

## Impact of COVID-19 pandemic on hand hygiene, health care utilization, spiritual and traditional medicine practices in Africa: a scoping review protocol

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### Abstract

Due to the impact of COVID-19 on conventional healthcare systems globally, communities have been compelled to modify numerous public health practices and adjust to new circumstances. This scoping review aims to delineate the existing research on the impact of the COVID-19 epidemic on health behaviors in Africa. This review examines alterations in healthcare utilization, hand cleanliness practices, and spiritual and traditional medical methodologies. The evaluations will employ the analytical framework established by Arksey and O'Malley, incorporating modifications proposed by Levac, Colquhoun, and O'Brien to enhance the planning process. A variety of electronic databases, including PubMed, Web of Science, Scopus, CINAHL, and the Cochrane Library, will be utilized to meticulously analyze peer-reviewed literature published from 2021 to 2025. Data will be collected using thematic analysis, and results will be presented in accordance with PRISMA-ScR principles to ensure clarity and consistency. This study aims to establish a robust evidence foundation for culturally responsive public health treatments in Africa that are appropriate for the post-pandemic context.

**Keywords:** COVID-19, Hand Hygiene Practices; Spiritual and Traditional Medicine; Scoping Review Protocol, Ghana

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### Background

The World Health Organization (WHO) declared the novel coronavirus (COVID-19) a global pandemic on March 11, 2020. In response, several public health measures were implemented globally, including social distancing, self-isolation, and quarantine for individuals who were sick or potentially exposed to the virus. Daily activities were significantly altered by these

containment measures, particularly behaviors associated with health and access to healthcare services [1,2]. The distinctive characteristics and worldwide impact of the COVID-19 pandemic rapidly captured the attention of scientists about its effects. The majority of the prior research focused on the impact of the COVID-19 pandemic on nursing habits [3] and sexual practices [4,5]. While this focus is permissible, it is essential to recognize population-level alterations in health behaviors to gain a clearer understanding of the diverse health practices related with the recent epidemic and its containment tactics in Africa. Indeed, with significant segments of the population isolated, lifestyle patterns have predominantly altered [6]. Comprehending these extensive behavioral modifications is essential. Prolonged isolation, widespread uncertainty, and significant lifestyle modifications likely induced alterations in various behaviors, including spiritual and traditional health practices, alcohol consumption, health-seeking behaviors, and dietary patterns [7]. Analyzing these factors is especially essential in Africa, where healthcare access is inequitable and health systems often suffer from inadequate finance. The COVID-19 pandemic exposed persistent structural issues, exacerbating pre-existing health disparities across the continent. The WHO emphasized that proper hand hygiene, particularly the frequent washing of hands with soap and clean water, is the most effective method to prevent the transmission of viruses. Preliminary research indicates that individuals in sub-Saharan Africa are significantly increasing their handwashing frequency. The efficacy of preventive measures was constrained due to the uneven distribution of improvements, resulting in numerous regions still facing challenges in accessing water and hygiene supplies [8, 9]. Correspondingly, there was a significant disturbance in health-seeking behaviors. Lockdowns, economic hardships, and heightened stress resulted in a reduction in healthcare utilization, particularly among women. The existing healthcare inequities were intensified by these disruptions, further aggravated by shortages of essential medications and

medical supplies [10, 11]. A notable behavioral adaptation to these constraints was the resurgence of traditional medical practices. A survey conducted during the epidemic indicated that over 46% of individuals in certain regions of Africa utilized traditional remedies to prevent COVID-19 and assist those already infected [12]. This tendency underscores the enduring significance of traditional medicine in African health systems and prompts essential inquiries regarding its possible formal incorporation into public health frameworks. Nonetheless, several current investigations on these behavioral modifications are restricted by methodological constraints, especially for the durations examined. Most studies had evidence only until December 2020, resulting in insufficient documentation of the evolving health habits within various African cultural contexts. The significance of spiritual activities and traditional medicine during the epidemic is notably underexamined. This scoping analysis seeks to evaluate the diverse effects of the COVID-19 pandemic on public health practices in Africa from 2021 to 2025. The review will concentrate on hand hygiene, healthcare utilization, spiritual involvement, and traditional medicinal practices. Scoping reviews, esteemed for their thoroughness in delineating current literature, structuring essential concepts, and pinpointing study deficiencies, offer a suitable methodological framework for investigating this expansive and intricate domain [13]. While existing literature has examined these issues separately, this protocol brings together biomedical (hand hygiene, healthcare utilization) and socio-cultural (spiritual/traditional medicine) practices into a single framework, which is limited in literature. The study again focuses on Africa where the interplay of formal healthcare, public health interventions, and traditional/spiritual practices is particularly strong, but not systematically synthesized in the context of COVID-19. The scoping review process provides a rigorous, transparent, and reproducible framework for identifying existing evidence, highlighting research gaps, and informing policy and culturally relevant health interventions. This study aims to guide the formulation of culturally relevant and contextually responsive health solutions in the post-pandemic age by synthesizing emerging evidence. A comprehensive understanding of behavioral changes during COVID-19 is crucial for informing effective policymaking and public health interventions throughout Africa.

## Methods

### Study design and sampling strategies

The Arksey and O'Malley methodological framework, supplemented by the enhancements proposed by will be employed to delineate literature regarding the effects of the COVID-19 pandemic on hand hygiene, healthcare utilization, and spiritual and traditional medicine practices in Africa. This approach will encompass the following stages: developing research questions, identifying pertinent studies, selecting studies, charting data, and synthesizing, summarizing, and presenting the findings. Levac, Colquhoun [14] proposed modifications to the Arksey and O'Malley methodological framework will be used to outline literature regarding the effects of the COVID-19 pandemic on spiritual and traditional medicine practices in Africa, healthcare utilization, and hand hygiene. This approach consists of the following steps: developing research questions; identifying relevant studies; selecting studies; creating

data charts; and lastly, presenting, summarizing, and synthesizing the results.

### Eligibility of the research question

The Population, Concept, and Context (PCC) mnemonic, as described by Moola, Munn [15], would be employed to assess the eligibility of the proposed scoping review question, as seen in Table 1.

### Identify pertinent studies

In collaboration with an experienced librarian at Catholic University of Ghana, we will devise a comprehensive search strategy to identify pertinent studies for our scoping study. The search strategy will employ a meticulously selected set of keywords and phrases that are pertinent to the COVID-19 pandemic, healthcare utilization, hand sanitation, and spiritual and traditional medicine practices in Africa. Boolean operators (AND, OR) and Medical Subject Headings (MeSH) will be employed to effectively integrate these search phrases. We will conduct a comprehensive and inclusive literature search by analyzing a variety of electronic databases, such as MEDLINE (PubMed), Scopus, Web of Science, Cochrane Library, and CINAHL, from their inception to the present. To ensure thorough coverage, we will consult grey literature sources, including reports from health authorities such as the World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC), and Google Scholar. As there will be no limitations on language or publication dates, a diverse array of studies on health practices associated with the COVID-19 pandemic from 2021 to the present can be incorporated. Google Translate will be implemented to facilitate the translation of documents that are not in English. We will evaluate the reference lists of all the included studies and relevant reviews to identify any new research that may have been overlooked during the database search. Table 2 illustrates the intended documentation of literature searches to facilitate replication and transparency. EndNote Library X20 will be employed to organize and administer all citations.

### Inclusion Criteria

1. Research conducted with local health officials and community leaders in Africa.
2. Research on the COVID-19 pandemic, hand hygiene, healthcare utilization, and spiritual and traditional medicine practices in Africa, along with insights gained.
3. Research studies use primary research methodologies, including quantitative, qualitative, and mixed methods designs.
4. Peer-reviewed academic articles, governmental reports, and Non-Governmental Organization (NGO) publications.
5. Research published in English or other languages, including French and Portuguese.
6. All pertinent studies encompassing the timeframe from 2021 to 2025.

### Exclusion Criteria

1. Research not Centred on Africa.
2. Non-peer-reviewed research, including theses and dissertations
3. Non-research articles, such as editorials, opinion, and abstracts.
4. Research disseminated before to 2021.

**Table 1:** PCC (Population, Concept, and Context) framework for determining the eligibility of this scoping review core question.

P - Population	Individuals of various ages in African nations. This encompasses persons impacted by the COVID-19 pandemic about hand cleanliness, health-seeking behaviors, spiritual activities, and the utilization of traditional medicine. Healthcare professionals, traditional healers, religious authorities, lawmakers, and the general populace may also be incorporated if they offer pertinent information.
C - Concept	Hand Hygiene Practices - Modifications in handwashing behaviors, utilization of sanitizers, and compliance with hygiene guidelines during the pandemic. Health-Seeking Behavior. Trends in healthcare utilization, delays in pursuing treatment, and preference for hospitals over alternative care sources. Spiritual Practices. The significance of faith-based interventions, prayer, fasting, religious counseling, and beliefs in supernatural protection throughout the pandemic. Traditional Medicine Practices. Utilization of herbal medicines, self-medication with indigenous treatments, and dependence on traditional healers as alternatives or supplements to biomedical therapy.
C - Context	Africa: This encompasses all African nations where research has investigated the effects of the COVID-19 epidemic on hand cleanliness, health-seeking behaviors, spiritual practices, and the utilization of traditional medicine. Research must be undertaken during or subsequent to the COVID-19 pandemic (2021–2025).

**Table 2.** Search strategy employed

Search Engine	Search Components	Search Terms	Yields	Date and time
PubMed	(COVID-19 Pandemic OR Coronavirus Disease OR SARsCOV2) AND (Spiritual Health Practices OR Fasting OR Meditation OR Prayer OR Chanting OR Scripture reading) AND (Physical Activity OR Exercise) AND (Fruit and Vegetable Intake OR Fruit and Vegetable Consumption) AND (Handwashing Practices) AND (Health Seeking OR Health Service Utilization OR Self Medication) AND Africa	(COVID-19 Pandemic) OR (Coronavirus Disease) OR (SARs COV2)) AND (Spiritual Health Practices) OR (Fasting) OR (Meditation) OR (Prayer) OR (Chanting) OR (Scripture reading)) AND (Handwashing Practices)) AND (Health Seeking)) OR (Health Service Utilization)) OR (Self Medication)) AND (Traditional Medicine Practices)) AND Africa AND (2021:2025[mdat])	95	27/12/24 @ 5:41pm
Web of Science		COVID-19 Pandemic (All Fields) and Spiritual Health Practices (All Fields) or Chanting (All Fields) and Hand hygiene (All Fields) or Health service utilization (All Fields) and Cor (All Fields) and Africa (All Fields) and 2021 or 2022 or 2023 or 2024 or 2025 (Publication Years) and 2021 or 2022 or 2023 or 2024 or 2025 (Publication Years) and 2021 or 2022 or 2023 or 2024 or 2025 (Publication Years)	181	27/01/2025 @ 6:30pm
Cochrane		Covid-19 pandemic AND Spiritual health practices AND Hand hygiene practices AND Health service utilization AND Traditional medicine practices AND Africa	161	28/01/2025 @2:15pm
Google scholar		Covid-19 pandemic AND (Spiritual practices OR Prayers OR meditation OR Yoga) AND (Hand hygiene practices OR Hand washing) AND (Health service utilization OR Self-medication) AND Traditional medicine practices AND Africa	12,000 Selected 52	28/01/2025@4:00pm
		Total Articles	489	
		Duplicates Found	29	

### Selection of Studies

A two-phase screening approach will be used to locate relevant papers for this scoping study. The study will begin by identifying titles and abstracts for screening (Phase 1). Subsequently, we will use EndNote's "Find Duplicates" tool to remove any redundant items from the collection. If a study meets the inclusion criteria or provides significant insights, it will be reviewed further. In the second stage, we will conduct an internet search for open access articles, individually contact authors for closed access publications, and use Catholic University Library Services to obtain the full texts of these studies. Following that,

each paper will be painstakingly analyzed in accordance with the inclusion and exclusion criteria to determine which research will be reviewed. Two reviewers (SAW, FD) will conduct the selection procedure separately in both stages to reduce bias. A third reviewer (MA) will be consulted in order to address any differences. We will develop a study screening tool with all of the inclusion criteria using Google Forms. We will test it on 10% of the potentially qualifying research to ensure consistency. The 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram (Figure 1) will be used to document the entire study selection process in order to guarantee accuracy and transparency in the review strategy.

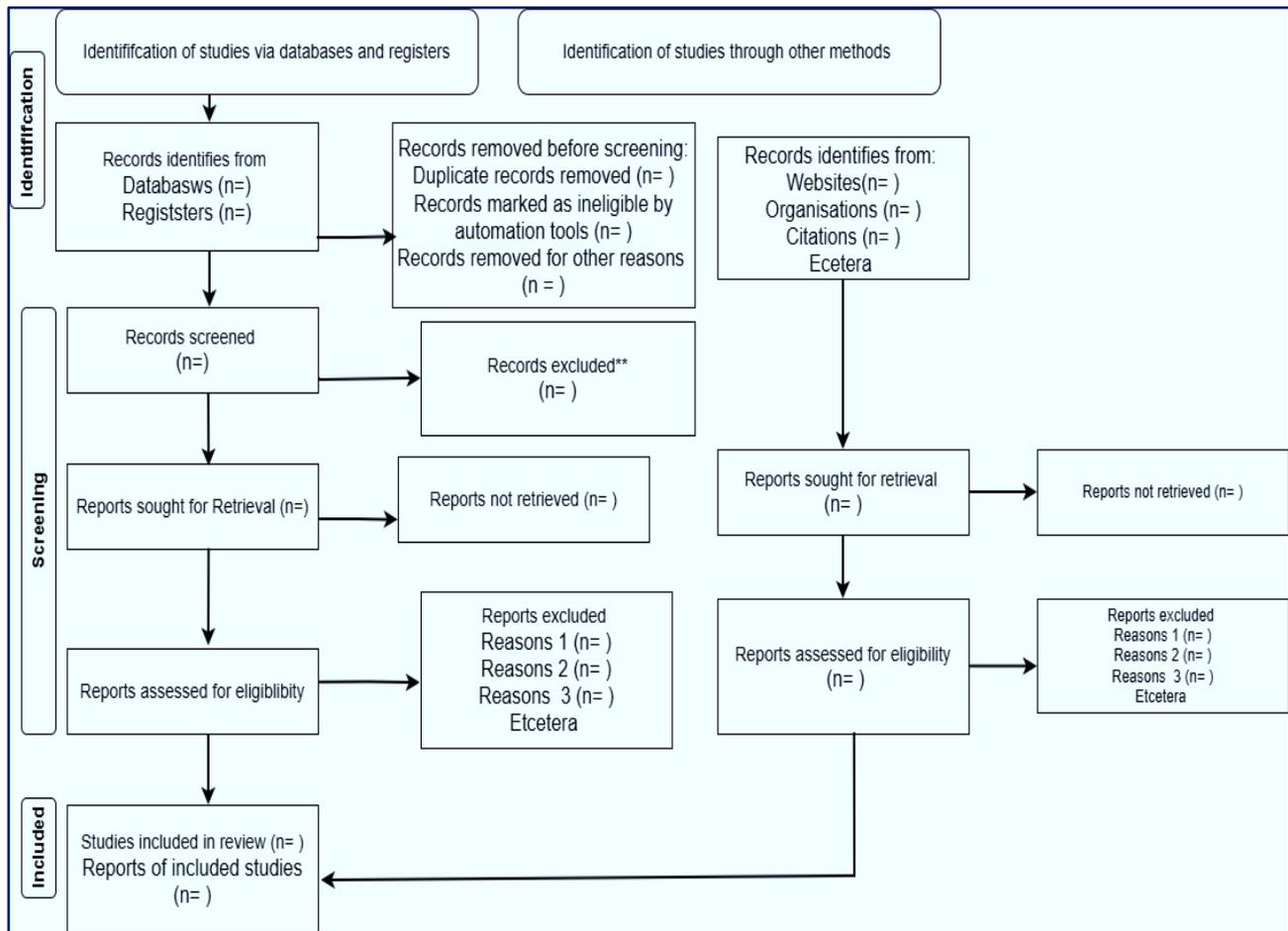


Figure 1: PRISMA flow schematic for the year 2020

### Mapping the data

A standardized data extraction form will be created and subsequently pilot evaluated by two reviewers utilizing a randomly selected subset of included studies to ensure precision and uniformity. Essential data to be extracted encompasses study characteristics (including authors, publication year, country, and study design), health practices (such as hand hygiene, healthcare utilization, and spiritual and traditional medicine), and recommendations (including proposed solutions and strategies for enhancing health practices) pertinent to the COVID-19 pandemic. Two reviewers (SAW, FD) will independently extract data to assure precision, and any discrepancies will be addressed in discussion.

### Compiling, summarizing, and presenting the findings

In order to conduct a thorough assessment of the evidence regarding the impact of COVID-19 Pandemic on Hand Hygiene, Health care utilization, Spiritual and Traditional Medicine Practices in Africa, this feasibility study will employ a theme analytic approach to analyze the data. The process will be divided into three stages: descriptive data analysis, theme analysis, and narrative synthesis. The qualitative thematic analysis will involve the synthesis of the primary themes related to the COVID-19 pandemic, hand hygiene, health care utilization, lessons learned from spiritual and traditional medicine practices, and identified gaps. The quantitative descriptive analysis will provide a summary of the study characteristics and distribution.

Ultimately, the findings will be organized into a narrative synthesis that will offer a comprehensive comprehension of the evidence, emphasizing critical areas that require enhancement and suggesting potential future research directions. The findings will be reported in accordance with the PRISMA-ScR standards to guarantee transparency and rigor. The study's findings will be presented in accordance with the PRISMA-ScR reporting standards [16].

### Discussion

The objective of this review technique is to elucidate the evidence regarding the impact of the COVID-19 epidemic on African health practices. The investigation concentrates on the impact of the pandemic on the utilization of healthcare, hand hygiene practices, and the use of traditional and spiritual remedies. A diverse array of electronic databases will be examined using the scoping review methodology. The scoping review findings will produce a set of results that are organized and will suggest potential directions for future research [17]. The protocol of this study is distinguished from others in two significant respects. Initially, the ScR is a more appropriate method for our research query than a systematic review. The scope of accessible evidence is the primary objective of our research query, which is broad in nature. Secondly, the present investigation will integrate qualitative and quantitative methodologies to disseminate our findings. Theme analysis will be implemented to offer actionable recommendations and

substantial insights into public health. The findings of this scoping review study are anticipated to engage practitioners, researchers, and other stakeholders interested in this growing issue within the pandemic context [17]. Furthermore, the distribution strategy for this study includes publication in peer-reviewed journals and presentations at conferences. We expect our scoping review to furnish actionable insights for policymakers and healthcare professionals in formulating targeted interventions that encourage and maintain healthy practices in the post-pandemic context. The pandemic may have substantially transformed healthcare access and lifestyle practices, and demonstrating these changes in Africa would yield insights into both beneficial and detrimental modifications in health-related behaviors. This scoping review's strength lies in its comprehensive examination of the existing literature on health practices in Africa during the COVID-19 pandemic. A notable quality of this scoping review is the transparency and reproducibility of its process. The study inclusion timeline will concentrate on publications from 2021 to 2025. A drawback exists in the restricted time window for study inclusion, potentially constraining the scope and quality of the investigations. Longitudinal studies may be excluded from the review due to their approach necessitating an extended duration to produce significant observations. This scoping review will exclusively encompass literature published in English; thus, studies in other languages will not be evaluated. A thorough assessment of the available literature may be beneficial for guiding future research and practice, despite potential limitations.

## Conclusion

The COVID-19 epidemic has significantly transformed health-related behaviors, healthcare utilization, and the dependence on spiritual and traditional medicinal practices throughout Africa. This scoping review seeks to comprehensively delineate the various ways the pandemic has transformed health practices, employing a comprehensive and methodologically rigorous approach based on the Arksey and O'Malley framework and adhering to PRISMA-ScR standards. The results of this scoping assessment will be essential in shaping public health policies that are culturally attuned, equitable, and responsive to the intricate realities of African communities. Policymakers, healthcare professionals, and academics must recognize and integrate traditional and spiritual practices within formal healthcare systems where suitable, thereby fostering a more comprehensive and robust approach to health promotion and illness prevention. Future research must prioritize longitudinal studies to document the progression of these behaviors over time, focusing on local contexts, gender inequities, and socio-economic determinants of health. Efforts must be undertaken to increase access to water, sanitation, and healthcare services, which are essential for maintaining advancements in public health practices established during the pandemic.

## Abbreviation

COVID-19: Coronavirus Disease 2019; CDC: Centers for Disease Control; PCC: Population, Content, and Context; MeSH: Medical Subject Headings; NGO: Non-Governmental Organization; PI: Principal Investigator; PRISMA-P: Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for protocols; PRISMA-ScR: Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews; WHO: World Health Organization.

## Declaration

### Acknowledgment

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### Funding

None.

### Availability of data and materials

Data will be available by emailing [amponwirekosabina@gmail.com](mailto:amponwirekosabina@gmail.com)

### Authors' contributions

SAW and FDB devised the study. FDB developed the technique for this investigation. SAW and FDB composed the initial draft, while SYO, MA, and EO conducted a critical review and implemented significant adjustments.

### Ethics approval and consent to participate

We conducted the research following the declaration of Helsinki. The study does not require ethics approval as it relies on published works. This procedure has been registered with Open Science Framework (OSF) Registration.

### Consent for publication

Not applicable

### Competing interest

The authors declare that they have no competing interests.

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