Structural barriers to highly active antiretroviral therapy (HAART) adherence: a systematic review protocol

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Review question/objectives

The objective of this review is to identify published and unpublished studies addressing the structural barriers to highly active antiretroviral therapy (HAART) adherence and critically appraise and synthesize them. More specifically, the focused objectives of this systematic review are to provide summarized evidence on:

- The institution-related barriers to HAART adherence among people living with human immunodeficiency virus (HIV)
- The poverty-related barriers to HAART adherence among people living with HIV
- The cultural and political barriers to HAART adherence among people living with HIV.

Background

At the end of 2011, the world had 34.2 million people infected with HIV, a slight increase from 33.5 million the year before. In the same year, 1.7 million people worldwide died from acquired immunodeficiency syndrome (AIDS) related causes\(^1\).

The global AIDS pandemic has taken a major toll worldwide whether it is in terms of human suffering, lives lost, or economic impact. HAART has long been deemed to be a cost-effective intervention, as it is
effective in reducing morbidity and mortality and increasing life years and quality-adjusted life years (QALYs) gained.²

One of the key targets in the declaration of the 2011 United Nations General Assembly Special Session on HIV/AIDS (UNGASS) was to increase access to antiretroviral therapy (ART) to get 15 million people on life-saving treatment by 2015.³

In 2011, for the first time, a majority (54%) of people eligible for ART in low- and middle-income countries were receiving it. However, coverage remains low in Eastern Europe and Central Asia (25%) and in the Middle East and North Africa (15%). The treatment access gap for children also persists, with global coverage much lower for children (28%) than for adults (54%). And worldwide, only 4% of HIV-infected injecting drug users are on anti-retrovirals (ARVs).¹ On top of this there is a problem of adherence to these drugs. Adherence is defined as taking medications or interventions correctly according to prescription. There are different methods for assessing adherence and the level of adherence is specific not only to places and patient groups but also to the method of adherence measurement used.⁴

According to recent studies, ART regimens require 70–90% adherence in order to be effective. Lack of adherence results in inadequate suppression of the virus and viral replication, low potency of the antiretroviral regimens, and pharmacokinetic interactions⁵ causing inadequate drug delivery.⁶ Non-adherence jeopardizes the development of drug resistance and failure of therapy.⁷,⁸ However, sustaining adherence to antiretroviral therapy (ART) over the long term requires accurate and consistent monitoring.⁶

Recently, the protracted global financial crisis is threatening the sustainability of funding commitments for HIV/AIDS.⁹ On the other hand, an estimated $US22–23 billion annually will be needed to fight the HIV pandemic by 2015.¹⁰

This has become particularly worrisome as accumulating evidence suggests that the use of HAART is not just a life-saving strategy for those infected with HIV, but also a highly effective means of preventing HIV transmission.⁵,⁶

Previous studies have identified both facilitators and barriers to HAART adherence. Important barriers to adherence are consistent across multiple settings and countries. However, the generalizability of previous findings was jeopardized by heterogeneity amongst the studies.¹¹

Therefore, the current synthesis aims to generate evidence regarding structural barriers to HAART adherence using a qualitative meta-synthesis which is able to provide detailed evidence. Structural barriers to HAART adherence can include institution-related factors, poverty-related factors, and cultural and political factors that collectively influence the extent to which persons living with HIV follow their medication regimens.¹² Previous studies assessed structural barriers separately (for example from the provider perspective, from the patient perspective, transportation health systems, etc). In addition, some studies reported structural barriers not only along with other barriers but also together with facilitators of HAART adherence.⁶,¹¹ This has led to inadequate exploration of structural barriers to HAART adherence. And no effort has been made to review these studies and to collectively explain structural barriers to HAART adherence as one framework. The special focus on structural barriers in the current review can serve as input for future research so that a standard framework can be established and measurement scales to assess these barriers can also be derived from it. Providing
researchers with a clear framework and direction will help them to move from a loosely defined to a well-defined concept.

**Keywords**
Facilitators; HIV-positive patients; highly active antiretroviral therapy; antiretroviral therapy; people living with HIV; structural; barriers

**Inclusion criteria**

*Types of participants*
This review will consider African studies that include people living with HIV (PLHIV) who have initiated HAART, and their caregivers.

*Types of intervention(s)/phenomena of interest*
This review will consider studies that investigate:

- Institution-related barriers to HAART adherence among PLHIV
- Poverty-related barriers to HAART adherence among PLHIV
- Cultural and political barriers to HAART adherence among PLHIV.

*Types of studies*
This review will consider studies that focus on qualitative data including, but not limited to, designs such as phenomenology, grounded theory, ethnography, action research and feminist research.

*Context*
African studies conducted in healthcare settings (hospitals, clinics, health centers) will be included.

**Search strategy**
The search strategy aims to find published and unpublished primary studies and qualitative reviews from 2005 to 2013. This is because qualitative studies reported before 2005 have already been included in one systematic review. A three-step search strategy will be utilized in this review. An initial limited search of MEDLINE and CINAHL will be undertaken followed by an analysis of the text words contained in the title and abstract, and of the index terms used to describe article. A second search using all identified keywords and index terms will then be undertaken across all included databases MEDLINE, CINAHL, Mednar, Google Scholar, and proQuest). Thirdly, the reference list of all identified reports and articles will be searched for additional studies. Studies reported in English will be considered for inclusion in this review. Studies conducted among injecting drug users will be excluded from the review. The search for unpublished studies will include: Mednar, Google Scholar, and proQuest.
The following initial search terms will be used:

**For population:** HIV-positive patients, highly active antiretroviral therapy, antiretroviral therapy, people living with HIV

**For phenomena of interest:**
- Structural barriers to HAART adherence
- Systemic barriers to HAART adherence
- Institutional barriers to HAART adherence
- Healthcare-related barriers to HAART adherence
- Cultural barriers to HAART adherence
- Political barriers to HAART adherence
- Social barriers to HAART adherence
- Transport barriers to HAART adherence
- Stigma as a barrier to HAART adherence
- Migration as a barrier to HAART adherence
- Homelessness as a barrier to HAART adherence
- Substance abuse as a barrier to HAART adherence
- Food insecurity as a barrier to HAART adherence
- Waiting time as a barrier to HAART adherence
- Interaction with healthcare providers as a barrier to HAART adherence.

**Assessment of methodological quality**

Papers selected for retrieval will be assessed by two independent reviewers for methodological validity prior to inclusion in the review using standardized critical appraisal instruments from the Joanna Briggs Institute Qualitative Assessment and Review Instrument (JBI-QARI) (Appendix I). Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer.

**Data collection**

Data will be extracted from papers included in the review using the standardized data extraction tool from JBI-QARI (Appendix II) independently by two reviewers. The data extracted will include specific details about the phenomena of interest, populations, study methods and outcomes of significance to the review question and specific objectives. In case there is missing information, authors of the primary studies will be contacted.
Data synthesis

Qualitative research findings will, where possible, be pooled using JBI-QARI. This will involve the aggregation or synthesis of findings to generate a set of statements that represent that aggregation, through assembling the findings rated according to their quality, and categorizing these findings on the basis of similarity in meaning. These categories are then subjected to a meta-synthesis in order to produce a single comprehensive set of synthesized findings that can be used as a basis for evidence-based practice. Where textual pooling is not possible, the findings will be presented in narrative form.

Conflicts of interest

We declare neither financial nor intellectual conflict of interest in this work

Acknowledgements

We would like to acknowledge the Joanna Briggs Institute and Ethiopian Malaria Alert Center: a Collaborating Centre of the Joanna Briggs Institute for their support.
References


Appendix I: Appraisal instruments

JBI-QARI appraisal instrument

**JBI QARI Critical Appraisal Checklist for Interpretive & Critical Research**

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<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Unclear</th>
<th>Not Applicable</th>
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<tr>
<td>1. Is there congruity between the stated philosophical perspective and the research methodology?</td>
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<td>2. Is there congruity between the research methodology and the research question or objectives?</td>
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<td>3. Is there congruity between the research methodology and the methods used to collect data?</td>
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<td>4. Is there congruity between the research methodology and the representation and analysis of data?</td>
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<td>5. Is there congruity between the research methodology and the interpretation of results?</td>
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<td>6. Is there a statement locating the researcher culturally or theoretically?</td>
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<td>7. Is the influence of the researcher on the research, and vice-versa, addressed?</td>
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<td>8. Are participants, and their voices, adequately represented?</td>
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<td>9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?</td>
<td>☐</td>
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<td>10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?</td>
<td>☐</td>
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Overall appraisal: ☐ Include ☐ Exclude ☐ Seek further info. ☐

Comments (including reason for exclusion)

______________________________________________________________

______________________________________________________________
Appendix II: Data extraction instruments

JBI-QARI data extraction instrument

**JBI QARI Data Extraction Form for Interpretive & Critical Research**

Reviewer .......................... Date ..........................

Author .......................... Year ..........................

Journal .......................... Record Number ..........................

**Study Description**

Methodology

Method

Phenomena of Interest

Setting

Geographical

Cultural

Participants

Data analysis

Authors Conclusions

Comments

Complete  Yes ☐  No ☐
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<tr>
<th>Findings</th>
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Extraction of findings complete  Yes ☐  No ☐