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Role of religious beliefs on antiretroviral treatment adherence among Pentecostal Christians in sub-Saharan Africa: a scoping review protocol

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ABSTRACT

Introduction Sub-Saharan Africa continues to be disproportionately affected by HIV/AIDS. As such, several countries in sub-Saharan Africa are implementing the UNAIDS' recommendation to test and treat people living with HIV (PLHIV) irrespective of their CD4 count. However, most of the antiretroviral treatment (ART) programmes, in this region, continue to struggle with poor adherence to treatment stemming from patient-related factors including their religious beliefs. Unfortunately, the role of religious beliefs on ART adherence has been underexplored in the literature. In this study protocol, we propose the steps of a scoping review to explore, identify and map the literature on the impact of religious beliefs on adherence to ART among Pentecostals living with HIV in sub-Saharan Africa.

Methods and analysis We will use Arksey and O'Malley's framework and the Joanna Briggs Institute methodology guidelines to conduct this scoping review. The following databases will be searched for relevant literature: Web of Science, PubMed/Medline, Psych-ARTICLES, Academic Search Complete, Cumulative Index of Nursing, Allied Health, Google Scholar and published articles from conference proceedings. Studies published between January 2010 and February 2022 will be eligible. The identified literature will be independently screened for eligibility by two reviewers based on predetermined inclusion and exclusion criteria. An Excel form will be designed to electronically capture data from studies that meet the inclusion criteria. Finally, we will use a narrative synthesis to summarise the data extracted to report on the nature of existing evidence and the impact of religious beliefs on ART adherence.

Ethics and dissemination Ethical approval will not be required for the scoping review since it will entail synthesising information from already published articles and conference proceedings. The study findings will be disseminated through publication in a scientific journal and presented at conferences and workshops aimed at improving adherence to ART in PLHIV.

Strengths and limitations of this study

- This proposed scoping review will provide a practical way to identify, explore and map the literature on religious beliefs and how they impact adherence to antiretroviral treatment among Pentecostals living with HIV in sub-Saharan Africa.
- Nine databases will be used in the study. Grey literature will also be searched from Theses and Dissertations libraries, Open Access and published reports from conference proceedings. Furthermore, a literature search will equally be done using free-text words on bibliographical search engines such as the WHO repository and National Health Departments, to capture the highest possible number of articles that will be relevant for the study.
- The Rayyan web application will be used in screening the articles to facilitate a blinded process that will minimise bias and increase the credibility of the screening process used in the study.
- Owing to the limited resources for translation, only articles written in English will be eligible for the scoping review. This restriction increases the possibility of missing out on studies that have been published in other languages used in sub-Saharan Africa.

INTRODUCTION

Sub-Saharan Africa continues to be severely affected by HIV/AIDS with more than 25.6 million people living with HIV (PLHIV).[1] Several countries in sub-Saharan Africa consequently responded to the HIV epidemic by adopting the UNAIDS 90-90-90 targets of 2014.[2] According to the 2014 UNAIDS's global targets, all countries were supposed to have had 90% of all the PLHIV know their HIV status, 90% of all the people diagnosed with HIV infection initiated on antiretroviral treatment (ART) and 90% of all the people receiving ART have suppressed viral load by 2020, to possibly end the HIV epidemic by 2030.[3] An increase to over 17.9 million people accessing ART in sub-Saharan Africa today can be attributed to the adoption of the 2014 UNAIDS 90-90-90

global targets[2] and the implementation of the Universal Test and Treat guidelines to initiate every person who tests positive for HIV irrespective of their CD4 count and WHO clinical stage.[4]

PLHIV who achieve undetectable viral load are known to live long healthy lives and have minimal risk of sexually transmitting HIV to their partners.[5] Although optimal adherence to ART yields great benefits, it is admittedly a demanding process requiring those on ART to remain committed to taking at least 95% of ART as prescribed.[5–7] Poor adherence to ART is a high-risk behaviour that can lead to treatment failure, increased risk of HIV transmission, disease progression from HIV to AIDS, and mortality.[6 8 9] Poor adherence to ART also increases the rates of hospital admissions due to increased opportunistic infections in patients with HIV, consequently increasing the workload of healthcare providers.[10–13] While patients showing resistance to the first-line ART regimen can be transferred to the second and subsequently the third-line regimen, such alternative treatment options are costly and difficult to administer and are also known to have intense side effects.[14–16]

Generally, adherence to ART is a complex and dynamic process influenced by the interplay of variables such as socioeconomic, cultural, health systems, therapy and patient-related factors.[17–19] Among the patient-related factors are substance abuse, emotional distress, treatment fatigue and religious beliefs.[20–23]

Globally, religion plays an important part in the lives of many people and over 88.7% of the world's population today profess to a religion.[24 25] Africa has the highest number of Christians. According to the global statistics on religion, 47% of Africa's population is evangelised and 49% of it is Christianised.[26] In sub-Saharan Africa, Pentecostal churches are currently among the fastest and largest growing Christian movements.[26] Pentecostal denominations are characterised by a new experience of the 'Holy Spirit'. This new experience of the Holy Spirit is believed by Pentecostals to give them the power to provide deliverance from sin, demonic attacks, demon possession, and also the ability to receive miracles and reveal prosperity promises.[26 27] Pentecostal Christian movements are generally led by Pastors or Christian leaders whose preaching places emphasis on prophecies, miracles and the spiritual healing of diseases such as HIV.[28–30] Consequently, PLHIV are becoming increasingly attracted to Pentecostal churches as they listen to testimonies of such faith-based healing through various channels.[30 31]

The impact of religious beliefs on the prevention, management and care of PLHIV has been widely recognised in sub-Saharan Africa from the onset of the HIV pandemic in 1981.[32] Many faith-link networks, such as Islamic Relief, Tear fund, Caritas Internationalist, World Conference of Religion for Peace, and the International Network of Religious Leaders living with HIV, have joined other actors such as the WHO and UNAIDS in providing resources aimed at preventing HIV transmission, and improving adherence to ART and care to PLHIV.[32]

However, there have also been instances where some faith-based organisations have contributed to misinformation about ART. For instance, studies from sub-Saharan African countries confirm that pastors claim to provide complementary therapy to HIV through prayers, holy tea, holy water and other faith-based healing rituals, sometimes conveyed to the public through privately owned radio and television stations.[28 30] Some highly influential spiritual leaders within Pentecostal churches in sub-Saharan Africa have also been noted to idolise miraculous healing using abnormal practices that include the eating of grass and snakes, the drinking of petrol and the spraying of insecticides on congregants.[33]

The use of traditional potions from traditional healers, holy water and prayers to 'cure' HIV is also well documented as barriers to ART adherence[20 28] and undermines the medical community's efforts to initiate and retain PLHIV on ART.[34 35] PLHIV also have an unwavering connection to their traditional healers and religious leaders, so discouraging them from using such complementary medicines can irreconcilably erode their trust in the healthcare system.[20 36 37]

Although more collaboration with complementary medicine providers such as Christian religious leaders, spiritual prophets and pastors is recommended as a way to strengthen adherence to ART,[28 31 38] there is still a paucity of evidence on nature, range and the extent to which religious beliefs impact adherence to ART. This protocol serves as a plan to explore, identify and map the literature on religious beliefs regarding ART adherence among Pentecostals living with HIV in sub-Saharan Africa.

METHODOLOGY AND ANALYSIS

Protocol design

Colquhoun *et al*[39] define a scoping review as a form of knowledge synthesis that addresses an exploratory research question aimed at mapping key concepts, types of evidence, and gaps in research related to a defined area or field, by systematically searching, selecting, and synthesising existing knowledge. The proposed scoping review will be guided by the methodological steps suggested by Arksey and O'Malley[40] as follows: (1) identification of the research question; (2) identification of relevant studies for the scoping review; (3) selection of the literature for the scoping review; (4) charting the data; and (5) collating, summarising and reporting the results. The Preferred Reporting Item for Systematic Reviews and Meta-Analyses (PRISMA) extension for Scoping Reviews checklist from Moher *et al*[41] will be used to ensure that the scoping review is meticulously conducted (see online supplemental appendix 1). Reporting of the results will follow the 2017 recommendations of the Joanna Briggs Institute (JBI).[42]

Stage 1: identification of the research question

The proposed study will use the population, concept and context (PCC) mnemonic recommended by JBI

for scoping reviews to formulate the research questions and to ensure that the studies that will be selected will align with the research question. Table 1 illustrates the PCC framework and eligibility criteria for selecting or rejecting studies.

Research questions

Among other Christian groups in sub-Saharan Africa, Pentecostals are well known for their emphasis and preaching on spiritual gifts and their ability to use the power of the Holy Spirit to heal people suffering from challenging diseases such as HIV.[28 30 31] Given that Pentecostals strongly believe in the use of the power of the Holy Spirit to heal diseases such as HIV, not much is known of their stance on adherence to ART. Generally, several clinical factors have been associated with PLHIV's ability to adhere to ART. Further psychosocial factors have also been used to explain the non-adherence behaviour to ART among PLHIV. Common psychosocial factors impacting ART adherence include beliefs about ART, mental health such as depression, coping strategies, perceived social support and religious beliefs.[43]

Religious beliefs are known to affect how some people deal with HIV and other psychosocial factors such as believing in ART, disclosure, acceptance of HIV status, stigma and discrimination, depression and anxiety which influence adherence to treatment.[44] Some religious beliefs also facilitate the creation of supportive environments to enhance adherence to ART by some patients.[44] Understanding the relationship between religious beliefs and the psychosocial factors impacting adherence to ART is pivotal[43 45] and can inform the development of holistic patient-centred HIV care for Pentecostals.

In this review, we will seek to answer the following research question: 'In what ways do religious beliefs impact adherence to ART among Pentecostals living with HIV in sub-Saharan Africa?' The following sub-questions will be explored in the study:

1. What is the impact of religious beliefs on ART adherence among Pentecostals living with HIV in sub-Saharan Africa?
2. Are there religious-embedded adherence interventions to improve ART adherence among Pentecostals living with HIV in sub-Saharan Africa and what are their impacts?
3. How do religious beliefs relate to the psychosocial factors that impact adherence to ART among Pentecostals living with HIV in sub-Saharan Africa?

Population term definition

The study population will consist of all Christians living with HIV from different Pentecostal denominations in sub-Saharan Africa (see table 1).

Stage 2: identification of relevant studies

Relevant studies for the scoping review will be identified through a systematic search of the following databases: Web of Science, EMBASE, PubMed/Medline, PsychARTICLES, Academic Search Complete, Cumulative Index of Nursing, Allied Health, EBSCOhost interface and Scopus. A literature search will also be done using free-text words on bibliographical search engines such as the WHO repository, National Health Departments, Academia.edu and Google Scholar. Grey literature will also be searched from Theses and Dissertations. Open Access and published reports from conference proceedings will equally be searched. The search process will be iterative and will be included in the report section of the study. At the time of searching for studies and articles, 'Medical Subject Headings (MeSH) term', abstract or title table, keyword and text word tabs will be selected. In the process of the searching, search terms will be combined using the Boolean technique (AND, OR) as

Table 1 The PCC framework and eligibility criteria for selecting or rejecting studies

Criteria	Determinants	Inclusion criteria	Exclusion criteria
Population	Adult Pentecostals living with HIV	Articles and studies reporting on adult Pentecostals living with HIV who are 18 years old and above	Articles and studies not reporting on adult Pentecostal Christians with HIV
Content	Barriers or facilitators of adherence to ART	Articles and studies reporting on religious beliefs as barriers or facilitators of ART adherence	Articles and studies reporting on religious beliefs not impacting ART adherence
Context	sub-Saharan Africa	Articles and studies reporting on religious beliefs as barriers or facilitators of ART adherence in sub-Saharan Africa	Studies and articles based on Christian religious beliefs as barriers or facilitators of ART adherence in other parts of the world
Sources of evidence	Empirical and grey literature	Evidence from empirical and grey literature such as government documents, NGO reports and academic dissertations from all study designs that meet the selection criteria	Evidence literature reviews, study protocols, editorials, commentaries and news reports will not be selected
Others	Language	All articles and studies that meet the selection criteria and are written in the English language	All articles and studies that are eligible but written in other languages
	Time	All articles and studies that meet the selection criteria, and were published between 2010 and February 2022	All articles and studies that are eligible but were published before 2010 and after February 2022

ART, antiretroviral treatment; NGO, non-governmental organisation; PCC, population, concept and context.

follows: (adherence) AND (faith) OR (Pentecostal*) OR (Christian*) OR (religious* beliefs) OR (psycho-social factors) AND (antiretroviral treatment) OR (antiretroviral medication) OR (HAART) OR (HIV medication) OR (antiretroviral therapy).

Pilot search

A pilot search will first be done with the assistance of a competent librarian in a selected database to identify potential problems that have to be addressed before conducting a final search of relevant studies and articles (see table 2). A record of all the searches carried out will be kept and updated during the search process to monitor when the same search terms are used in other databases. Eligible studies and articles will be uploaded into the Mendeley software and any duplicates that are found in the selected studies and articles will be removed.

Stage 3: study selection

Only studies that meet the inclusion criteria as presented in table 1 will be selected. The proposed study selection process is shown on the PRISMA flow diagram in figure 1.

Eligible studies will be screened by two reviewers at two levels. The first part of the screening will entail a double and independent screening of the titles and abstracts of studies depending on whether the studies initially meet the inclusion criteria as described in table 1. During the screening process, authors of articles and studies that meet the selection criteria but are not available online will be contacted for a copy of the full texts of the articles,

Table 2 A record of the pilot electronic search carried out

Date	Keyword searched	Search engine used	Number of publications obtained
25 Feb 2022	((((Adherence) AND ((“2010”(Date - Publication): “3000”(Date - Publication)))) AND ((Faith OR Pentecostal* OR Christian* OR religion* beliefs OR psycho-social factors) AND ((“2010”(Date - Publication): “3000”(Date - Publication))))) AND ((Antiretroviral treatment OR antiretroviral medication OR antiretroviral therapy OR HAART OR HIV medication) AND ((“2010”(Date - Publication): “3000”(Date - Publication)))) (“adherance”(All Fields] OR “adhere”(All Fields] OR “adhered”(All Fields] OR “adherence”(All Fields] OR “adherences”(All Fields] OR “adherent”(All Fields] OR “adherents”(All Fields] OR “adherer”(All Fields] OR “adherers”(All Fields] OR “adheres”(All Fields] OR “adhering”(All Fields)) AND 2010/01/01:3000/12/31(Date - Publication) AND ((“faith”(All Fields] OR “faithful”(All Fields] OR “faithfulness”(All Fields] OR “faiths”(All Fields] OR “Pentecostal*“(All Fields] OR “Christian*“(All Fields] OR (“religion*“(All Fields] AND (“belief s”(All Fields] OR “culture”(MeSH Terms] OR “culture”(All Fields] OR “belief”(All Fields] OR “beliefs”(All Fields))) OR (“Psycho-social”(All Fields] AND (“factor”(All Fields] OR “factor s”(All Fields] OR “factors”(All Fields)))) AND 2010/01/01:3000/12/31(Date - Publication)) AND ((((“antiretroviral agents”(Pharmacological Action] OR “antiretroviral agents”(MeSH Terms] OR (“antiretroviral”(All Fields] AND “agents”(All Fields)) OR “antiretroviral agents”(All Fields] OR “antiretroviral”(All Fields] OR “antiretrovirally”(All Fields] OR “antiretrovirals”(All Fields)) AND (“therapeutics”(MeSH Terms] OR “therapeutics”(All Fields] OR “treatments”(All Fields] OR “therapy”(MeSH Subheading] OR “therapy”(All Fields] OR “treatment”(All Fields] OR “treatment s”(All Fields))) OR ((“antiretroviral agents”(Pharmacological Action] OR “antiretroviral agents”(MeSH Terms] OR (“antiretroviral”(All Fields] AND “agents”(All Fields)) OR “antiretroviral agents”(All Fields] OR “antiretroviral”(All Fields] OR “antiretrovirally”(All Fields] OR “antiretrovirals”(All Fields)) AND (“medic”(All Fields] OR “medical”(All Fields] OR “medicalization”(MeSH Terms] OR “medicalization”(All Fields] OR “medicalizations”(All Fields] OR “medicalize”(All Fields] OR “medicalized”(All Fields] OR “medicalizes”(All Fields] OR “medicalizing”(All Fields] OR “medically”(All Fields] OR “medicals”(All Fields] OR “medicated”(All Fields] OR “medication s”(All Fields] OR “medics”(All Fields] OR “pharmaceutical preparations”(MeSH Terms] OR (“pharmaceutical”(All Fields] AND “preparations”(All Fields)) OR “pharmaceutical preparations”(All Fields] OR “medication”(All Fields] OR “medications”(All Fields))) OR ((“antiretroviral agents”(Pharmacological Action] OR “antiretroviral agents”(MeSH Terms] OR (“antiretroviral”(All Fields] AND “agents”(All Fields)) OR “antiretroviral agents”(All Fields] OR “antiretroviral”(All Fields] OR “antiretrovirally”(All Fields] OR “antiretrovirals”(All Fields)) AND (“therapeutics”(MeSH Terms] OR “therapeutics”(All Fields] OR “therapies”(All Fields] OR “therapy”(MeSH Subheading] OR “therapy”(All Fields] OR “therapy s”(All Fields] OR “therapys”(All Fields))) OR (“antiretroviral therapy, highly active”(MeSH Terms] OR (“antiretroviral”(All Fields] AND “therapy”(All Fields] AND “highly”(All Fields] AND “active”(All Fields)) OR “highly active antiretroviral therapy”(All Fields] OR “haart”(All Fields] OR “haarts”(All Fields)) OR ((“hiv”(MeSH Terms] OR “hiv”(All Fields)) AND (“medic”(All Fields] OR “medical”(All Fields] OR “medicalization”(MeSH Terms] OR “medicalization”(All Fields] OR “medicalizations”(All Fields] OR “medicalize”(All Fields] OR “medicalized”(All Fields] OR “medicalizes”(All Fields] OR “medicalizing”(All Fields] OR “medically”(All Fields] OR “medicals”(All Fields] OR “medicated”(All Fields] OR “medication s”(All Fields] OR “medics”(All Fields] OR “pharmaceutical preparations”(MeSH Terms] OR (“pharmaceutical”(All Fields] AND “preparations”(All Fields)) OR “pharmaceutical preparations”(All Fields] OR “medication”(All Fields] OR “medications”(All Fields)))) AND 2010/01/01:3000/12/31(Date - Publication))	PubMed	178

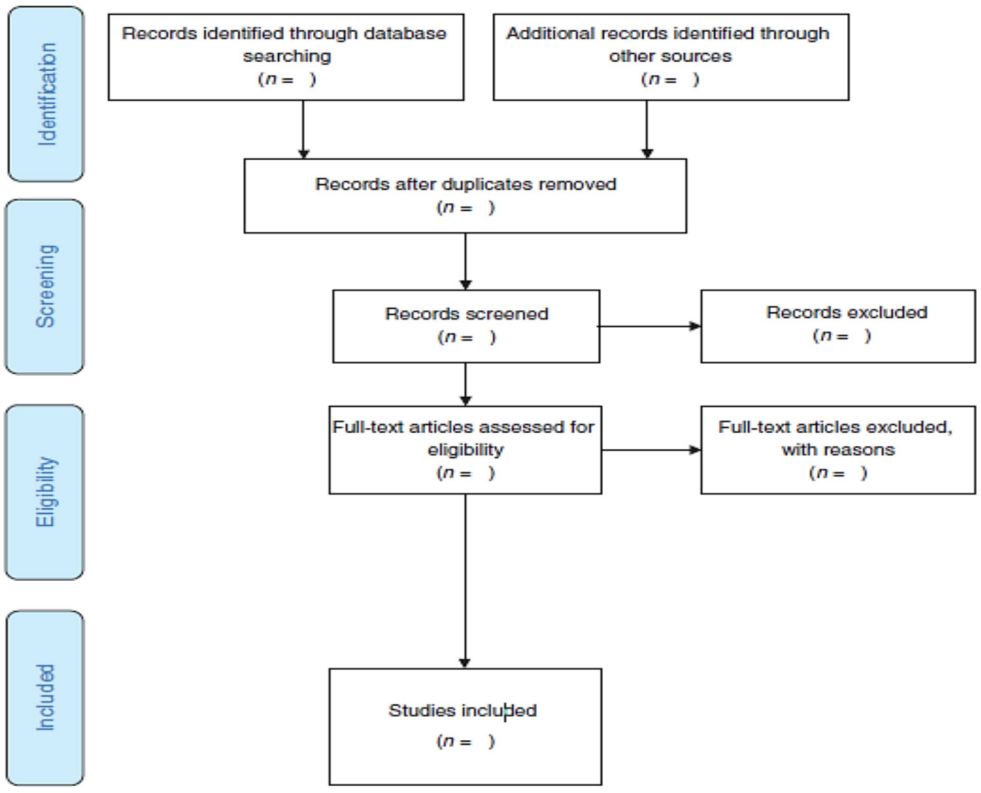

Figure 1 Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow chart of study selection process.

and should these requests be unsuccessful, such articles will be excluded from the study. The screening of articles at both levels will be done on the Rayyan OCRI Systematic Reviews Web application[46] in a blinded process that will eliminate bias. A screening guide will be developed from the PCC framework and eligibility criteria for selecting or rejecting studies (table 1) and provided with instructions to help the screeners to carry out the screening of articles and studies without difficulties. The screening guide will be piloted on the screening of 11 articles and a full-text screening of 5 articles. In the case where the two reviewers encounter any conflict, they will meet to resolve the conflict recorded on the Rayyan application. However, if the two reviewers are unable to address the problem using the Rayyan application, the study supervisors will be contacted to help them to reach a consensus on the unresolved problem.

Stage 4: charting the data

At the charting stage of the study, an Excel form will be designed to electronically capture data from studies that meet the inclusion criteria. The data collection Excel form will be adapted from the JBI[42] data charting document (see table 3). The data will independently be charted by the reviewers. The electronically designed data charting form will have the following fields: authors and date, the title of the study, publishers of the study, the aim of the study, setting of the study, the study population, sampling method used, the study design, data collection methods, study findings and the conclusion drawn by the study. A preliminary test of the appropriateness of the newly developed data charting form will be done using six randomly picked articles. This step will help to determine the suitability of the data collection tool for capturing the required data. Feedback obtained from the preliminary test conducted on the data charting form will be used to improve the quality and accuracy of the data capturing form.

Table 3 A sample of the proposed data charting form

Criteria	Relevant information	Comments
Author and date		
Title of study		
Publication		
Aim(s)/objective(s)		
Study setting		
Study population		
Sampling method		
Study design		
Data collection method(s)		
Data analysis		
Conclusion		
Outcome(s)		
Key finding(s)		
Comments		

Stage 5: collating, summarising and reporting the results

A narrative synthesis will be used to summarise data extracted from the selected studies. Studies focusing on religious beliefs that are impacting adherence to ART among Pentecostals living with HIV in sub-Saharan Africa will be synthesised. This will be followed by studies relating to religious-embedded ART adherence interventions that have been carried out in sub-Saharan Africa, and their impacts on adherence to ART among Pentecostals living with HIV. Finally, we will also distill constructs and suggested links that will help us hypothesise the relationship between Pentecostal religious beliefs and other psychological factors impacting ART adherence. The results of the scoping review will, therefore, be described concerning the research questions and the purpose of the study. Research gaps will also be identified such as countries that do not have data on religious beliefs that impact adherence to ART among Pentecostals living with HIV in sub-Saharan Africa.

Patient and public involvement

The authors declare that they will use publicly available data for the study. As such, the public or PLHIV will not take part in the design, conduct or plans to disseminate the review findings.

ETHICS AND DISSEMINATION

This scoping review protocol is the first phase of an exploratory sequential mixed-methods doctoral study design that aims to understand adherence to ART among Pentecostals in the Cape Town Metropole. It is envisaged that the results gathered in this study and the subsequent phases of the entire doctoral project will be synthesised and used to develop guidelines that can be used by Pentecostal Christian leaders and healthcare workers to optimise adherence to ART among PLHIV in South Africa and beyond. Ethical approval will not be required for this study because the scoping review will involve synthesising information from already published articles and conference proceedings. Regarding the dissemination of the results obtained from the study, a manuscript from the scoping review will be prepared and submitted for publication in a scientific journal as well as presented at conferences and workshops aimed at improving adherence to ART among PLHIV.

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