**Scoping Review Protocol**

***Identifying health equity factors that influence the public's perception of COVID-19 health information and recommendations: A scoping review protocol***

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**Abstract**

**Introduction:** Social determinants of health impact health outcomes. Perception and uptake of COVID-19 health information may be influenced by health equity factors that are derived from social determinants of health. This scoping review will identify research papers that report on health equity factors that may impact the understanding of COVID-19 information and recommendations.

**Objective:**  This protocol aims to map research studies on public perception of COVID-19 prevention information and recommendations using the PROGRESS- Plus health equity framework.

**Methods:**  This scoping review will search (through OVID) Medline, Cochrane Central Register of Controlled Trials (CENTRAL), APA PsycINFO, and Embase databases to identify and map all relevant studies on health equity factors influencing the public's perceptions of COVID-19 recommendations in any language published between January 1, 2020, to July 26, 2021. We will follow the PRISMA-P reporting guidelines and the scoping review analysis methodology from Arksey and O'Malley.

**Inclusion criteria:** We will include all quantitative and qualitative studies that report on general public people (students, patients, caregivers, etc.). Our phenomenon of interest is COVID-19 health information and recommendations provided by different sources of information. The desired outcome is the comprehension of the provided COVID-19 health information and recommendations.

1. **Introduction**

In 2020, the World Health Organization (WHO) announced that the novel CoronaVirus (COVID-19) was breaking out worldwide (Cucinotta 2020). This black swan event has had considerable implications on global health care systems and every aspect of human life (Nicola 2020). Past epidemic experiences suggest that public beliefs, perceptions and behaviors may influence the outcomes of epidemics (Manguvo 2015). During the COVID-19 pandemic, human behavior is influenced by central emotions and their knowledge and perceptions of COVID-19 information (Geldsetzer 2020).

Human behavior related to small-scale decisions about isolation and other preventive behaviours may influence the spread of the virus (Attema 2021). To mitigate the spread of the virus, the government and allied public health associations should formulate effective strategies and policies that could enrich the public's understanding of the COVID-19 pandemic (Shafiq 2021). Since the spread of the virus, various sources of information have tried to disseminate COVID-19 information to increase public awareness and adherence to COVID-19 recommendations (Shafiq 2021). Reliable sources of information vary across countries, ranging from local, non-official authorities to official, government-based organizations (Roozenbeek 2020). With a wide range of sources, there are always potential risks of having the public bump into false and ambiguous information (Palosky 2021). The spread of misinformation and disinformation induced the World Health Organization (WHO) to coin the term "infodemic" to outline the false circulated information in digital and physical environments (WHO, n.d.). Furthermore, many of these sources draw up the information and recommendations explicitly for health professionals (researchers, scientists, physicians, and so on) and not for the general public.

To increase the acceptance of COVID-19 information among the public, governments and public health authorities should execute effective communication strategies that are tailored for public citizens, and the success of such plans is dependent on maintaining the public's trust in delivered messages for a long period of time (Hyland-Wood 2021).

Effective communication needs to address the public's social determinants of health to reduce health disparities and increase access to healthcare systems. Social determinants of health (SDH) refer to the conditions in which individuals are born, grow, and live. It encompasses factors like education, employment, economic status, community and social context, and access to health care systems; these underlying factors account for different health outcomes (Artiga 2018; WHO, n.d.). As critical health outcomes, perception and adoption of COVID-19 information are influenced by health inequities.. It is crucial to apply equity lenses to the processes of guideline development, design of policy interventions, and implementation of

preventive measures, as inequities in these policies could affect marginalized and vulnerable populations and deteriorate pre-existing inequities (Glover 2020).

To our knowledge, there has not yet been a scoping review that reports on health equity factors such as education and health literacy, ethnicity, gender, age, place of residence, socioeconomic status, and other determinants that could impact the understanding of COVID-19 information and recommendations. The objective of this scoping review was to map research studies on public perception of COVID-19 prevention information and recommendations using the PROGRESS- Plus health equity framework.

## 2. RESEARCH QUESTION & RESEARCH OBJECTIVES

The research question guiding this review study is "What health equity factors influence the public's perception and uptake of COVID-19 health information and recommendations?".

The objectives of this scoping review are as follows:

- Recognizing the most common public sources of COVID-19 information
- Identifying papers that discuss the health equity factors related to the public's perception and uptake of COVID-19 information and recommendations
- Mapping findings into PROGRESS- Plus framework via a framework analysis approach

The PICO Framework:

- Population: General public; for example, students, patients, caregivers, etc.
- Intervention: COVID-19 health information and recommendations provided by different sources of information.
- Comparison/ Control: Not Applicable
- Outcome: Perception and uptake of COVID-19 information and recommendations.

## 3. METHODOLOGY

This scoping review will consider all relevant research publications, including experimental and quasi-experimental study designs and qualitative studies published from January 1, 2020,  to July 26, 2021. We will follow the PRISMA-P reporting guidelines (Moher 2015), the methodology by Arksey and O'Malley (Arksey 2005), and guidance from the Joanna Briggs Institute for the development of this protocol (Aromataris 2020). We will develop a logic model outlining the conceptual pathway for the intervention's impact on health consumers.

## 3.1. Logic Model:
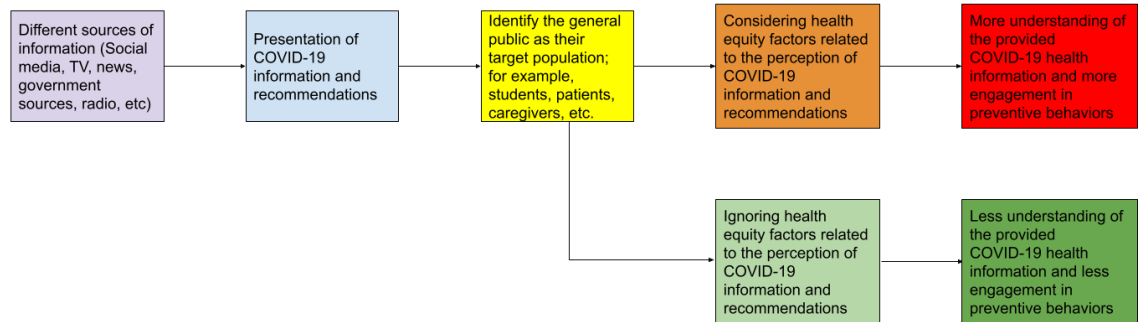


## 3.2. Eligibility criteria

**Table 1. Inclusion and Exclusion Criteria**

| Criteria Dimension (Spider) | Inclusion criteria | Exclusion criteria |
|---|---|---|
| **Types of Participants/Population (sample)** | General public; for example, students, patients, caregivers, etc. | Physicians, researchers, health professionals, academics and other people that are not general health consumers |
| **Intervention/Phenomena of interest** | COVID-19 health information and recommendations provided by different sources of information | Health information other than COVID-19 |
| **Research Type** | Research publications (methods, data and analysis) quantitative, qualitative, or mixed-method documents published in peer-reviewed publications | Commentaries, literature reviews, gray literature |

| Year of Publication | January 1st, 2020- July 26, 2021 | Prior to 2020 |
|---|---|---|
| Language of Publication | All languages | All |

### 3.3. Search Methods

We developed a search strategy in consultation with a health sciences librarian (VL) to search the following bibliographic databases (through OVID) using keywords, MeSH terms, Major Subject Headings, and/or Thesaurus: Medline, Cochrane Central Register of Controlled Trials (CENTRAL), APA PsycINFO, and Embase. In addition to searching bibliographic databases, we will conduct a focused search using motor engines like Google and related health journals to search existing websites and databases using our keywords. We will also hand-search reference lists of screened and accepted publications for other relevant records.

### 3.3. Screening and Selection

Using Covidence software (Covidence,n.d.) as a web-based platform for the management of systematic review data, we will follow a two-part study selection process: (1) a title and abstract review and (2) a full-text review. Two reviewers will independently assess all potential studies and documents against a priori inclusion and exclusion criteria (Table 1). We will resolve any disagreements through discussion, or, if required, we will consult a third reviewer**.**

### 3.4. Data Extraction and Management

We will develop a standardized extraction sheet. Two reviewers will extract data in duplicate and independently, and they will compare results and resolve disagreements by discussion or with help from a third reviewer. To ensure the validity of the data extraction form, it will be piloted by both reviewers, and a third reviewer will review the accuracy of the content. Reviewers will extract the following variables: (1) author(s) and year of publication, (2) source country(ies), (3) study design, (4) gender(s) of participants, (5) ages of participants, (6) COVID-19 information content (prevention and vaccination information and/or recommendations), (7) source of health information or recommendation, (8) Reported Health equity factor according to PROGRESS-Plus equity framework, (9) study objectives, (10) outcome (uptake of information/misinformation and engagement in preventive behaviors), (11) key findings, (12) conclusions.

### 3.5. Critical Appraisal

As a scoping review, the purpose of this study is to aggregate the findings and present an overview of the research rather than to evaluate the quality of the individual studies. Therefore, an overall assessment of the strength of the evidence will not be performed.

### 3.6. Synthesis of Results

We will structure results using the PROGRESS-Plus health equity framework (O'Neill 2014); this framework helps us identify and map the key findings and group them into the associated determinants. Results will be presented in tables with narrative descriptions. We will discuss the application of findings to the broader context/discussion on factors influencing the perception and uptake of COVID-19 information/ recommendations and provide conclusions/implications for policy research and practice. We will also discuss the strengths and limitations of the scoping review.

### 4. DISSEMINATION

We will draft a manuscript aimed for a peer-reviewed publication in the open-access International Journal of Environmental Research and Public Health. We may also present findings at local team meetings and conferences.

### 5. ROLE OF THE FUNDING SOURCE

The funders of the study will have no role in the study design, data collection, data analysis, data interpretation, or writing of the report. The corresponding author will have full access to all of the data in the study and will have final responsibility for the decision to submit for publication.

### 6. Competing Interests

The authors declare no potential conflicts of interest.

### 7. Funding

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