relation to COVID-19 from 2020 to 2024, with the aim of recognizing and addressing gaps in health communication that can be tackled by a Brazilian observatory of infectious diseases in the workplace.

METHOD

Type of study
The scoping review of the literature will be conducted based on the steps proposed by the Joanna Briggs Institute (JBI) Manual[13] and will be reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR)[14].

Scoping reviews are useful for mapping the literature in a given area, clarifying concepts and

identifying key questions related to a concept and also identifying knowledge gaps[15]. They are aimed at carrying out a scoping review concerning the health observatories and their contributions to the field of Worker's Health regarding COVID-19. The research protocol was registered in the Open Science Framework (OSF) (osf.io/9x8pz), Registration DOI https://doi.org/10.17605/OSF.IO/56AW3.

To guide the research and the development of the research question, a framework based on the acronym PCC (Participants, Concept, and Context) elements was utilized. This framework is presented in figure 1.

Component	Description
Participants	Scientific publications about health observatories
Concept	Revelations of scientific production on health observatories regarding: * Approaches (e.g., data collection methods, surveillance techniques) * Purposes (focusing on Worker's Health)
Context	* Timeframe: 2020-2024 * Focus: Impact of COVID-19 on Worker's Health in Brazil
Review question	What are the revelations of scientific production on health observatories regarding their approaches and purposes with the emergence of COVID-19 from 2020 to 2024, and do they contribute to the field of Worker's Health in Brazil?

Figure 1- Scoping review protocol framework. Rio de Janeiro, RJ, Brazil, 2024

Furthermore, the scoping review will be structured in the following steps: topic and research question identification; establishment of study eligibility criteria; identification of pre-selected and included studies/documents; categorization of included studies/documents; data analysis, interpretation, and extraction; synthesis and knowledge identification (answering the research question).

Eligibility criteria
All articles, documents, and information from websites published from March 2020 to March 2024 that analyze, evaluate, or present data on the approaches and purposes of health observatories related to COVID-19 in the field of Worker's Health were eligible.

This may include identifying challenges and learning opportunities for addressing occupa-

tional hazard surveillance and diseases; recommendations for public policies and work practices; and evidence to support decisions on health and safety at work.

This implies that the impacts of the pandemic on the health, safety, and well-being of workers must be identified. Analyses, evaluations, or presentations of information must be relevant to the practice of occupational health and/or to the field of knowledge referred to in Brazil as Worker's Health.

Health observatories that do not address occupational health will be excluded, including those focused on other aspects of public health, such as epidemiological surveillance or mental health, for example.

Regarding language, documents not published in English, Portuguese, or Spanish will be excluded. The restriction to these languages is related to the limitation of supporting resources for the study. While the inclusion of publications without restrictions on time or language increases the breadth of the review, the decision to impose linguistic restrictions was made to ensure the quality and consistency of the research analysis. In other words, the availability of resources for translation and analysis, as well as the representativeness of studies published in those languages, were taken into consideration.

Types of sources

This scoping review will consider both experimental, analytical, and descriptive observational studies. Qualitative studies will also be included. Furthermore, systematic reviews meeting the inclusion criteria will be included. Text and opinion papers will be evaluated according to the inclusion criteria of the scoping review.

Search strategy

An initial search of relevant articles was conducted in the PubMed scientific database to inform the scoping review protocol framework. Keywords identified from titles, abstracts, and subject headings of a priori studies were then used to develop a targeted search strategy for PubMed, aiming for a well-defined scope. This strategy can be updated if necessary, particularly if more than six months elapse between search completion and analysis. Figure 2 presents the draft of the search strategy that will be employed in databases.

Databases	Strategy
PUBMED	(((("COVID-19"[Mesh] OR "SARS-CoV-2"[Mesh] OR COVID 19[TIAB]) AND observator*) OR "Health observator*") AND ("occupational health"[MeSH Terms] OR occupation* OR work*)
Web of Science	Observatory AND Covid 19 (Topic)
EMBASE / PICO	(observatory AND 'coronavirus disease 2019'/syn AND (work* OR 'named groups by occupation'/syn OR 'occupational groups')
BVS (LILACS; BDENF – Nursing; Multimedia Resources; MINSAPERU; LIPECS; SciELO Preprints; CUMED)	observatorio AND (covid OR coronavirus OR pandemia)
SCOPUS	(TITLE-ABS-KEY (observatory) AND TITLE-ABS-KEY (covid 19 OR covid-19 OR pandemic))
GOOGLE SCHOLAR	Observatorio AND pandemic Observatory AND (pandemic OR covid 19)
Scielo org	(observatorio OR observatory) AND (covid OR coronavirus OR pandemia OR pandemic).

Figure 2 – Search strategy. Rio de Janeiro, RJ, Brazil, 2024

The search strategy will need to be adapted for each database and information source used in this review. Due to the complexity of the topic, multiple search strategies with varying levels of comprehensiveness may be employed within the same database when necessary. Results from each strategy will then be combined.

Finally, the reference lists of studies included from March 2020 to March 2024 will be scrutinized to identify any additional relevant papers potentially missed by the database searches. The databases searched include: Medline in PubMed; Web of Science (WOS) – Clarivate; Excerpta Medica database (Embase) – Elsevier; Information for Health Action (VHL), including Latin American and Caribbean Health Sciences Literature (LILACS), Nursing Database (BDENF), Ministerio de Salud del Perú (MINSAPERU), Literatura Peruana en Ciencias

de la Salud (LIPECS), Centro Nacional de Información de Ciencias Médicas (CUMED).

Supplementary searches will be performed using Scholar Google and Scientific Electronic Library Online (SciELO). Relevant websites: World Health Organization; National Institute for Occupational Safety and Health (NIOSH) and Websites of health observatories identified in the previous step.

Study/Source of evidence selection

Following the search, all citations identified will be gathered and uploaded into the EndNote 20.4 2022 (Clarivate Analytics, PA, USA) and duplicates will be removed. Since the broad nature of the topic may leads to a high number of irrelevant results in the initial search, the search results in the databases will be further refined.

To ensure consistent application of the criteria, a pilot test will be conducted initially. Then, two or more independent reviewers will screen titles and abstracts in Rayyan (Qatar Computing Research Institute, Doha, Qatar)[16] to identify potentially relevant studies based on the pre-defined inclusion criteria. This process facilitates blinded peer review and refines data screening. Studies classified for inclusion will then be retrieved in full text.

Two or more independent reviewers will thoroughly assess the full text of these studies against the inclusion criteria. Reasons for exclusion at this stage will be documented and reported in the scoping review. Any discrepancies among reviewers regarding paper selection will be resolved by consensus, or with the involvement of an additional reviewer if necessary. Finally, the results of the search process will be thoroughly documented and comprehensively presented in the Preferred Reporting Items for PRISMA-ScR[14] flow diagram.

Data extraction

A data extraction tool will be developed using the JBI Data Extraction Instrument and employed by two or more independent reviewers. The extracted data will encompass study type and focus of health observatories; approaches employed by health observatories (e.g., data collection methods, surveillance techniques, interventions); time frame (2020-2024); impact of COVID-19 (specific considerations for worker health across different industry sectors); location; impact indicators and intensity.

Following the recommendations for scoping reviews, a pilot testing phase will be conducted to ensure the tool's effectiveness and refine it based on initial application. The draft data extraction tool will be adjusted and refined as needed throughout the data extraction process from each included study, with these modifications documented in the scoping review report. During the extraction process, if deemed necessary based on unclear or missing data, the authors of the papers and representatives of the health observatories will be contacted to solicit clarification or additional information.

Data analysis and presentation

In accordance with the PRISMA Extension for Scoping Reviews (PRISMA-ScR)[14], a thematic analysis approach will be employed to systematically code and categorize the extracted data based on pre-defined themes relevant to the review question. Narrative summaries will be provided alongside the tabular and/or charted results, describing their relevance to the objective and question of the review. These summaries will highlight key findings, patterns, and any discrepancies identified across the included studies.

To further enhance transparency and facilitate knowledge synthesis, a narrative matrix or map may also be generated[17] to visually represent the distribution of findings across different categories or variables (e.g., study design, health observatory focus, worker population). In other words, narrative summaries will accompany the tabular results, maps, and/or charts, clarifying their research relevance. Additionally, a PRISMA-ScR flow diagram will be utilized to visually illustrate the process of study selection, from the initial search conducted to the final number of included studies.

REFERENCES

1. Hemmings J, Wilkinson J. What is a public health observatory? J Epidemiol Community Health. 2003;57:324-6. https://doi.org/10.1136/jech.57.5.324

2. Phélan CM. La Red Observatorios Locales de Barcelona, España: un estudio de casos para diseñar uma propuesta nacional. Revista Venezolana de Sociología y Antropología [Internet]. 2007 [cited 2024 June 05];17(48):96-122. Available from: https://www.redalyc.org/articulo.oa?id=70504806

3. Aspinall PJ, Jacobson B, Castillo-Salgado C. Establishing and sustaining health observatories serving urbanized populations around the world: scoping study and survey. Eur J Public Health. 2016;26(4):681-6. https://doi.org/10.1093/eurpub/ckw007

4. Siqueira CE, Carvalho F. The observatory of the Americas as a network in environmental and worker health in the Americas. Ciênc Saúde Colet. 2003;8(4):897-902. https://doi.org/10.1590/S1413-81232003000400012

5. Paim MC, Santos MLR. State of the art of health observatories: narratives on policy and systems analysis. Saúde debate [Internet]. 2018 [cited 2024 June 05];42(spe2):361-376. Available from: https://www.scienceopen.com/document?vid=854ac973-c6fd-4a50-998c-b03f9d290cd6

6. World Health Organization (WHO). Listings of WHO's response to COVID-19 [Internet]. Geneva: WHO; 2020 [cited 2024 June 05; updated 29 Jan 2021]. Available from: https://www.who.int/news/item/29-06-2020-covidtimeline

7. Lopez-Leon S, Wegman-Ostrosky T, Perelman C, Sepulveda R, Rebolledo PA, Cuapio A, et al. More than 50 long-term effects of COVID-19: a systematic review and meta-analysis. Sci Rep. 2021;11(1):16144. https://doi.org/10.1101/2021.01.27.21250617

8. Davis HE, Assaf GS, McCorkell L, Wei H, Low RJ, Re'em Y, et al. Characterizing long COVID in an international cohort: 7 months of symptoms and their impact. Eclinical Medicine. 2021;38:101019. https://doi.org/10.1016/j.eclinm.2021.101019

9. Su Y, Yuan D, Chen DG, Davis MM, Goldman JD, Heath JR, et al. Multiple early factors anticipate post-acute COVID-19 sequelae. Cell. 2022;185(5):881–895.e20. https://doi.org/10.1016/j.cell.2022.01.014

10. Gomez, CM, Vasconcellos, LCF, Machado, JMH. A brief history of worker's health in Brazil's Unified Health System: progress and challenges. Ciênc. saúde colet. [Internet]. 2018 [cited 2024 June 05];23(6):1963-1970. Available from: https://www.scielo.br/j/csc/a/DCSW6mPX5gXnV3TRjfZM7ks/?lang=en#

11. Almeida IM, Mininel, VA. A construção multidisciplinar e interprofissional da saúde do trabalhador. In: Ferreira LP, Silva MAA, editores. Distúrbio de voz relacionado ao trabalho: conquistas e desafios na América Latina [Internet]. São Paulo: Sintropia Traduções; 2022 [cited 2024 June 05]; p. 57-67. Available from: https://digital.bibliotecaorl.org.br/handle/forl/467?locale-attribute=pt_BR

12. Vogel L. La actualidad del modelo obrero italiano para la lucha a favor de la salud en el trabajo. Laboreal. 2016;12(2):10–17. https://doi.org/10.4000/laboreal.2122

13. Peters MDJ, Godfrey C, McInerney P, Munn Z, Tricco AC, Khalil, H. Chapter 11: Scoping Reviews (2020 version). In: Aromataris E, Munn Z, editors. JBI Manual for Evidence Synthesis [Internet]. Adelaide: JBI; 2020 [cited 2024 June 05]. Available from: https://synthesismanual.jbi.global

14. Tricco AC, Lillie E, Zarin W, Brien KKO, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169(7):467-473. https://doi.org/10.7326/M18-0850

15. Khalil H, Peters MD, Tricco AC, Pollock D, Alexander L, McInerney P, Godfrey CM, Munn Z. Conducting high quality scoping

reviews-challenges and solutions. J Clin Epidemiol. 2021 Feb;130:156-160. http://doi.org/10.1016/j.jclinepi.2020.10.009.

16. Harrison H, Griffin SJ, Kuhn I, Usher-Smith JA. Software tools to support title and abstract screening for systematic reviews in healthcare: an evaluation. BMC Med Res Methodol. 2020;20(1):7. http://doi.org/10.1186/s12874-020-0897-3.

17. Pollock D, Peters MDJ, Khalil H, McInerney P, Alexander L, Tricco AC, et al. Recommendations for the extraction, analysis, and presentation of results in scoping reviews. JBI Evidence Synthesis. 2023;21(3):520-532. https://doi.org/10.11124/JBIES-22-00123

AUTHORSHIP CONTRIBUTIONS
Project design: Cozendey-Silva EN, Teixeira LR
Data collection: Cozendey-Silva EN, Martinez-Silveira MS
Data analysis and interpretation: Cozendey-Silva EN, Martinez-Silveira MS, Mattos RCOC, Teixeira LR
Writing and/or critical review of the intellectual content: Cozendey-Silva EN, Martinez-Silveira MS, Teixeira LR
Final approval of the version to be published: Cozendey-Silva EN, Martinez-Silveira MS, Mattos RCOC, Teixeira LR
Responsibility for the text in ensuring the accuracy and completeness of any part of the paper: Cozendey-Silva EN, Martinez-Silveira MS, Mattos RCOC, Teixeira LR