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Mapping the evidence of intimate partner violence among women living with HIV/AIDS in Africa: A scoping review

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3 **Mapping the evidence of intimate partner violence among women living with HIV/AIDS**
4 **in Africa: A scoping review**
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Abstract

Objectives: The present study undertakes a scoping review aimed to map the evidence of IPV against women living with HIV/AIDS in Africa.

Design: We used the online database to identify papers published from 01 January 2009 to 01 April 2019, from which we selected 20 articles from Uganda, Nigeria, Kenya, South Africa, Zambia, Ethiopia, Cameroon, Tanzania, and Swaziland that used IPV as an outcome variable among women living with HIV/AIDS.

Data Sources: PubMed, MEDLINE, EBSCO host, Google Scholar

Eligibility criteria: We included women who were aged 15 and above, living with HIV/AIDS in Sub-Saharan Africa.

Data extraction and synthesis: We conducted the abstract screening with two independent reviewers. We also performed full-text screening. We used the six methodological frameworks proposed by Arksey and O'Malley, 2005. The Mixed Method Appraisal Tool was used to determine the quality of the studies. We used NVIVO software version 12 to undertake a thematic analysis.

Results: Of the studies, the majority, 60%, reported cross-sectional results. In comparison, 25% examined qualitative studies, 5% were clinical trials, 5% were cohort studies, and the remaining 5% covered grey literature. This review revealed evidence of IPV experience among women with HIV/AIDS, evidence of how HIV status disclosure influences IPV, proof of the association of socio-demographic characteristics with IPV, and implications for practice. Moreover, the review revealed that following the serostatus disclosure, there is evidence of heightened risk for IPV.

Conclusions: This study found evidence of IPV among women living with HIV/AIDS. The HIV-positive women were at considerable risk of IPV after disclosure of their serostatus to a male partner. Therefore, further research is needed to promote action to reduce the IPV among both HIV-positive and-negative women and to determine healthcare workers' IPV screening experience.

Keywords: Intimate partner violence, women, HIV/AIDS, Africa

Article summary

Strengths and limitation of this study

- The links between HIV/AIDS and IPV are complex and not well understood; hence, this review aimed to assess in-depth associations among women living with HIV/AIDS, and we obtained baseline evidence for future research in gender-based violence.
- One of the limitations of this review is that it only included the literature published in the English language. Since the studies published in other languages were not included, additional evidence of IPV among women infected with HIV/AIDS was not part of this review's assessment.
- We did not include all the articles in our review because some were published in journals inaccessible to us.

Introduction

Women living with human immunodeficiency virus and acquired immune deficiency syndrome (HIV/AIDS) who disclose their HIV serostatus are more likely to experience intimate partner violence (IPV) than women who are HIV-negative [1]. Among the former, IPV and HIV/AIDS may provide overlapping, or perhaps intersecting, challenges [2]. The reason that women experience this violence is that the abusers have usually been shown to want to establish and maintain power and control over another person. This is often reflected in the imbalance of power between the women and their abusers [3]. Intimate partner violence is defined as any behaviour within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship. This also includes emotional abuse and controlling behaviours by an intimate partner [4].

Worldwide, IPV is of public health and social concern. The prevalence of IPV in the World Health Organization's (WHO) different regions varies but was similar in the Eastern Mediterranean and South-East Asian regions, where IPV was reported to be 37% and 37.7% respectively, to that in Sub-Saharan Africa (SSA), where the prevalence was 36.6% [5]. Over a third of women in SSA reported IPV, and because this high prevalence of IPV was among both women and young girls, it is of concern [2,5]. The harmful consequences of IPV among women and young girls are well documented and have been shown to affect their mental, sexual, and reproductive health [5-7]. Studies on IPV and depression show that women who

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3 are exposed to physical violence, childhood sexual abuse, mild or severe emotional violence,
4 and high levels of spousal control are more likely to be depressed [6-8], to abuse alcohol [5-7],
5 and give birth to babies of low birth weight [5-7]. Since they may not be able to negotiate
6 condom use [5-7], they are also at risk of sexually transmitted infections (STIs), including
7 HIV/AIDS [5-7,9].
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12 The relationship between IPV and HIV/AIDS among women and young girls is a topic of
13 intense debate within the scientific community [2,10]. Some researchers consider that IPV
14 increases women's vulnerability to HIV infection [1,5-7], while other researchers suggest that
15 HIV-positive status among women may influence IPV [2,11]. A study conducted in Zimbabwe
16 among pregnant women living with HIV/AIDS revealed an IPV prevalence of 40% [12].
17 Another study in Kenya showed that after HIV-positive serostatus disclosure, one in three
18 women experienced IPV [13]. Moreover, both the combination of physical and sexual IPV
19 (OR: 2.00; 95% CI: 1.24–3.22) and the experience of any type of IPV were associated with
20 HIV/AIDS infection in women (OR=1.41; 95% CI: 1.16–1.73) [14].
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25 Intimate partner violence and HIV/AIDS are thus two pandemics that require integrated and
26 collaborative interventions. The Joint United Nations Programme established new targets for
27 the scaling up of HIV/AIDS treatment by 2030. Among its aims are to increase the number of
28 people who know their HIV/AIDS status by 90%, to increase the number of people who receive
29 sustained antiretroviral therapy (ART) by 90% and to strive to ensure that 90% of all people
30 who are HIV/AIDS seropositive receive ART [15]. These new targets are promising, but
31 achieving them could be compromised by women and young girls experiencing IPV.
32 Therefore, we conducted a scoping review to systematically map the IPV research conducted
33 among women living with HIV/AIDS to identify the existing gaps in knowledge. The
34 information generated through this scoping review can be used by researchers, policymakers
35 and program developers to foster appropriate programs and policy frameworks.
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49 **Methods**

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51 The protocol (<https://bmjopen.bmj.com/content/bmjopen/9/8/e029284.full.pdf>) of this review
52 was published in the BMJ Open. Currently, the International Prospective Register of
53 Systematic Reviews (PROSPERO) does not register a scoping review. This review is part of a
54 large-scale study on IPV among women in Ethiopia living both with and without HIV/AIDS.
55 We used the six frameworks proposed by Arksey and O'Malley [16]: 1) Identifying the research
56 questions and defining the eligibility criteria 2) Identifying relevant studies by conducting an
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extensive search 3) Making the study selection and appraising its quality 4) Synthesising the included studies (charting the data) and presenting the findings by using a PRISMA chart 5) Collating, summarising and reporting 6) Consulting (Table 1).

Table 1: The proposed scoping review following the six Arksey and O'Malley steps

Stage one: Formulating the study question
Stage two: Identifying the relevant studies
Stage three: Study selection
Stage four: Charting the data
Stage five: Collating, summarising and reporting
Stage six: Consultation

Stage one: Identifying the research questions

This scoping protocol is based on the following research questions:

1. Is there evidence of IPV experience among women living with HIV/AIDS in Africa?
2. Is there evidence that shows that HIV/AIDS status disclosure influences IPV among women in Africa?
3. Is there evidence that socio-demographic characteristics are associated with IPV among women living with HIV/AIDS in Africa?

Eligibility criteria

Inclusion criteria:

1. Studies with study participants aged 15 and above
2. Studies with evidence of IPV against women
3. Studies with evidence about HIV-positive persons
4. Studies on IPV over the past ten years for the maximum amount of updated information: Years of publication from 01 January 2009 to 01 April 2019
5. Peer-reviewed literature, grey literature, government documents, policy briefs, systematic reviews, and meta-analysis

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3 6. Studies conducted in Sub-Saharan African countries (all the countries in Africa
4 except Algeria, Djibouti, Egypt, Libya, Morocco, Somalia, Sudan and Tunisia)
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8 **Exclusion criteria:**
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- 10 1. Articles published in a language other than English
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12 2. The elements of the PCC (Population, Concept, and Context) criteria to map studies
13 correctly [17] (Table 2)
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15 Table 2: PCC framework
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PCC	Description
P=Population	The population for this study were all women aged 15 and above living with HIV/AIDS or receiving ART
C=Concept	IPV (Physical, and/or sexual and/or emotional/psychological violence) or domestic violence
C=Context	Sub-Saharan African countries where the problem of IPV mostly exists among women living with HIV/AIDS

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33 **Stage two: Identifying the relevant studies**
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36 We created a Google form to search the literature in which we included the topic of the study,
37 author and date, and a review questionnaire. The Google form enabled screeners to record
38 studies for screening that have been included in the Endnote library. We inserted the keywords
39 into the PubMed advanced search menu, and the results that appeared were selected and
40 exported to Endnote.
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45 In addition, using a comprehensive strategy, we searched for published evidence and included
46 it in this study. A variety of literature, including peer-reviewed articles and grey literature, were
47 retrieved. In the PubMed advanced search, we used MeSH terms such as intimate partner
48 violence, women, HIV, Africa, domestic violence, and focused on dates of publication after 01
49 January 2009.
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54 In addition to PubMed, we used MEDLINE with full text via EBSCO host, Google Scholar,
55 Science Direct and Scopus. We found a total of 750 articles from the PubMed search and
56 identified 128 additional records through other sources. We completed the search on 08 April
57 2019 (**supplementary file 1 and supplementary file 2**).
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Stage three: Study selection

Screening

In our search strategy, we piloted to check the appropriateness of the selected electronic databases and the keywords we decided to include. The principal author conducted title screening, and two reviewers conducted the abstract screening independently. The purpose of the title screening was to assess the titles for eligibility and to remove duplicates. We created an Endnote library to which all the eligible titles were exported. We removed any duplicates before the screening of the abstract. Relevant articles based on the inclusion criteria of the scoping review were selected.

The independent reviewer abstract screening was to minimise reporting bias [17]. Moreover, we undertook the full-text article screening independently, based on the eligibility criteria. We contacted the authors for the articles that were not available electronically and requested these be sent to us directly. During the full article retrieval, we used the University of KwaZulu-Natal library. When a disagreement arose between the two reviewers, a third reviewer made the decision. We presented the update of the findings by using a PRISMA chart.

Quality assurance of the study

To determine the methodological quality, we adapted and used the Mixed Methods Appraisal Tool (MMAT) 2018 version to evaluate each review [18]. Additionally, we used the PRISMA-P 2015 and PRISMA-ScR checklists to check whether the recommended items were included or not [19,20]. During analysis, we reviewed the checklist of the consolidated criteria for reporting qualitative research (COREQ), a 32-item checklist for interviews and focus group discussions [21].

Stage four: Charting the data

We used the data charting table (Table 3) to extract the necessary background information and to extract information from each selected study. We used an Excel spreadsheet for the data charting. This form highlighted essential ideas regarding the variables from the background and included the research questions which were addressed by the variables and the themes. Two reviewers jointly developed the data charting form to decide which variables to extract, which they charted independently. We continuously updated the data charting form during the duration of the study.

Data items: We abstracted data on the article characteristics (e.g. year, country of origin), aim of the study, IPV and population (HIV-positive women), sample size, age group, and the study design.

Table 3: Data charting table

Author & year	Country	Study aim	Population	Sample Size	Age group (years)	Study design
Ashaba et al., 2017 [22]	Uganda	To explore psychosocial challenges experienced by women living with HIV	Women	20	22–40	Qualitative
Bernstein et al., 2016 [23]	South Africa	To assess the prevalence and correlates of IPV among HIV-infected pregnant women	Women	623	18–44	Cross-sectional
Lauren et al., 2017 [24]	South Africa	To measure how IPV impacts women's safety following mobile HCT diagnosis	Women	255	18+	Clinical trial
Colombini et al., 2016 [13]	Kenya	To explore women's experiences of IPV risks following disclosure to their partner	Women	30	15–49	Qualitative
Conroy et al., 2016 [25]	Uganda	To examine the association between relationship power and sexual violence	Women	307	19–75	Cross-sectional
Emusu et al., 2009 [26]	Uganda	To explore the experiences of sexual violence among women in HIV-discordant unions	Women	26	Not mentioned	Qualitative
Ezeanochie et al., 2011 [27]	Nigeria	To evaluate the prevalence and correlates of IPV among HIV-positive women	Women	305	21–43	Cross-sectional
Ezechi et al., 2009 [28]	Nigeria	To determine the prevalence, types and correlates of IPV	Women	652	<20–≥40	Cross-sectional
Fiorentino et al., 2019 [29]	Cameroon	To assess the prevalence and factors of IPV against HIV-positive women and its relationship with ART interruption ≥1 month	Women	894	≥21	Cross-sectional
Hampanda et al., 2016 [30]	Zambia	To determine how IPV against HIV-positive women affects safe infant feeding practices	Women	320	18+	Cross-sectional
Hampanda et al., 2018 [31]	Zambia	To advance the current understanding of the relationship between IPV against women and their HIV status disclosure behaviours	Women	320	18+	Cross-sectional
Iliyasu et al., 2016 [32]	Northern Nigeria	To assess prevalence and risk factors of domestic violence among HIV-positive women	Women	300	18–70	Descriptive & cross-sectional
Malaju et al., 2013 [33]	Ethiopia	To assess women's expectations of their partner's violence on the disclosure of the HIV test	Women	400	15–49	Cross-sectional

Colombini, 2015 [34]	Swaziland	To explore the risks of experiencing IPV after HIV infection among women with HIV	Women	19	18–44	Qualitative
Olowookere et al., 2015 [35]	Nigeria	To assess the prevalence and correlates of IPV among women living with HIV/AIDS in an antiretroviral clinic in Nigeria	Women	360	18+	Cross-sectional
Chinwe, 2017 [36]	Kenya	To examine SV against HIV-positive women enrolled in HIV care in Kenya	Women	25	18+	Qualitative
Osinde et al., 2011 [37]	Uganda	To measure the prevalence and factors associated with IPV among HIV-infected women	Women	317	15+	Cross-sectional
Wilson et al., 2016 [38]	Kenya	To assess the prevalence and correlates of IPV in the past year by a regular male partner in HIV-positive female sex workers in Mombasa, Kenya	Women	357	18+	Cross-sectional
Young et al., 2018 [39]	Uganda	To examine physical and sexual IPV prevalence and correlates among WLWH in Uganda	Women	455	18+	Cohort
United Nations Educational, Scientific & Cultural Organization, 2013 [40]	Tanzania	To discuss the links between gender-based violence (GBV) and HIV and AIDS in conflict and post-conflict situations in the Great Lakes Region	Women	N/A	N/A	Workshop report

Stage five: Collating, summarising and reporting the result

We undertook qualitative data analyses using NVIVO software 12 to collate, summarise, and report the results. Firstly, the researchers read and reread the articles thoroughly, noting down the initial ideas to find codes. The notable features of the data across the entire article were systematically coded, and data relevant to each code was collated. We then developed the codes into potential themes and finally defined and named the themes and produced the report [41]. We used the description of the coding tree and thematic content analysis to analyse the data. We extracted and coded the data that were related to the IPV experience among HIV-positive women, identified the emerging themes and then coded the data according to these themes. The analysis process used the following steps 1) Coding data from the selected articles 2) Categorising the codes into themes 3) Displaying the data 4) Identifying key patterns in the data and the sub-themes 5) Summarising and synthesising.

Stage six: Consultation

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3 We held consultations with the stakeholders, such as policymakers, clinicians, patients, and
4 families, in addition to other appropriate groups who researched IPV, in order to obtain more
5 references and to provide insights on what the literature failed to highlight [42].
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8 9 **Results**

10 11 **Screening results**

12 We found 750 articles in the original data search. A total of 159 publications remained after
13 we removed duplicates and other unrelated topics. A hundred and thirty-six (136) articles
14 were excluded, which did not meet our inclusion criteria, and 23 items were included for full-
15 text screening. After the full-article screening, we excluded three studies, providing reasons
16 for this, and a final 20 articles remained from which to extract data (**Figure 1**).
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23 **[Insert Figure 1]:** Figure 1: The PRISMA 2009 flow diagram to update screening
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26 **Characteristics of the included studies**

27 Out of the 20 included studies, 19 were published in peer-reviewed journals [13,22-39], while
28 the remaining one was categorised as grey literature [40]. From the included studies, 12 were
29 quantitative and cross-sectional in nature [23,25,27-33,35,37,38], five were qualitative
30 [13,23,26,34], one was a clinical trial [24], one was a cohort design [39] and the remaining
31 one was grey literature (a conference discussion report) [40] (**Figure 2**).
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37 **[Insert Figure2]:** Figure 2: Distribution of study designs used in the study (n=20)
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40 Out of the 20 studies, five were conducted in Uganda [22,25,26,37,39], four in Nigeria
41 [27,28,32,35], three in Kenya [13,36,38], two in South Africa [23,24], two in Zambia [30,31],
42 one in Ethiopia [33], one in Cameroon [29], one in Tanzania [40], and the remaining one in
43 Swaziland [34] (**Figure 3**).
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47 **[Insert Figure 3]:** Figure 3: Distribution of countries represented in the included studies
48 (n=20)
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51 **Study findings**

52 Four themes emerged from the identified studies: evidence of IPV experience among women
53 with HIV/AIDS, evidence of HIV/AIDS status disclosure influencing IPV, evidence of the
54 association of socio-demographic characteristics with IPV, and implications for future practice.
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Evidence of intimate partner violence experience among women with HIV/AIDS

We found evidence of IPV experience from almost all of the 20 included studies in the 11 countries in the Sub-Saharan African region [13,22-40]. The prevalence of IPV varied among countries; we identified the highest prevalence of IPV in South Africa (67.3%) [24] and the lowest prevalence in Kenya (14.6%) [38]. Intimate partner violence was also identified in Nigeria (65.8%) [28], Uganda (29%) [39], another study in South Africa, (21%) [23], Nigeria, (23.6%) [35], Kenya, nearly one-third of women in the study [13], Cameroon (23%) [29], Nigeria (22.1%) [32] and Uganda (29.3%) [37]. On average, one-third (30.2%) of HIV-positive women experienced IPV among the included studies. Psychological, emotional or verbal abuse was the most common form of violence reported among HIV-positive women and ranged from 12.1% to 51.7% [27-29,35,37]. One study showed that physical violence had a more pronounced effect on status disclosure than sexual or emotional violence [31]. Sexual violence was found to be the least common type of abuse among HIV-positive women, ranging from 2% to 44.8% [23,28,29,35].

Three studies showed evidence of further abuse following IPV, such as the difficulty of engaging in HIV/AIDS care, interruption of ART adherence, partner stigma and abuse, and financial withdrawal [13,22,29]. There was also evidence showing that physical weakness, economic and social dependence on a partner and alcohol abuse by a male partner were the leading causes of IPV [26,40].

Evidence of HIV/AIDS status disclosure influencing IPV

Evidence of IPV after HIV/AIDS status disclosure was reported from six studies [28,31-35]. Following the sero-disclosure, there was evidence of heightened risk for IPV, stigma, abuse, marriage disruption, and financial withdrawal [13,22,28,29,32,33]. Evidence from one study showed about 74% of abuse coming after HIV/AIDS status disclosure [28]. However, some studies found that sero-concordance is protective of emotional or verbal abuse [13]. Women who had their own income, those who did not have a stigmatising attitude towards people living with HIV/AIDS, those who had attained secondary level education and above, those with a positive attitude towards counsellors, and those able to access health facilities were all associated with positive partner reaction [33]. On the other hand, having an HIV-negative spouse and disclosure of HIV/AIDS status was associated with abuse [28].

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3 Studies also explored the expectation of adverse reactions related to HIV/AIDS in the
4 community, including gossip and discrimination [22,33]. Evidence even existed that some
5 women did not disclose their HIV/AIDS status because of expected fear of rejection, abuse and
6 anticipated loss of trust from their partner [22,28,40]. For instance, studies showed that some
7 women kept their HIV serostatus a secret to prevent an adverse reaction [22,40]. One study
8 also presented evidence of early mixed feeding following the disclosure of an HIV-positive
9 status [30]. Findings show that physical violence is the most prevalent form of IPV that occurs
10 after status disclosure rather than sexual abuse [31].
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18 **Evidence of the association of socio-demographic characteristics with IPV**

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20 We found evidence of socio-demographic characteristics which were associated with IPV in
21 four studies [32,35,37,39]. One study identified that older age groups of women, those >40,
22 were at risk for IPV [32]. Contrary to this, a study in Uganda showed that being older was
23 associated with a lower risk for IPV [39]. Similarly, one study in Nigeria showed that younger
24 partners (20–39) were more at risk for IPV [35].
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30 A study from Nigeria showed that multiparity, being a respondent with an HIV-positive child,
31 and marital status (divorced women) were associated with IPV [32]. However, a study in
32 Uganda showed that being married was associated with a higher risk of IPV [39].
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36 Two studies revealed that non-formal education of husbands (i.e. lack of education) was
37 associated with IPV [27,32]. Contrary to this, a study in rural Uganda showed that there was a
38 significant, but inverse, the association between educational level and physical partner violence
39 [37]. There was also an inverse association between the educational level of the respondent and
40 sexual/psychological abuse, as well as psychological/sexual violence [37].
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45 Only one study from Uganda reported that a higher household asset index score was protective
46 from IPV [39]. The socio-demographic factor of alcohol abuse by male partners was an
47 essential factor associated with IPV among HIV-positive women [26,35,38]. Additionally, IPV
48 was associated with the experience of violence before women had an HIV-positive diagnosis
49 [27]. Moreover, a Ugandan study reported that the use of ART was associated with an increased
50 prevalence of IPV [37]. One study result also showed that women experiencing controlling
51 behaviour by the index partner was associated with IPV [38].
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58 **Implications for future practice**

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3 Evidence from four studies indicated that the prevention of IPV is through the integration of
4 partner violence identification and care into other healthcare services (sexual and reproductive
5 services and services such as HIV testing and counselling) [13,25,27,31]. A study in Uganda
6 recommended the integration of various stakeholders, including partners, family,
7 policymakers, community members and funders and program implementers who could work
8 together to prevent IPV [22].
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14 Healthcare workers (HCWs) should ensure safe disclosure to avoid post-disclosure abuse. Safe
15 disclosure, including couple counselling, mutual disclosure between partners, separate
16 counselling sessions for men, and facilitated disclosure were recommendations [13,22,34]. A
17 study also reported that HIV/AIDS counsellors should evaluate the advantages and
18 disadvantages of status disclosure among women [31]. Furthermore, a Zambian study indicated
19 that IPV prevention required training counsellors to facilitate discussions with women about
20 IPV[31]. Moreover, evidence from two studies showed the importance of ensuring that
21 women's decisions to disclose their HIV serostatus are fully informed and voluntary [13,31].
22 Evidence from five studies reported that routine screening for IPV to identify abused women
23 during HIV/AIDS care services is necessary [23,27,29,37,39]. Furthermore, evidence from a
24 Ugandan study also highlighted that HCWs should inform HIV-discordant couples
25 appropriately on their reproductive options and referral systems and link couples with
26 counselling services on sexual violence [26].
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37 A study also proposed a way forward by improving public awareness and family counselling
38 as a strategy of IPV prevention [34]. Four studies recommended that promoting gender equity,
39 empowering women economically, as well as promoting positive masculinities that support
40 and protect women are measures to prevent IPV [22,25,34,43]. Moreover, two studies reported
41 the involvement of males in programs of IPV prevention [22,34].
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47 **Discussion**

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49 This scoping review was aimed at mapping the evidence of IPV against women living with
50 HIV/AIDS in SSA. It revealed evidence of IPV experience among women with HIV/AIDS,
51 how HIV/AIDS status disclosure influences its prevalence, and proof of the association of
52 socio-demographic characteristics with IPV. The implications for future practice and
53 recommendations were also made evident.
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3 The experience of IPV varies among SSA countries. On average, 30.2% of HIV-positive
4 women had experienced IPV. This overall finding corresponds to the results of Ugandan and
5 Kenyan studies [13,37,39]. Of the types of IPV, emotional abuse was the most common form
6 of violence reported among HIV-positive women [27-29,35,37]; sexual violence was found to
7 be the least common type of abuse among HIV-positive women [23,28,29,35]. As a result of
8 this type of violence, women delayed accessing ART for fear of further violence, experienced
9 denial of healthcare or discrimination in healthcare settings, employment, education, housing
10 and enforced HIV testing [6,7,40]. In light of these findings, studies highlighted strategies to
11 protect women from IPV by the integration of violence identification and care into other
12 healthcare services (sexual, reproductive, and HIV/AIDS-related services such as HIV testing
13 and counselling services) [13,25,27,31]. It was suggested that the integration of the family,
14 policymakers, community members, as well as funders and program implementers in gender-
15 based violence prevention programs, were a way forward [22].

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26 The WHO data in 2018 showed that 25.7 million people are living with HIV/AIDS in Africa
27 [44], indicating that HIV/AIDS continues to be one of the significant causes of disease burden
28 in SSA [44, 45], causing substantial health problems in the region. However, studies have
29 highlighted that the effect of the HIV/AIDS epidemic varies in different countries of SSA [45].
30 Significant to this study, research in Africa has also shown that there is a strong association
31 between HIV infection and IPV [46]. This relationship between the two health problems is
32 complex and iterative [47]; because of this, countries with a high HIV/AIDS prevalence, for
33 instance, South Africa and Nigeria, account for a high prevalence of violence (67.3%) [24] and
34 (65.8%) [28] respectively. The studies in this review included countries with a varying range
35 of HIV/AIDS prevalence; as reported in 2016, these were Swaziland (27.2%), South Africa
36 (18.9%), Zambia (12.4%), Uganda (6.5%), Kenya (5.4%), Tanzania (4.7%), Cameroon (3.8%),
37 Nigeria (2.9%) and Ethiopia (1.1%) [48]. Moreover, IPV can itself also be both a risk factor
38 for and a consequence of HIV/AIDS [49]. Therefore, IPV needs safe monitoring, screening
39 and intervention among HIV-positive women in healthcare settings [47].

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51 Evidence of IPV following HIV/AIDS status disclosure was found in nine studies reviewed
52 [13,22,29,28,31-35]. If our study had searched only for the effect of HIV/AIDS disclosure
53 without IPV, more evidence of the consequences of HIV/AIDS status disclosure could have
54 come to light. Moreover, stigma, abuse, marriage disruption and financial withdrawal were
55 evident consequences of HIV test result disclosure [13,22,28,29,32,33]. Therefore, there is a
56 need for safe disclosure such as couple counselling, mutual disclosure between partners,
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3 separate counselling sessions for men, and facilitated disclosure [13,22,34]. One study also
4 reported that HIV/AIDS counsellors should evaluate the advantages and disadvantages of status
5 disclosure among women [31]. The Zambian study suggested training counsellors to facilitate
6 discussions with women about IPV [31]. Moreover, evidence from two studies showed that
7 ensuring women's fully informed and voluntary decision making to disclose their HIV/AIDS
8 serostatus is required [13,31].
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14 A study in Uganda showed that the socio-demographic status of being married was associated
15 with a higher risk of IPV [19]. Another type of marital status, such as being divorced, was also
16 associated with IPV in another context [12]. Hence, the prevention strategy for IPV should be
17 emphasised for both married and divorced women. Age could also be a risk factor, depending
18 on the country. A study in Zimbabwe identified that older women, >40 years, were at increased
19 risk for IPV [12]. Contrary to this, a study in Uganda showed that older age represented a lower
20 risk for IPV [19]. Corresponding with this, a survey in Nigeria showed that younger partners
21 (20–39) were at increased risk of IPV [15]. However, from these findings, we realised that
22 violence could affect all age groups; hence the importance of improving public awareness and
23 providing family counselling as a strategy for IPV prevention [14].
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33 Studies revealed that other socio-demographic aspects, such as higher household asset value
34 were protective against IPV [39]. To this end, promoting gender equity, and empowering
35 women economically, as well as promoting positive masculinities that support and protect
36 women should be considered to protect against IPV [22,25,34,38]. Concerned bodies are also
37 aware that traditional masculine norms, for instance, aggressiveness and male suppression of
38 emotional vulnerability, can lead to physical violence [50]. Moreover, a male partner's heavy
39 drinking and aggressive behaviour, that men believe to be an accepted norm of masculinity
40 lead to violence [51]. Hence, wise disclosure of HIV/AIDS status assisted by healthcare
41 workers, mutual disclosure, and involving males in programs for IPV prevention is advisable.
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49 Health systems should address violence because of its significantly harmful effects on women's
50 health and well-being, including their mental, sexual and reproductive health [52]. Intimate
51 partner violence seems to be a preventable health problem. Thus the health system needs to
52 develop a response that can provide women with a multisectoral and women-centred response
53 providing privacy, confidentiality and accountability, empowerment of women's decision
54 making, and immediate assistance in a holistic way [52].
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Strengths and limitations

We used an approved MMAT tool to check the quality of appraisal of the included studies. We also used public health and social science databases for title screening. By doing so, we obtained all relevant published studies; however, we could have found additional pertinent articles if other bibliographic databases had been searched. Other terms, rather than the keywords we searched, could have existed in a different database. In our search, we included articles published in the English language only; therefore, we may have missed critical points published in studies presented in another language. Furthermore, this scoping review was a huge undertaking, and it only includes results up to the date of 10 April 2019.

Conclusion

Overall, this scoping review provides a summary of the existing literature showing the evidence of IPV experiences among women with HIV/AIDS. Furthermore, two other relevant categories of evidence reviewed are the negative influence of HIV/AIDS status disclosure on IPV and the association of socio-demographic characteristics with IPV and what the resulting implications are for practice. Psychological and emotional abuse were the most common form of violence reported. Sexual violence was found to be the least common type among HIV-positive women. The review showed the difficulty of women who experienced IPV in engaging in HIV/AIDS care, the interruption of their ART treatment, and that stigma, abuse, and financial withdrawal were some of the consequences that followed from IPV. As this review has shown, IPV was associated with HIV/AIDS status disclosure and having an HIV-negative spouse was a risk factor for IPV. In particular, there is evidence of a heightened risk for partner violence, shame, abuse, marriage disruption, and financial withdrawal following serostatus disclosure.

Therefore, the review highlighted the need for strategies such as the integration of IPV screening and care into other healthcare services (sexual, reproductive and HIV/AIDS services). Moreover, safe disclosure such as couple counselling, mutual disclosure between partners, separate counselling sessions for men, and facilitated disclosure is vital. The review has also emphasised routine screening for IPV to identify abused women attending HIV/AIDS care services. Most importantly, there is a need for further research among special population groups and on health systems barriers to screening for IPV and for a focus on how victims are treated.

Recommendations for future research

For future research, we suggest investigating the differences and similarities of the IPV experiences for women living with or without HIV/AIDS and the associated factors in the different regions of the various countries in SSA. The lived experience of women, both living with and without HIV/AIDS, and the HCW's experience of IPV screening and its barriers still need to be further studied.

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Contribution

MM: Conceived the topic and drafted the study as part of his PhD study; he was involved in the design and analysis. **NK** and **MT**: Supervised and guided the review, engaged in the design, analysis and revisiting of the manuscript critically for relevant intellectual content. All three authors read and approved the final manuscript. MM, NK and MT agreed to be accountable for all aspects of the work.

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Patient and public involvement

We didn't let the patient and/or public to involve in the design, reporting, or dissemination plans of this research.

Patient consent for publication: Non-applicable

Ethical approval: This is a scoping review, and the consent to participate was not applicable.

Consent for publication: Not applicable.

Data sharing statement

We will share all evidence from our data search and analysis upon reasonable request.

Competing interests

All authors declare that they have no conflict of interests.

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[Insert] Fig1: The PRISMA 2009 flow diagram

[Insert]Fig 2:Study design

[Insert] Figure 3: Distribution of countries

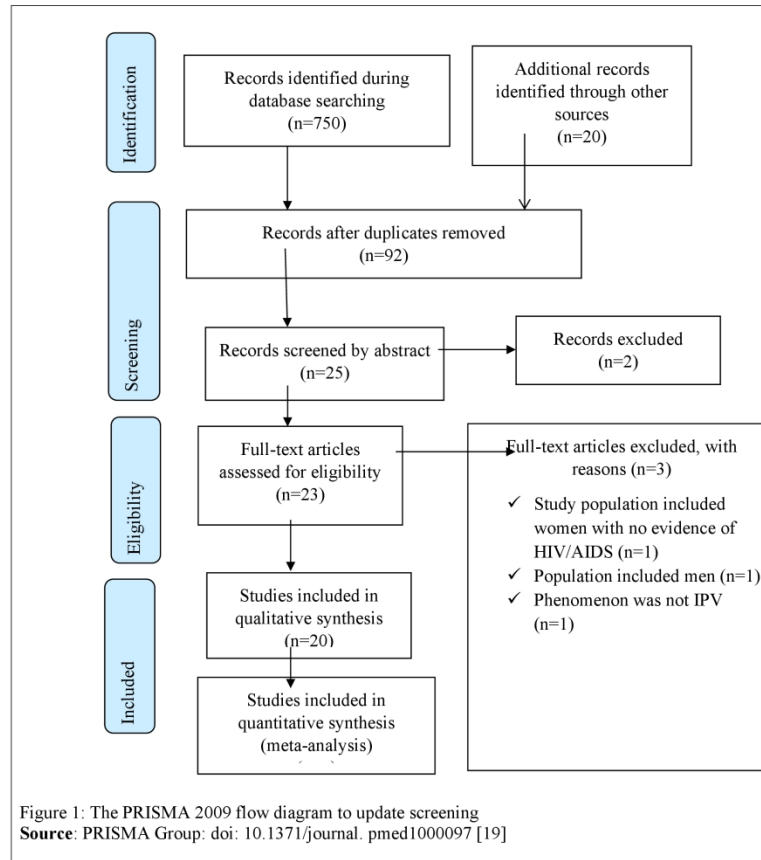


Figure 1

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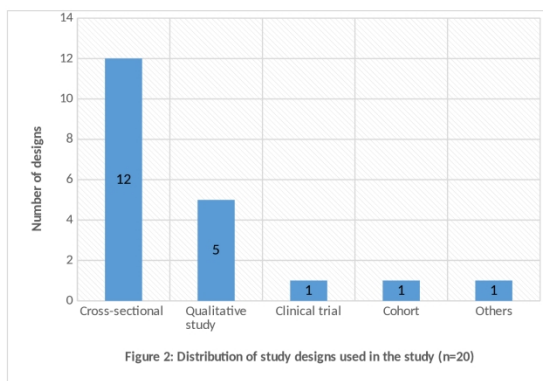


Figure 2

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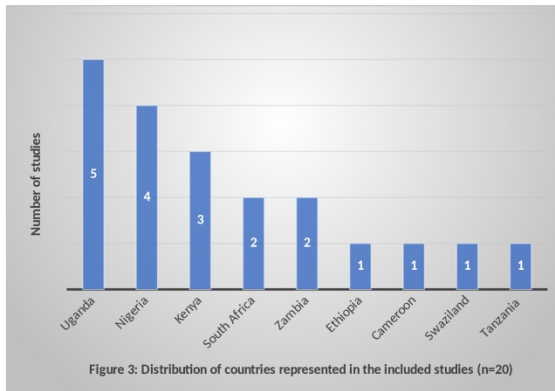


Figure 3

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Supplementary file 1: The pilot for the initial search

Population	Concept	Keywords	Date	No. found
Women living with HIV/AIDS	Intimate partner violence	("intimate partner violence"[MeSH Terms] AND "women"[MeSH Terms]) AND HIV[Title]) OR "domestic violence"[MeSH Terms]) AND "africa"[MeSH Terms]) AND ("2009/01/01"[PDAT] : "2019/04/01"[PDAT])	08 April 2019	750

Supplementary file 2: Database searching

Search date	Database	Keywords	No. of retrieved articles	No. of eligible articles	No. after cancelled duplicates
April 08 2019	Google Scholar	Intimate partner violence and its associated factors among women living with HIV/AIDS in Sub-Saharan Africa	7430	223	130
09 April 2019	Pubmed	Intimate partner violence, OR domestic violence OR physical violence OR sexual violence OR emotional violence OR psychological violence AND women AND HIV Africa	80	55	19
08 April 2019 09 April 2019 09 April 2019	<ul style="list-style-type: none"> ✓ Ebscohost ✓ Grey literature ✓ Governmental publication ✓ Thesis/ dissertation 	Intimate partner, HIV, Sub-Saharan, Africa	48	15	10
Total			7558	293	159

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	



SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	
Limitations	20	Discuss the limitations of the scoping review process.	
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: 10.7326/M18-0850.



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Mapping the evidence of intimate partner violence among women living with HIV/AIDS in sub-Saharan Africa: A scoping review

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3 1 **Mapping the evidence of intimate partner violence among women living with HIV/AIDS**
4 **in sub-Saharan Africa: A scoping review**
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6

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3 26 **Abstract**
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6 27 **Objectives:** The present study undertakes a scoping review aimed to map the evidence of
7 28 intimate partner violence (IPV) against women living with human immunodeficiency virus or
8 29 acquired immunodeficiency syndrome (HIV/AIDS) in Africa.
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11 30 **Design:** We used the online database to identify papers published from 01 January 2009 to 01
12 31 April 2019, from which we selected 21 articles from Uganda, Nigeria, Kenya, South Africa,
13 32 Zambia, Ethiopia, Cameroon, Tanzania, and Swaziland that used IPV as an outcome variable
14 33 among women living with HIV/AIDS.
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18 34 **Data Sources:** PubMed, MEDLINE, EBSCO host, Google Scholar
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22 35 **Eligibility criteria:** We included women who were aged 15 and above, living with HIV/AIDS
23 36 in sub-Saharan Africa.
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27 37 **Data extraction and synthesis:** We conducted the abstract screening with two independent
28 38 reviewers. We also performed full-text screening. We used the six methodological frameworks
29 39 proposed by Arksey and O'Malley, 2005. The Mixed Method Appraisal Tool was used to
30 40 determine the quality of the studies. We used NVIVO software version 12 to undertake a
31 41 thematic analysis.
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37 42 **Results:** Of the studies, the majority, 57.1%, reported cross-sectional results. In comparison,
38 43 23.8% examined qualitative studies, 9.5% were clinical trials, 4.8% were cohort studies, and
39 44 the remaining 4.8% covered grey literature. This review revealed evidence of IPV experience
40 45 among women with HIV/AIDS, evidence of how HIV status disclosure influences IPV, proof
41 46 of the association of socio-demographic characteristics with IPV, and implications for practice.
42 47 Moreover, the review revealed that following the serostatus disclosure, there is evidence of
43 48 heightened risk for IPV.
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50 49 **Conclusions:** This study found evidence of IPV among women living with HIV/AIDS. The
51 50 HIV-positive women were at considerable risk of IPV after disclosure of their serostatus to a
52 51 male partner. Therefore, further research is needed to promote action to reduce IPV among
53 52 HIV-positive and-negative women and to determine healthcare workers' IPV screening
54 53 experience.
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59 54 **Keywords:** Intimate partner violence, women, HIV/AIDS, Africa
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56 **Article summary**7
8 **Strengths and limitation of this study**
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11 • This review aimed to assess in-depth associations among women living with
12 HIV/AIDS, and we obtained baseline evidence for future research in gender-based
13 violence.
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17 • One of the limitations of this review is that it only included the literature published in
18 the English language.
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21 • The studies published in other languages were not included and the additional evidence
22 of IPV among women infected with HIV/AIDS was not part of this review's assessment
23 is also a limitation.
24
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27 • We did not include all the articles in our review because some were published in
28 journals inaccessible to us.
29
30

31 **Introduction**
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33
34 Women living with human immunodeficiency virus or acquired immune deficiency syndrome
35 (HIV/AIDS) who disclose their HIV serostatus are more likely to experience intimate partner
36 violence (IPV) than women who are HIV-negative [1]. Among the former, IPV and HIV/AIDS
37 may provide overlapping, or perhaps intersecting, challenges [2]. The reason that women
38 experience this violence is that the abusers have usually been shown to want to establish and
39 maintain power and control over another person. This is often reflected in the imbalance of
40 power between the women and their abusers [3]. Intimate partner violence is defined as any
41 behaviour within an intimate relationship that causes physical, psychological or sexual harm to
42 those in the relationship. This also includes emotional abuse and controlling behaviours by an
43 intimate partner [4].
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52 Worldwide, IPV is of public health and social concern. The prevalence of IPV in the World
53 Health Organization's (WHO) different regions varies but was similar in the Eastern
54 Mediterranean and South-East Asian regions, where IPV was reported to be 37% and 37.7%
55 respectively, to that in sub-Saharan Africa (SSA), where the prevalence was 36.6% [5]. Over
56 a third of women in SSA reported IPV, and because this high prevalence of IPV was among
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3 84 both women and young girls, it is of concern [2,5]. The harmful consequences of IPV among
4
5 85 women and young girls are well documented and have been shown to affect their mental,
6
7 86 sexual, and reproductive health [5-7]. In response to stress due to abuse, the immune system
8
9 87 can be compromised, which later exacerbating the spread of cancer and viral infections [5]. To
10
11 88 the biological stress response, there are behavioural and other risk factors that also influence
12
13 89 the link between intimate partner violence and adverse health outcomes [5].

14
15 90 Studies on IPV and depression show that women who are exposed to physical violence,
16
17 91 childhood sexual abuse, mild or severe emotional violence, and high levels of spousal control
18
19 92 are more likely to be depressed [6-8], to abuse alcohol [5-7], and give birth to babies of low
20
21 93 birth weight [5-7]. Since they may not be able to negotiate condom use [5-7], they are also at
22
23 94 risk of sexually transmitted infections (STIs), including HIV/AIDS [5-7,9].

24
25 95 The relationship between IPV and HIV/AIDS among women and young girls is a topic of
26
27 96 intense debate within the scientific community [2,10]. Some researchers consider that IPV
28
29 97 increases women's vulnerability to HIV infection [1,5-7], while other researchers suggest that
30
31 98 HIV-positive status among women may influence IPV [2,11]. A study conducted in Zimbabwe
32
33 99 among pregnant women living with HIV/AIDS revealed an IPV prevalence of 40% [12].
34
35 100 Another study in Kenya showed that after HIV-positive serostatus disclosure, one in three
36
37 101 women experienced IPV [13]. Moreover, both the combination of physical and sexual IPV
38
39 102 (OR: 2.00; 95% CI: 1.24–3.22) and the experience of any type of IPV were associated with
40
41 103 HIV/AIDS infection in women (OR=1.41; 95% CI: 1.16–1.73) [14].

42
43 104 Intimate partner violence and HIV/AIDS are thus two pandemics that require integrated and
44
45 105 collaborative interventions. The Joint United Nations Programme established new targets for
46
47 106 the scaling up of HIV/AIDS treatment by 2030. Among its aims are to increase the number of
48
49 107 people who know their HIV/AIDS status by 90%, to increase the number of people who receive
50
51 108 sustained antiretroviral therapy (ART) by 90% and to strive to ensure that 90% of all people
52
53 109 who are HIV/AIDS seropositive receive ART [15]. These new targets are promising, but
54
55 110 achieving them could be compromised by women and young girls experiencing IPV.
56
57 111 Therefore, we conducted a scoping review to systematically map the IPV research conducted
58
59 112 among women living with HIV/AIDS to identify the existing gaps in knowledge. The
60
61 113 information generated through this scoping review can be used by researchers, policymakers
62
63 114 and program developers to foster appropriate programs and policy frameworks.

115 **Methods**

116 The protocol (<https://bmjopen.bmj.com/content/bmjopen/9/8/e029284.full.pdf>) of this review
 117 was published in the BMJ Open. Currently, the International Prospective Register of
 118 Systematic Reviews (PROSPERO) does not register a scoping review. This review is part of a
 119 large-scale study on IPV among women in Ethiopia living both with and without HIV/AIDS.
 120 We used the six frameworks proposed by Arksey and O'Malley [16]: 1) Identifying the research
 121 questions and defining the eligibility criteria 2) Identifying relevant studies by conducting an
 122 extensive search 3) Making the study selection and appraising its quality 4) Synthesising the
 123 included studies (charting the data) and presenting the findings by using a PRISMA chart 5)
 124 Collating, summarising and reporting 6) Consulting (Table 1).

125 Table 1: The proposed scoping review following the six Arksey and O'Malley steps

Stage one: Formulating the study question

Stage two: Identifying the relevant studies

Stage three: Study selection

Stage four: Charting the data

Stage five: Collating, summarising and reporting

Stage six: Consultation

126 **Stage one: Identifying the research questions**

127 This scoping protocol is based on the following research questions:

- 128 1. Is there evidence of IPV experience among women living with HIV/AIDS in Africa?
- 129 2. Is there evidence that shows that HIV/AIDS status disclosure influences IPV among
 130 women in Africa?
- 131 3. Is there evidence that socio-demographic characteristics are associated with IPV among
 132 women living with HIV/AIDS in Africa?

133 **Eligibility criteria**

134 **Inclusion criteria:**

- 135 1. Studies with study participants aged 15 and above
- 136 2. Studies with evidence of IPV against women

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3 137 3. Studies with evidence about HIV-positive persons
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6 138 4. Studies on IPV over the past ten years for the maximum amount of updated
7 139 information: Years of publication from 01 January 2009 to 01 April 2019
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10 140 5. Peer-reviewed literature, grey literature, government documents, policy briefs,
11 141 systematic reviews, and meta-analysis
12
13
14 142 6. Studies conducted in sub-Saharan African countries (all the countries in Africa
15 143 except Algeria, Djibouti, Egypt, Libya, Morocco, Somalia, Sudan and Tunisia)
16
17

18 144 **Exclusion criteria:**

- 19
20 145 Articles published in a language other than English
21
22 146 The elements of the PCC (Population, Concept, and Context) criteria to map studies correctly
23 147 [17] (Table 2)
24
25 148 Table 2: PCC framework
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27

PCC	Description
P=Population	The population for this study were all women aged 15 and above living with HIV/AIDS or receiving ART
C=Concept	IPV(Physical, and/or sexual and/or emotional/psychological violence) or domestic violence
C=Context	Sub-Saharan African countries where the problem of IPV mostly exists among women living with HIV/AIDS

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39 149 **Stage two: Identifying the relevant studies**

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46 150 We created a Google form to search the literature in which we included the topic of the study,
47 151 author and date, and a review questionnaire. The Google form enabled screeners to record
48 152 studies for screening that have been included in the Endnote library. We inserted the keywords
49 153 into the PubMed advanced search menu, and the results that appeared were selected and
50 154 exported to Endnote.

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55 155 In addition, using a comprehensive strategy, we searched for published evidence and included
56 156 it in this study. A variety of literature, including peer-reviewed articles and grey literature, were
57 157 retrieved. In the PubMed advanced search, we used MeSH terms such as intimate partner
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3 158 violence, women, HIV, Africa, domestic violence, and focused on dates of publication after 01
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5 159 January 2009.

6
7 160 In addition to PubMed, we used MEDLINE with full text via EBSCO host, Google Scholar,
8
9 161 Science Direct and Scopus. We found a total of 750 articles from the PubMed search and
10
11 162 identified 128 additional records through other sources. We completed the search on 08 April
12
13 163 2019 (**supplementary file 1**).

14 15 164 **Stage three: Study selection**

16 17 165 **Screening**

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19 166 In our search strategy, we piloted to check the appropriateness of the selected electronic
20
21 167 databases and the keywords we decided to include. The principal author conducted title
22
23 168 screening, and two reviewers conducted the abstract screening independently. The purpose of
24
25 169 the title screening was to assess the titles for eligibility and to remove duplicates. We created
26
27 170 an Endnote library to which all the eligible titles were exported. We removed any duplicates
28
29 171 before the screening of the abstract. Relevant articles based on the inclusion criteria of the
30
31 172 scoping review were selected.

32
33 173 The independent reviewer abstract screening was to minimise reporting bias [17]. Moreover,
34
35 174 we undertook the full-text article screening independently, based on the eligibility criteria. We
36
37 175 contacted the authors for the articles that were not available electronically and requested these
38
39 176 be sent to us directly. During the full article retrieval, we used the University of KwaZulu-
40
41 177 Natal library. When a disagreement arose between the two reviewers, a third reviewer made
42
43 178 the decision. We presented the update of the findings by using a preferred reporting items for
44
45 179 systematic reviews and meta-analyses (PRISMA) chart.

46 180 **Quality assurance of the study**

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48
49 181 To determine the methodological quality, we adapted and used the Mixed Methods Appraisal
50
51 182 Tool (MMAT) 2018 version to evaluate each review [18]. Additionally, we used the preferred
52
53 183 reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 and
54
55 184 preferred reporting items for systematic reviews and meta-analyses extension for scoping
56
57 185 reviews (PRISMA-ScR) checklists to check whether the recommended items were included or
58
59 186 not [19,20]. During analysis, we reviewed the checklist of the consolidated criteria for reporting
60

187 qualitative research (COREQ), a 32-item checklist for interviews and focus group discussions
188 [21].

189 **Stage four: Charting the data**

190 We used the data charting table (Table 3) to extract the necessary background information and
191 to extract information from each selected study. We used an Excel spreadsheet for the data
192 charting. This form highlighted essential ideas regarding the variables from the background
193 and included the research questions which were addressed by the variables and the themes.
194 Two reviewers jointly developed the data charting form to decide which variables to extract,
195 which they charted independently. We continuously updated the data charting form during the
196 duration of the study.

197 **Data items:** We abstracted data on the article characteristics (e.g. year, country of origin), aim
198 of the study, IPV and population (HIV-positive women), sample size, age group, and the study
199 design.

200 Table 3: Data charting table

Author & year	Country	Study aim	Population	Sample Size	Age group (years)	Study design
Ashaba et al., 2017 [22]	Uganda	To explore psychosocial challenges experienced by women living with HIV	Women	20	22–40	Qualitative
Bernstein et al., 2016 [23]	South Africa	To assess the prevalence and correlates of IPV among HIV-infected pregnant women	Women	623	18–44	Cross-sectional
Lauren et al., 2017 [24]	South Africa	To measure how IPV impacts women's safety following mobile HCT diagnosis	Women	255	18+	Clinical trial
Colombini et al., 2016 [13]	Kenya	To explore women's experiences of IPV risks following disclosure to their partner	Women	30	15–49	Qualitative
Conroy et al., 2016 [25]	Uganda	To examine the association between relationship power and sexual violence	Women	307	19–75	Cross-sectional
Emusu et al., 2009 [26]	Uganda	To explore the experiences of sexual violence among women in HIV-discordant unions	Women	26	Not mentioned	Qualitative
Ezeanochie et al., 2011 [27]	Nigeria	To evaluate the prevalence and correlates of IPV among HIV-positive women	Women	305	21–43	Cross-sectional
Ezechi et al., 2009 [28]	Nigeria	To determine the prevalence, types and correlates of IPV	Women	652	<20–≥40	Cross-sectional
Fiorentino et al., 2019 [29]	Cameroon	To assess the prevalence and factors of IPV against HIV-	Women	894	≥21	Cross-sectional

		positive women and its relationship with ART interruption ≥ 1 month				
Hampanda et al., 2016 [30]	Zambia	To determine how IPV against HIV-positive women affects safe infant feeding practices	Women	320	18+	Cross-sectional
Hampanda et al., 2018 [31]	Zambia	To advance the current understanding of the relationship between IPV against women and their HIV status disclosure behaviours	Women	320	18+	Cross-sectional
Iliyasu et al., 2016 [32]	Northern Nigeria	To assess prevalence and risk factors of domestic violence among HIV-positive women	Women	300	18–70	Descriptive & cross-sectional
Malaju et al., 2013 [33]	Ethiopia	To assess women's expectations of their partner's violence on the disclosure of the HIV test	Women	400	15–49	Cross-sectional
Colombini, 2015 [34]	Swaziland	To explore the risks of experiencing IPV after HIV infection among women with HIV	Women	19	18–44	Qualitative
Olowookere et al., 2015 [35]	Nigeria	To assess the prevalence and correlates of IPV among women living with HIV/AIDS in an antiretroviral clinic in Nigeria	Women	360	18+	Cross-sectional
Chinwe, 2017 [36]	Kenya	To examine SV against HIV-positive women enrolled in HIV care in Kenya	Women	25	18+	Qualitative
Osinde et al., 2011 [37]	Uganda	To measure the prevalence and factors associated with IPV among HIV-infected women	Women	317	15+	Cross-sectional
Wilson et al., 2016 [38]	Kenya	To assess the prevalence and correlates of IPV in the past year by a regular male partner in HIV-positive female sex workers in Mombasa, Kenya	Women	357	18+	Cross-sectional
Young et al., 2018 [39]	Uganda	To examine physical and sexual IPV prevalence and correlates among WLWH in Uganda	Women	455	18+	Cohort
United Nations Educational, Scientific & Cultural Organization, 2013 [40]	Tanzania	To discuss the links between gender-based violence (GBV) and HIV and AIDS in conflict and post-conflict situations in the Great Lakes Region	Women	N/A	N/A	Workshop report
Matseke et al., 2016 [41]	South Africa	Intimate partner violence among HIV positive pregnant women in South Africa	Women	673	18+	A clinic-randomised, controlled trial

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202 Stage five: Collating, summarising and reporting the result

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3 203 We undertook qualitative data analyses using NVIVO software 12 to collate, summarise, and
4 204 report the results. Firstly, the researchers read and reread the articles thoroughly, noting down
5 205 the initial ideas to find codes. The notable features of the data across the entire article were
6 206 systematically coded, and data relevant to each code was collated. We then developed the codes
7 207 into potential themes and finally defined and named the themes and produced the report [42].
8 208 We used the description of the coding tree and thematic content analysis to analyse the data.
9 209 We extracted and coded the data that were related to the IPV experience among HIV-positive
10 210 women, identified the emerging themes and then coded the data according to these themes. The
11 211 analysis process used the following steps 1) Coding data from the selected articles 2)
12 212 Categorising the codes into themes 3) Displaying the data 4) Identifying key patterns in the
13 213 data and the sub-themes 5) Summarising and synthesising.

23 214 **Stage six: Consultation**

24 215 We held consultations with the stakeholders, such as policymakers, clinicians, patients, and
25 216 families, in addition to other appropriate groups who researched IPV, in order to obtain more
26 217 references and to provide insights on what the literature failed to highlight [43].

31 218 **Results**

34 219 **Screening results**

35 220 We found 750 articles in the original data search. A total of 159 publications remained after
36 221 we removed duplicates and other unrelated topics. A hundred and thirty-six (136) articles
37 222 were excluded, which did not meet our inclusion criteria, and 23 items were included for full-
38 223 text screening. After the full-article screening, we excluded two studies, providing reasons for
39 224 this, and a final 21 articles remained from which to extract data (**Figure 1**).

45 225 **[Insert Figure 1]:** Figure 1: The PRISMA 2009 flow diagram to update screening

48 226 **Characteristics of the included studies**

49 227 Out of the 21 included studies, 20 were published in peer-reviewed journals [13,22-39,41],
50 228 while the remaining one was categorised as grey literature [40]. From the included studies, 12
51 229 were quantitative and cross-sectional in nature [23,25,27-33,35,37,38], five were qualitative
52 230 [13,23,26,34], two was a clinical trial [24,41], one was a cohort design [39] and the
53 231 remaining one was grey literature (a conference discussion report) [40] (**Figure 2**).

59 232 **[Insert Figure2]:** Figure 2: Distribution of study designs used in the study (n=21)

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3 233 Out of the 21 studies, five were conducted in Uganda [22,25,26,37,39], four in Nigeria
4 234 [27,28,32,35], three in Kenya [13,36,38], two in South Africa [23,24], two in Zambia [30,31],
5 235 one in Ethiopia [33], one in Cameroon [29], one in Tanzania [40], and the remaining one in
6 236 Swaziland [34] (**Figure 3**).

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11 237 **[Insert Figure 3]:** Figure 3: Distribution of countries represented in the included studies
12 238 (n=21)

13 239 **Study findings**

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17 240 Four themes emerged from the identified studies: evidence of IPV experience among women
18 241 with HIV/AIDS, evidence of HIV/AIDS status disclosure influencing IPV, evidence of the
19 242 association of socio-demographic characteristics with IPV, and implications for future practice.

20 243 **Evidence of intimate partner violence experience among women with HIV/AIDS**

21 244 We found evidence of IPV experience from almost all of the 21 included studies in the 11
22 245 countries in the Sub-Saharan African region [13,22-41]. The prevalence of IPV varied among
23 246 countries; we identified the highest prevalence of IPV in South Africa (67.3%) [24] and the
24 247 lowest prevalence in Kenya (14.6%) [38]. Intimate partner violence was also identified in
25 248 Nigeria (65.8%) [28], in South Africa, overall, 56.3% reported having experienced either
26 249 psychological or physical IPV[41],Uganda (29%) [39], another study in South Africa, (21%)
27 250 [23], Nigeria, (23.6%) [35], Kenya, nearly one-third of women in the study [13], Cameroon
28 251 (23%) [29], Nigeria (22.1%) [32] and Uganda (29.3%) [37]. On average, one-third (30.2%) of
29 252 HIV-positive women experienced IPV among the included studies. Psychological, emotional
30 253 or verbal abuse was the most common form of violence reported among HIV-positive women
31 254 and ranged from 12.1% to 51.7% [27-29,35,37]. One study showed that physical violence had
32 255 a more pronounced effect on status disclosure than sexual or emotional violence [31]. Sexual
33 256 violence was found to be the least common type of abuse among HIV-positive women, ranging
34 257 from 2% to 44.8% [23,28,29,35].

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41 258 Three studies showed evidence of further abuse following IPV, such as the difficulty of
42 259 engaging in HIV/AIDS care, interruption of ART adherence, partner stigma and abuse, and
43 260 financial withdrawal [13,22,29]. There was also evidence showing that physical weakness,
44 261 economic and social dependence on a partner and alcohol abuse by a male partner were the
45 262 leading causes of IPV [26,40].

46 263 **Evidence of HIV/AIDS status disclosure influencing IPV**

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2
3 264 Evidence of IPV after HIV/AIDS status disclosure was reported from six studies [28,31-35].
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5 265 Following the sero-disclosure, there was evidence of heightened risk for IPV, stigma, abuse,
6
7 266 marriage disruption, and financial withdrawal [13,22,28,29,32,33]. Evidence from one study
8
9 267 showed about 74% of abuse coming after HIV/AIDS status disclosure [28]. However, some
10
11 268 studies found that sero-concordance is protective of emotional or verbal abuse [13]. Women
12
13 269 who had their own income, those who did not have a stigmatising attitude towards people living
14
15 270 with HIV/AIDS, those who had attained secondary level education and above, those with a
16
17 271 positive attitude towards counsellors, and those able to access health facilities were all
18
19 272 associated with positive partner reaction [33]. On the other hand, having an HIV-negative
20
21 273 spouse and disclosure of HIV/AIDS status was associated with abuse [28].

22
23 274 Studies also explored the expectation of adverse reactions related to HIV/AIDS in the
24
25 275 community, including gossip and discrimination [22,33]. Evidence even existed that some
26
27 276 women did not disclose their HIV/AIDS status because of expected fear of rejection, abuse and
28
29 277 anticipated loss of trust from their partner [22,28,40]. For instance, studies showed that some
30
31 278 women kept their HIV serostatus a secret to prevent an adverse reaction [22,40]. One study
32
33 279 also presented evidence of early mixed feeding following the disclosure of an HIV-positive
34
35 280 status [30]. Findings show that physical violence is the most prevalent form of IPV that occurs
36
37 281 after status disclosure rather than sexual abuse [31].

282 **Evidence of the association of socio-demographic characteristics with IPV**

38
39 283 We found evidence of socio-demographic characteristics which were associated with IPV in
40
41 284 four studies [32,35,37,39]. One study identified that older age groups of women, those >40,
42
43 285 were at risk for IPV [32]. Contrary to this, a study in Uganda showed that being older was
44
45 286 associated with a lower risk for IPV [39]. Similarly, one study in Nigeria showed that younger
46
47 287 partners (20–39) were more at risk for IPV [35].

48
49 288 A study from Nigeria showed that multiparity, being a respondent with an HIV-positive child,
50
51 289 and marital status (divorced women) were associated with IPV [32]. However, a study in
52
53 290 Uganda showed that being married was associated with a higher risk of IPV [39].

54
55 291 Two studies revealed that non-formal education of husbands (i.e. lack of education) was
56
57 292 associated with IPV [27,32]. Contrary to this, a study in rural Uganda showed that there was a
58
59 293 significant, but inverse, the association between educational level and physical partner violence
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3 294 [37]. There was also an inverse association between the educational level of the respondent and
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5 295 sexual/psychological abuse, as well as psychological/sexual violence [37].
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7
8 296 Only one study from Uganda reported that a higher household asset index score was protective
9
10 297 from IPV [39]. The socio-demographic factor of alcohol abuse by male partners was an
11
12 298 essential factor associated with IPV among HIV-positive women [26,35,38]. Additionally, IPV
13
14 299 was associated with the experience of violence before women had an HIV-positive diagnosis
15
16 300 [27]. Moreover, a Ugandan study reported that the use of ART was associated with an increased
17
18 301 prevalence of IPV [37]. One study result also showed that women experiencing controlling
19
20 302 behaviour by the index partner was associated with IPV [38].

21 303 **Implications for future practice**

22
23 304 Evidence from four studies indicated that the prevention of IPV is through the integration of
24
25 305 partner violence identification and care into other healthcare services (sexual and reproductive
26
27 306 services and services such as HIV testing and counselling) [13,25,27,31]. A study in Uganda
28
29 307 recommended the integration of various stakeholders, including partners, family,
30
31 308 policymakers, community members and funders and program implementers who could work
32
33 309 together to prevent IPV [22].

34
35 310 Healthcare workers (HCWs) should ensure safe disclosure to avoid post-disclosure abuse. Safe
36
37 311 disclosure, including couple counselling, mutual disclosure between partners, separate
38
39 312 counselling sessions for men, and facilitated disclosure were recommendations [13,22,34]. A
40
41 313 study also reported that HIV/AIDS counsellors should evaluate the advantages and
42
43 314 disadvantages of status disclosure among women [31]. Furthermore, a Zambian study indicated
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45 315 that IPV prevention required training counsellors to facilitate discussions with women about
46
47 316 IPV [31]. Moreover, evidence from two studies showed the importance of ensuring that
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49 317 women's decisions to disclose their HIV serostatus are fully informed and voluntary [13,31].
50
51 318 Evidence from five studies reported that routine screening for IPV to identify abused women
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53 319 during HIV/AIDS care services is necessary [23,27,29,37,39]. Furthermore, evidence from a
54
55 320 Ugandan study also highlighted that HCWs should inform HIV-discordant couples
56
57 321 appropriately on their reproductive options and referral systems and link couples with
58
59 322 counselling services on sexual violence [26].

60
323 A study also proposed a way forward by improving public awareness and family counselling
324 as a strategy of IPV prevention [34]. Four studies recommended that promoting gender equity,

325 empowering women economically, as well as promoting positive masculinities that support
326 and protect women are measures to prevent IPV [22,25,34,44]. Moreover, two studies reported
327 the involvement of males in programs of IPV prevention [22,34].

328 **Discussion**

329 This scoping review was aimed at mapping the evidence of IPV against women living with
330 HIV/AIDS in SSA. It revealed evidence of IPV experience among women with HIV/AIDS,
331 how HIV/AIDS status disclosure influences its prevalence, and proof of the association of
332 socio-demographic characteristics with IPV. The implications for future practice and
333 recommendations were also made evident.

334 The experience of IPV varies among SSA countries. On average, 30.2% of HIV-positive
335 women had experienced IPV. This overall finding corresponds to the results of Ugandan and
336 Kenyan studies [13,37,39]. Of the types of IPV, emotional abuse was the most common form
337 of violence reported among HIV-positive women [27-29,35,37]; sexual violence was found to
338 be the least common type of abuse among HIV-positive women [23,28,29,35]. As a result of
339 this type of violence, women delayed accessing ART for fear of further violence, experienced
340 denial of healthcare or discrimination in healthcare settings, employment, education, housing
341 and enforced HIV testing [6,7,40]. In light of these findings, studies highlighted strategies to
342 protect women from IPV by the integration of violence identification and care into other
343 healthcare services (sexual, reproductive, and HIV/AIDS-related services such as HIV testing
344 and counselling services) [13,25,27,31]. It was suggested that the integration of the family,
345 policymakers, community members, as well as funders and program implementers in gender-
346 based violence prevention programs, were a way forward [22].

347 The WHO data in 2018 showed that 25.7 million people are living with HIV/AIDS in Africa
348 [45], indicating that HIV/AIDS continues to be one of the significant causes of disease burden
349 in SSA [45, 46], causing substantial health problems in the region. However, studies have
350 highlighted that the effect of the HIV/AIDS epidemic varies in different countries of SSA [46].
351 Significant to this study, research in Africa has also shown that there is a strong association
352 between HIV infection and IPV [47]. This relationship between the two health problems is
353 complex and iterative [48]; because of this, countries with a high HIV/AIDS prevalence, for
354 instance, South Africa and Nigeria, account for a high prevalence of violence (67.3%) [24] and
355 (65.8%) [28] respectively. The studies in this review included countries with a varying range
356 of HIV/AIDS prevalence; as reported in 2016, these were Swaziland (27.2%), South Africa

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3 357 (18.9%), Zambia (12.4%), Uganda (6.5%), Kenya (5.4%), Tanzania (4.7%), Cameroon (3.8%),
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5 358 Nigeria (2.9%) and Ethiopia (1.1%) [49]. Moreover, IPV can itself also be both a risk factor
6
7 359 for and a consequence of HIV/AIDS [50]. Therefore, IPV needs safe monitoring, screening
8
9 360 and intervention among HIV-positive women in healthcare settings [48].

10
11 361 Evidence of IPV following HIV/AIDS status disclosure was found in nine studies reviewed
12
13 362 [13,22,29,28,31-35]. If our study had searched only for the effect of HIV/AIDS disclosure
14
15 363 without IPV, more evidence of the consequences of HIV/AIDS status disclosure could have
16
17 364 come to light. Moreover, stigma, abuse, marriage disruption and financial withdrawal were
18
19 365 evident consequences of HIV test result disclosure [13,22,28,29,32,33]. Therefore, there is a
20
21 366 need for safe disclosure such as couple counselling, mutual disclosure between partners,
22
23 367 separate counselling sessions for men, and facilitated disclosure [13,22,34]. One study also
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25 368 reported that HIV/AIDS counsellors should evaluate the advantages and disadvantages of status
26
27 369 disclosure among women [31]. The Zambian study suggested training counsellors to facilitate
28
29 370 discussions with women about IPV [31]. Moreover, evidence from two studies showed that
30
31 371 ensuring women's fully informed and voluntary decision making to disclose their HIV/AIDS
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33 372 serostatus is required [13,31].

34
35 373 A study in Uganda showed that the socio-demographic status of being married was associated
36
37 374 with a higher risk of IPV [19]. Another type of marital status, such as being divorced, was also
38
39 375 associated with IPV in another context [12]. Hence, the prevention strategy for IPV should be
40
41 376 emphasised for both married and divorced women. Age could also be a risk factor, depending
42
43 377 on the country. A study in Zimbabwe identified that older women, >40 years, were at increased
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45 378 risk for IPV [12]. Contrary to this, a study in Uganda showed that older age represented a lower
46
47 379 risk for IPV [19]. Corresponding with this, a survey in Nigeria showed that younger partners
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49 380 (20–39) were at increased risk of IPV [15]. However, from these findings, we realised that
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51 381 violence could affect all age groups; hence the importance of improving public awareness and
52
53 382 providing family counselling as a strategy for IPV prevention [14].

54
55 383 Women who are living with HIV/AIDS not only experienced with IPV but also other type of
56
57 384 violence/stigma/discriminations. A study in South Africa showed that higher levels of
58
59 385 depressive symptoms and greater perceived stigma were associated with physical and
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386 psychological IPV[41]. It also showed that psychological IPV and physical IPV were also
387 individually associated with high perceived stigma and higher levels of depressive
388 symptoms[41].

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3 389 Studies revealed that other socio-demographic aspects, such as higher household asset value
4 were protective against IPV [39]. To this end, promoting gender equity, and empowering
5 390 women economically, as well as promoting positive masculinities that support and protect
6 391 women should be considered to protect against IPV [22,25,34,38]. Concerned bodies are also
7 392 aware that traditional masculine norms, for instance, aggressiveness and male suppression of
8 393 emotional vulnerability, can lead to physical violence [51]. Moreover, a male partner's heavy
9 394 drinking and aggressive behaviour, that men believe to be an accepted norm of masculinity
10 395 lead to violence [52]. Hence, wise disclosure of HIV/AIDS status assisted by healthcare
11 396 workers, mutual disclosure, and involving males in programs for IPV prevention is advisable.
12 397
13 398 Health systems should address violence because of its significantly harmful effects on women's
14 399 health and well-being, including their mental, sexual and reproductive health [53]. Intimate
15 400 partner violence seems to be a preventable health problem. Thus the health system needs to
16 401 develop a response that can provide women with a multisectoral and women-centred response
17 402 providing privacy, confidentiality and accountability, empowerment of women's decision
18 403 making, and immediate assistance in a holistic way [53].

404 **Strengths and limitations**

405 We used an approved MMAT tool to check the quality of appraisal of the included studies. We
406 also used public health and social science databases for title screening. By doing so, we
407 obtained all relevant published studies; however, we could have found additional pertinent
408 articles if other bibliographic databases had been searched. Other terms, rather than the
409 keywords we searched, could have existed in a different database. In our search, we included
410 articles published in the English language only; therefore, we may have missed critical points
411 published in studies presented in another language. Furthermore, this scoping review was a
412 huge undertaking, and it only includes results up to the date of 10 April 2019.

413 **Conclusion**

414 Overall, this scoping review provides a summary of the existing literature showing the evidence
415 of IPV experiences among women with HIV/AIDS. We found evidence of IPV experience
416 from almost all of the studies included. On average, one-third (30.2%) of HIV-positive women
417 experienced IPV among the included studies. Psychological, emotional or verbal abuse was the
418 most common form of violence reported among HIV-positive women. Furthermore, two other
419 relevant categories of evidence reviewed are the negative influence of HIV/AIDS status

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3 420 disclosure on IPV and the association of socio-demographic characteristics with IPV and what
4
5 421 the resulting implications are for practice. Psychological and emotional abuse were the most
6
7 422 common form of violence reported. Sexual violence was found to be the least common type
8
9 423 among HIV-positive women. The review showed the difficulty of women who experienced
10
11 424 IPV in engaging in HIV/AIDS care, the interruption of their ART treatment, and that stigma,
12
13 425 abuse, and financial withdrawal were some of the consequences that followed from IPV. As
14
15 426 this review has shown, IPV was associated with HIV/AIDS status disclosure and having an
16
17 427 HIV-negative spouse was a risk factor for IPV. In particular, there is evidence of a heightened
18
19 428 risk for partner violence, shame, abuse, marriage disruption, and financial withdrawal
20
21 429 following serostatus disclosure.

21 430 Therefore, the review highlighted the need for strategies such as the integration of IPV
22
23 431 screening and care into other healthcare services (sexual, reproductive and HIV/AIDS
24
25 432 services). Moreover, safe disclosure such as couple counselling, mutual disclosure between
26
27 433 partners, separate counselling sessions for men, and facilitated disclosure is vital. The review
28
29 434 has also emphasised routine screening for IPV to identify abused women attending HIV/AIDS
30
31 435 care services. Most importantly, there is a need for further research among special population
32
33 436 groups and on health systems barriers to screening for IPV and for a focus on how victims are
34
35 437 treated.

36 438 **Recommendations for future research**

37
38 439 For future research, we suggest investigating the differences and similarities of the IPV
39
40 440 experiences for women living with or without HIV/AIDS and the associated factors in the
41
42 441 different regions of the various countries in SSA. The lived experience of women, both living
43
44 442 with and without HIV/AIDS, and the HCW's experience of IPV screening and its barriers still
45
46 443 need to be further studied.

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52
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56
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58 59 450 **Contribution**

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2
3 451 MM: Conceived the topic and drafted the study as part of his PhD study; he was involved in
4 452 the design and analysis. **NK** and **MT**: Supervised and guided the review, engaged in the
5 453 design, analysis and revisiting of the manuscript critically for relevant intellectual content. All
6 454 three authors read and approved the final manuscript. MM, NK and MT agreed to be
7 455 accountable for all aspects of the work.

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459 **Patient and public involvement**

460 We didn't let the patient and/or public to involve in the design, reporting, or dissemination
461 plans of this research.

462 **Patient consent for publication:** Non-applicable

463 **Ethical approval:** This is a scoping review, and the consent to participate was not applicable.

464 **Consent for publication:** Not applicable.

465 **Data sharing statement**

466 We will share all evidence from our data search and analysis upon reasonable request.

467 **Competing interests**

468 All authors declare that they have no conflict of interests.

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16 651 [Insert] Fig1: The PRISMA 2009 flow diagram

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19 652 [Insert]Fig 2: Study design

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22 653 [Insert] Figure 3: Distribution of countries

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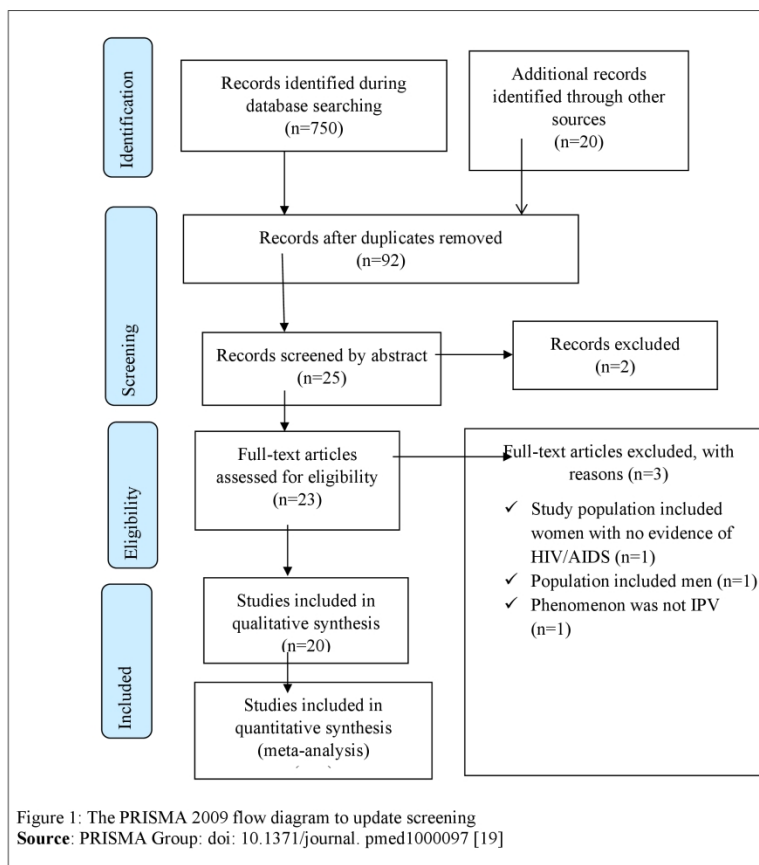


Figure 1

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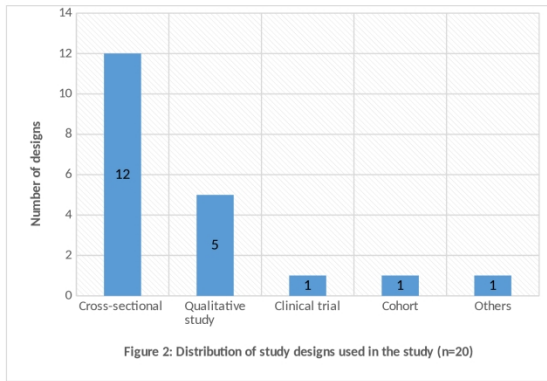


Figure 2

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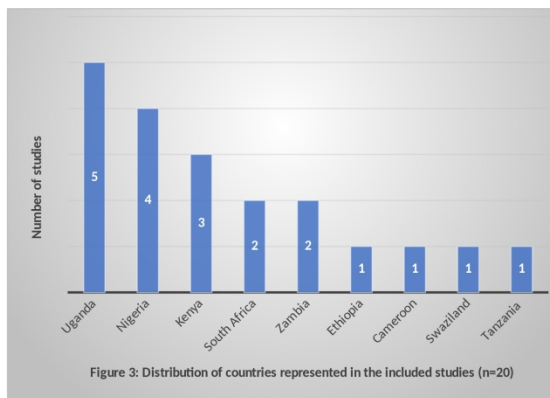


Figure 3

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Supplementary file 1: Search strategy

Population	Concept	Keywords	Date	No.found
Women living with HIV/AIDS	Intimate partner violence	("intimate partner violence"[MeSH Terms] AND "women"[MeSH Terms]) AND HIV[Title] OR "domestic violence"[MeSH Terms] AND "africa"[MeSH Terms] AND ("2009/01/01"[PDAT] : "2019/04/01"[PDAT])	08 April 2019	750

For peer review only

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	



SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	
Limitations	20	Discuss the limitations of the scoping review process.	
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: [10.7326/M18-0850](https://doi.org/10.7326/M18-0850).



BMJ Open

Mapping the evidence of intimate partner violence among women living with HIV/AIDS in sub-Saharan Africa: A scoping review

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2020-041326.R2
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Primary Subject Heading:	Public health
Secondary Subject Heading:	HIV/AIDS, Reproductive medicine, Sexual health
Keywords:	Public health < INFECTIOUS DISEASES, HIV & AIDS < INFECTIOUS DISEASES, REPRODUCTIVE MEDICINE, PUBLIC HEALTH

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3 1 **Mapping the evidence of intimate partner violence among women living with HIV/AIDS**
4 **in sub-Saharan Africa: A scoping review**

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3 **26 Abstract**
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6 **27 Objectives:** The present study undertakes a scoping review aimed to map the evidence of
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8 intimate partner violence (IPV) against women living with human immunodeficiency virus or
9
10 acquired immunodeficiency syndrome (HIV/AIDS) in Africa.

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12 **30 Design:** We used the online database to identify papers published from 01 January 2009 to 01
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14 April 2019, from which we selected 21 articles from Uganda, Nigeria, Kenya, South Africa,
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16 Zambia, Ethiopia, Cameroon, Tanzania, and Swaziland that used IPV as an outcome variable
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18 among women living with HIV/AIDS.

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20 **34 Data Sources:** PubMed, MEDLINE, EBSCO host, Google Scholar

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22 **35 Eligibility criteria:** We included women who were aged 15 and above, living with
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24 HIV/AIDS in sub-Saharan Africa.
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27 **37 Data extraction and synthesis:** We conducted the abstract screening with two independent
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29 reviewers. We also performed full-text screening. We used the six methodological
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31 frameworks proposed by Arksey and O'Malley, 2005. The Mixed Method Appraisal Tool was
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33 used to determine the quality of the studies. We used NVIVO software version 12 to
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35 undertake a thematic analysis.

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37 **42 Results:** Of the studies, the majority, 57.1%, reported cross-sectional results. In comparison,
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39 23.8% examined qualitative studies, 9.5% were clinical trials, 4.8% were cohort studies, and
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41 the remaining 4.8% covered grey literature. This review revealed evidence of IPV experience
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43 among women with HIV/AIDS, evidence of how HIV status disclosure influences IPV, proof
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45 of the association of socio-demographic characteristics with IPV, and implications for
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47 practice. Moreover, the review revealed that following the serostatus disclosure, there is
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49 evidence of heightened risk for IPV.

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51 **49 Conclusions:** This study found evidence of IPV among women living with HIV/AIDS. The
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53 HIV-positive women were at considerable risk of IPV after disclosure of their serostatus to a
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55 male partner. Therefore, further research is needed to promote action to reduce IPV among
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57 HIV-positive and-negative women and to determine healthcare workers' IPV screening
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59 experience.

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54 Keywords: Intimate partner violence, women, HIV/AIDS, Africa

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Article summary

Strengths and limitation of this study

- This review aimed to assess in-depth associations among women living with HIV/AIDS, and we obtained baseline evidence for future research in IPV.
- One of the limitations of this review is that it only included the literature published in the English language.
- The studies published in other languages were not included and the additional evidence of IPV among women infected with HIV/AIDS was not part of this review's assessment is also a limitation.
- We did not include all the articles in our review because some were published in journals inaccessible to us.

Introduction

Women living with human immunodeficiency virus or acquired immune deficiency syndrome (HIV/AIDS) who disclose their HIV serostatus are more likely to experience intimate partner violence (IPV) than women who are HIV-negative [1]. Among the former, IPV and HIV/AIDS may provide overlapping, or perhaps intersecting, challenges [2]. The reason that women experience this violence is that the abusers have usually been shown to want to establish and maintain power and control over another person. This is often reflected in the imbalance of power between the women and their abusers [3]. Intimate partner violence is defined as any behaviour within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship. This also includes emotional abuse and controlling behaviours by an intimate partner [4].

Worldwide, IPV is of public health and social concern. The prevalence of IPV in the World Health Organization's (WHO) different regions varies but was similar in the Eastern Mediterranean and South-East Asian regions, where IPV was reported to be 37% and 37.7% respectively, to that in sub-Saharan Africa (SSA), where the prevalence was 36.6% [5]. Over a third of women in SSA reported IPV, and because this high prevalence of IPV was among both women and young girls, it is of concern [2,5]. The harmful consequences of IPV among

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3 84 women and young girls are well documented and have been shown to affect their mental,
4 85 sexual, and reproductive health [5-7]. In response to stress due to abuse, the immune system
5 86 can be compromised, which later exacerbating the spread of cancer and viral infections [5].
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7 87 To the biological stress response, there are behavioural and other risk factors that also
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9 88 influence the link between intimate partner violence and adverse health outcomes [5].

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12 89 Studies on IPV and depression show that women who are exposed to physical violence,
13 90 childhood sexual abuse, mild or severe emotional violence, and high levels of spousal control
14 91 are more likely to be depressed [6-8], to abuse alcohol [5-7], and give birth to babies of low
15 92 birth weight [5-7]. Since they may not be able to negotiate condom use [5-7], they are also at
16 93 risk of sexually transmitted infections (STIs), including HIV/AIDS [5-7,9].

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19 94 The relationship between IPV and HIV/AIDS among women and young girls is a topic of
20 95 intense debate within the scientific community [2,10]. Some researchers consider that IPV
21 96 increases women's vulnerability to HIV infection [1,5-7], while other researchers suggest that
22 97 HIV-positive status among women may influence IPV [2,11]. A study conducted in
23 98 Zimbabwe among pregnant women living with HIV/AIDS revealed an IPV prevalence of
24 99 40% [12]. Another study in Kenya showed that after HIV-positive serostatus disclosure, one
25 100 in three women experienced IPV [13]. Moreover, both the combination of physical and
26 101 sexual IPV (OR: 2.00; 95% CI: 1.24–3.22) and the experience of any type of IPV were
27 102 associated with HIV/AIDS infection in women (OR=1.41; 95% CI: 1.16–1.73) [14].

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30 103 Intimate partner violence and HIV/AIDS are thus two pandemics that require integrated and
31 104 collaborative interventions. The Joint United Nations Programme established new targets for
32 105 the scaling up of HIV/AIDS treatment by 2030. Among its aims are to increase the number of
33 106 people who know their HIV/AIDS status by 90%, to increase the number of people who
34 107 receive sustained antiretroviral therapy (ART) by 90% and to strive to ensure that 90% of all
35 108 people who are HIV/AIDS seropositive receive ART [15]. These new targets are promising,
36 109 but achieving them could be compromised by women and young girls experiencing IPV.
37 110 Therefore, we conducted a scoping review to systematically map the IPV research conducted
38 111 among women living with HIV/AIDS to identify the existing gaps in knowledge. The
39 112 information generated through this scoping review can be used by researchers, policymakers
40 113 and program developers to foster appropriate programs and policy frameworks.

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115 **Methods**

116 The protocol [16] of this review was published in the BMJ Open. Currently, the International
 117 Prospective Register of Systematic Reviews (PROSPERO) does not register a scoping
 118 review. This review is part of a large-scale study on IPV among women in Ethiopia living
 119 both with and without HIV/AIDS. We used the six frameworks proposed by Arksey and
 120 O'Malley [17]: 1) Identifying the research questions and defining the eligibility criteria 2)
 121 Identifying relevant studies by conducting an extensive search 3) Making the study selection
 122 and appraising its quality 4) Synthesising the included studies (charting the data) and
 123 presenting the findings by using a PRISMA chart 5) Collating, summarising and reporting 6)
 124 Consulting (Table 1).

125 Table 1: The proposed scoping review following the six Arksey and O'Malley steps

Stage one: Formulating the study question

Stage two: Identifying the relevant studies

Stage three: Study selection

Stage four: Charting the data

Stage five: Collating, summarising and reporting

Stage six: Consultation

126 **Stage one: Identifying the research questions**

127 This scoping protocol is based on the following research questions:

- 128 1. Is there evidence of IPV experience among women living with HIV/AIDS in Africa?
- 129 2. Is there evidence that shows that HIV/AIDS status disclosure influences IPV among
 130 women in Africa?
- 131 3. Is there evidence that socio-demographic characteristics are associated with IPV
 132 among women living with HIV/AIDS in Africa?

133 **Eligibility criteria**

134 **Inclusion criteria:**

- 135 1. Studies with study participants aged 15 and above

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3 136 2. Studies with evidence of IPV against women
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6 137 3. Studies with evidence about HIV-positive persons
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8 138 4. Studies on IPV over the past ten years for the maximum amount of updated
9 information: Years of publication from 01 January 2009 to 01 April 2019
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12 140 5. Peer-reviewed literature, grey literature, government documents, policy briefs,
13 systematic reviews, and meta-analysis
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16 142 6. Studies conducted in sub-Saharan African countries (all the countries in Africa
17 except Algeria, Djibouti, Egypt, Libya, Morocco, Somalia, Sudan and Tunisia)
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20 144 **Exclusion criteria:**

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23 145 Articles published in a language other than English

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25 146 The elements of the PCC (Population, Concept, and Context) criteria to map studies correctly
26 [18] (Table 2)
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28 148 Table 2: PCC framework
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PCC	Description
P=Population	The population for this study were all women aged 15 and above living with HIV/AIDS or receiving ART
C=Concept	IPV(Physical, and/or sexual and/or emotional/psychological violence) or domestic violence
C=Context	Sub-Saharan African countries where the problem of IPV mostly exists among women living with HIV/AIDS

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46 149 **Stage two: Identifying the relevant studies**

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49 150 We created a Google form to search the literature in which we included the topic of the study,
50 151 author and date, and a review questionnaire. The Google form enabled screeners to record
51 152 studies for screening that have been included in the Endnote library. We inserted the
52 153 keywords into the PubMed advanced search menu, and the results that appeared were
53 154 selected and exported to Endnote.
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58 155 In addition, using a comprehensive strategy, we searched for published evidence and included
59 156 it in this study. A variety of literature, including peer-reviewed articles and grey literature,
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3 157 were retrieved. In the PubMed advanced search, we used MeSH terms such as intimate
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5 158 partner violence, women, HIV, Africa, domestic violence, and focused on dates of
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7 159 publication after 01 January 2009.

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9 160 In addition to PubMed, we used MEDLINE with full text via EBSCO host, Google Scholar,
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11 161 Science Direct and Scopus. We found a total of 750 articles from the PubMed search and
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13 162 identified 128 additional records through other sources. We completed the search on 08 April
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15 163 2019 (**supplementary file 1**).

164 **Stage three: Study selection**

165 **Screening**

166 In our search strategy, we piloted to check the appropriateness of the selected electronic
167 databases and the keywords we decided to include. The principal author conducted title
168 screening, and two reviewers conducted the abstract screening independently. The purpose of
169 the title screening was to assess the titles for eligibility and to remove duplicates. We created
170 an Endnote library to which all the eligible titles were exported. We removed any duplicates
171 before the screening of the abstract. Relevant articles based on the inclusion criteria of the
172 scoping review were selected.

173 The independent reviewer abstract screening was to minimise reporting bias [18]. Moreover,
174 we undertook the full-text article screening independently, based on the eligibility criteria.
175 We contacted the authors for the articles that were not available electronically and requested
176 these be sent to us directly. During the full article retrieval, we used the University of
177 KwaZulu-Natal library. When a disagreement arose between the two reviewers, a third
178 reviewer made the decision. We presented the update of the findings by using a preferred
179 reporting items for systematic reviews and meta-analyses (PRISMA) chart.

180 **Quality assurance of the study**

181 To determine the methodological quality, we adapted and used the Mixed Methods Appraisal
182 Tool (MMAT) 2018 version to evaluate each review [19]. Additionally, we used the
183 preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P)
184 2015 and preferred reporting items for systematic reviews and meta-analyses extension for
185 scoping reviews (PRISMA-ScR) checklists to check whether the recommended items were
186 included or not [20,21]. During analysis, we reviewed the checklist of the consolidated

187 criteria for reporting qualitative research (COREQ), a 32-item checklist for interviews and
188 focus group discussions [22].

189 **Stage four: Charting the data**

190 We used the data charting table (Table 3) to extract the necessary background information
191 and to extract information from each selected study. We used an Excel spreadsheet for the
192 data charting. This form highlighted essential ideas regarding the variables from the
193 background and included the research questions which were addressed by the variables and
194 the themes. Two reviewers jointly developed the data charting form to decide which variables
195 to extract, which they charted independently. We continuously updated the data charting form
196 during the duration of the study.

197 **Data items:** We abstracted data on the article characteristics (e.g. year, country of origin),
198 aim of the study, IPV and population (HIV-positive women), sample size, age group, and the
199 study design.

200 Table 3: Data charting table

Author & year	Country	Study aim	Population	Sample Size	Age group (years)	Study design
Ashaba et al., 2017 [23]	Uganda	To explore psychosocial challenges experienced by women living with HIV	Women	20	22–40	Qualitative
Bernstein et al., 2016 [24]	South Africa	To assess the prevalence and correlates of IPV among HIV-infected pregnant women	Women	623	18–44	Cross-sectional
Lauren et al., 2017 [25]	South Africa	To measure how IPV impacts women's safety following mobile HCT diagnosis	Women	255	18+	Clinical trial
Colombini et al., 2016 [13]	Kenya	To explore women's experiences of IPV risks following disclosure to their partner	Women	30	15–49	Qualitative
Conroy et al., 2016 [26]	Uganda	To examine the association between relationship power and sexual violence	Women	307	19–75	Cross-sectional
Emusu et al., 2009 [27]	Uganda	To explore the experiences of sexual violence among women in HIV-discordant unions	Women	26	Not mentioned	Qualitative
Ezeanochie et al., 2011 [28]	Nigeria	To evaluate the prevalence and correlates of IPV among HIV-positive women	Women	305	21–43	Cross-sectional
Ezechi et al., 2009 [29]	Nigeria	To determine the prevalence, types and correlates of IPV	Women	652	<20–≥40	Cross-sectional
Fiorentino et al., 2019 [30]	Cameroon	To assess the prevalence and factors of IPV against HIV-	Women	894	≥21	Cross-sectional

		positive women and its relationship with ART interruption \geq 1 month				
Hampanda et al., 2016 [31]	Zambia	To determine how IPV against HIV-positive women affects safe infant feeding practices	Women	320	18+	Cross-sectional
Hampanda et al., 2018 [32]	Zambia	To advance the current understanding of the relationship between IPV against women and their HIV status disclosure behaviours	Women	320	18+	Cross-sectional
Iliyasu et al., 2016 [33]	Northern Nigeria	To assess prevalence and risk factors of domestic violence among HIV-positive women	Women	300	18–70	Descriptive & cross-sectional
Malaju et al., 2013 [34]	Ethiopia	To assess women's expectations of their partner's violence on the disclosure of the HIV test	Women	400	15–49	Cross-sectional
Colombini, 2015 [35]	Swaziland	To explore the risks of experiencing IPV after HIV infection among women with HIV	Women	19	18–44	Qualitative
Olowookere et al., 2015 [36]	Nigeria	To assess the prevalence and correlates of IPV among women living with HIV/AIDS in an antiretroviral clinic in Nigeria	Women	360	18+	Cross-sectional
Chinwe, 2017 [37]	Kenya	To examine SV against HIV-positive women enrolled in HIV care in Kenya	Women	25	18+	Qualitative
Osinde et al., 2011 [38]	Uganda	To measure the prevalence and factors associated with IPV among HIV-infected women	Women	317	15+	Cross-sectional
Wilson et al., 2016 [39]	Kenya	To assess the prevalence and correlates of IPV in the past year by a regular male partner in HIV-positive female sex workers in Mombasa, Kenya	Women	357	18+	Cross-sectional
Young et al., 2018 [40]	Uganda	To examine physical and sexual IPV prevalence and correlates among WLWH in Uganda	Women	455	18+	Cohort
United Nations Educational, Scientific & Cultural Organization, 2013 [41]	Tanzania	To discuss the links between gender-based violence (GBV) and HIV and AIDS in conflict and post-conflict situations in the Great Lakes Region	Women	N/A	N/A	Workshop report
Matseke et al., 2016 [42]	South Africa	Intimate partner violence among HIV positive pregnant women in South Africa	Women	673	18+	A clinic-randomised, controlled trial

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202 Stage five: Collating, summarising and reporting the result

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3 203 We undertook qualitative data analyses using NVIVO software 12 to collate, summarise, and
4 204 report the results. Firstly, the researchers read and reread the articles thoroughly, noting down
5 205 the initial ideas to find codes. The notable features of the data across the entire article were
6 206 systematically coded, and data relevant to each code was collated. We then developed the
7 207 codes into potential themes and finally defined and named the themes and produced the
8 208 report [43]. We used the description of the coding tree and thematic content analysis to
9 209 analyse the data. We extracted and coded the data that were related to the IPV experience
10 210 among HIV-positive women, identified the emerging themes and then coded the data
11 211 according to these themes. The analysis process used the following steps 1) Coding data from
12 212 the selected articles 2) Categorising the codes into themes 3) Displaying the data 4)
13 213 Identifying key patterns in the data and the sub-themes 5) Summarising and synthesising.

23 214 **Stage six: Consultation**

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25 215 We held consultations with the stakeholders, such as policymakers (two), clinicians (three),
26 216 patients (five), and families (two), in addition to other appropriate groups who researched
27 217 IPV, in order to obtain more references and to provide insights on what the literature failed to
28 218 highlight [44]. Moreover, these consultations helped in mapping the evidence of the existence
29 219 of physical, emotional, and sexual violence among HIV infected women. The talks helped to
30 220 gain further insight into IPV.

36 221 **Results**

39 222 **Screening results**

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41 223 We found 750 articles in the original data search. A total of 159 publications remained after
42 224 we removed duplicates and other unrelated topics. A hundred and thirty-six (136) articles
43 225 were excluded, which did not meet our inclusion criteria, and 23 items were included for full-
44 226 text screening. After the full-article screening, we excluded two studies, providing reasons for
45 227 this, and a final 21 articles remained from which to extract data (**Figure 1**).

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51 228 **[Insert Figure 1]:** Figure 1: The PRISMA 2009 flow diagram to update screening

53 229 **Characteristics of the included studies**

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55 230 Out of the 21 included studies, 20 were published in peer-reviewed journals [13,23-40,42],
56 231 while the remaining one was categorised as grey literature [41]. From the included studies, 12
57 232 were quantitative and cross-sectional in nature [24,26,28-34,36,38,39], five were qualitative
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3 233 [13,24,27,35], two was a clinical trial [25,42], one was a cohort design [40] and the
4 234 remaining one was grey literature (a conference discussion report) [41] (**Figure 2**).

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7 235 **[Insert Figure2]:** Figure 2: Distribution of study designs used in the study (n=21)

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10 236 Out of the 21 studies, five were conducted in Uganda [23,26,27,38,40], four in Nigeria
11 237 [28,29,33,34], three in Kenya [13,37,39], two in South Africa [24,25], two in Zambia [31,32],
12 238 one in Ethiopia [34], one in Cameroon [30], one in Tanzania [41], and the remaining one in
13 239 Swaziland [35] (**Figure 3**).

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18 240 **[Insert Figure 3]:** Figure 3: Distribution of countries represented in the included studies
19 241 (n=21)

20 21 22 242 **Study findings**

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24 243 Four themes emerged from the identified studies: evidence of IPV experience among women
25 244 with HIV/AIDS, evidence of HIV/AIDS status disclosure influencing IPV, evidence of the
26 245 association of socio-demographic characteristics with IPV, and implications for future
27 246 practice.

28 29 30 31 247 **Evidence of intimate partner violence experience among women with HIV/AIDS**

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34 248 We found evidence of IPV experience from almost all of the 21 included studies in the 11
35 249 countries in the Sub-Saharan African region [13,23-42]. The prevalence of IPV varied among
36 250 countries; we identified the highest prevalence of IPV in South Africa (67.3%) [25] and the
37 251 lowest prevalence in Kenya (14.6%) [39]. Intimate partner violence was also identified in
38 252 Nigeria (65.8%) [29], in South Africa, overall, 56.3% reported having experienced either
39 253 psychological or physical IPV[42],Uganda (29%) [40], another study in South Africa, (21%)
40 254 [24], Nigeria, (23.6%) [36], Kenya, nearly one-third of women in the study [13], Cameroon
41 255 (23%) [30], Nigeria (22.1%) [33] and Uganda (29.3%) [38]. On average, one-third (30.2%)
42 256 of HIV-positive women experienced IPV among the included studies. Psychological,
43 257 emotional or verbal abuse was the most common form of violence reported among HIV-
44 258 positive women and ranged from 12.1% to 51.7% [28-30,36,38]. One study showed that
45 259 physical violence had a more pronounced effect on status disclosure than sexual or emotional
46 260 violence [32]. Sexual violence was found to be the least common type of abuse among HIV-
47 261 positive women, ranging from 2% to 44.8% [24,29,30,36].

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3 262 Three studies showed evidence of further abuse following IPV, such as the difficulty of
4 263 engaging in HIV/AIDS care, interruption of ART adherence, partner stigma and abuse, and
5 264 financial withdrawal [13,23,30]. There was also evidence showing that physical weakness,
6 265 economic and social dependence on a partner and alcohol abuse by a male partner were the
7 266 leading causes of IPV [27,41].

267 **Evidence of HIV/AIDS status disclosure influencing IPV**

15 268 Evidence of IPV after HIV/AIDS status disclosure was reported from six studies [29,32-36].
16 269 Following the sero-disclosure, there was evidence of heightened risk for IPV, stigma, abuse,
17 270 marriage disruption, and financial withdrawal [13,23,29,30,33,34]. Evidence from one study
18 271 showed about 74% of abuse coming after HIV/AIDS status disclosure [29]. However, some
19 272 studies found that sero-concordance is protective of emotional or verbal abuse [13]. Women
20 273 who had their own income, those who did not have a stigmatising attitude towards people
21 274 living with HIV/AIDS, those who had attained secondary level education and above, those
22 275 with a positive attitude towards counsellors, and those able to access health facilities were all
23 276 associated with positive partner reaction [34]. On the other hand, having an HIV-negative
24 277 spouse and disclosure of HIV/AIDS status was associated with abuse [29].

25 278 Studies also explored the expectation of adverse reactions related to HIV/AIDS in the
26 279 community, including gossip and discrimination [23,34]. Evidence even existed that some
27 280 women did not disclose their HIV/AIDS status because of expected fear of rejection, abuse
28 281 and anticipated loss of trust from their partner [23,29,41]. For instance, studies showed that
29 282 some women kept their HIV serostatus a secret to prevent an adverse reaction [23,41]. One
30 283 study also presented evidence of early mixed feeding following the disclosure of an HIV-
31 284 positive status [31]. Findings show that physical violence is the most prevalent form of IPV
32 285 that occurs after status disclosure rather than sexual abuse [32].

286 **Evidence of the association of socio-demographic characteristics with IPV**

33 287 We found evidence of socio-demographic characteristics which were associated with IPV in
34 288 four studies [33,36,38,40]. One study identified that older age groups of women, those >40,
35 289 were at risk for IPV [33]. Contrary to this, a study in Uganda showed that being older was
36 290 associated with a lower risk for IPV [40]. Similarly, one study in Nigeria showed that
37 291 younger partners (20–39) were more at risk for IPV [36].

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3 292 A study from Nigeria showed that multiparity, being a respondent with an HIV-positive
4 293 child, and marital status (divorced women) were associated with IPV [33]. However, a study
5 294 in Uganda showed that being married was associated with a higher risk of IPV [40].
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9 295 Two studies revealed that non-formal education of husbands (i.e. lack of education) was
10 296 associated with IPV [28,33]. Contrary to this, a study in rural Uganda showed that there was
11 297 a significant, but inverse, the association between educational level and physical partner
12 298 violence [38]. There was also an inverse association between the educational level of the
13 299 respondent and sexual/psychological abuse, as well as psychological/sexual violence [38].
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18 300 Only one study from Uganda reported that a higher household asset index score was
19 301 protective from IPV [40]. The socio-demographic factor of alcohol abuse by male partners
20 302 was an essential factor associated with IPV among HIV-positive women [27,36,39].
21 303 Additionally, IPV was associated with the experience of violence before women had an HIV-
22 304 positive diagnosis [28]. Moreover, a Ugandan study reported that the use of ART was
23 305 associated with an increased prevalence of IPV [38]. One study result also showed that
24 306 women experiencing controlling behaviour by the index partner was associated with IPV
25 307 [39].
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32 33 308 **Implications for future practice**

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35 309 Evidence from four studies indicated that the prevention of IPV is through the integration of
36 310 partner violence identification and care into other healthcare services (sexual and
37 311 reproductive services and services such as HIV testing and counselling) [13,26,28,32]. A
38 312 study in Uganda recommended the integration of various stakeholders, including partners,
39 313 family, policymakers, community members and funders and program implementers who
40 314 could work together to prevent IPV [23].
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47 315 Healthcare workers (HCWs) should ensure safe disclosure to avoid post-disclosure abuse.
48 316 Safe disclosure, including couple counselling, mutual disclosure between partners, separate
49 317 counselling sessions for men, and facilitated disclosure were recommendations [13,23,35]. A
50 318 study also reported that HIV/AIDS counsellors should evaluate the advantages and
51 319 disadvantages of status disclosure among women [32]. Furthermore, a Zambian study
52 320 indicated that IPV prevention required training counsellors to facilitate discussions with
53 321 women about IPV [32]. Moreover, evidence from two studies showed the importance of
54 322 ensuring that women's decisions to disclose their HIV serostatus are fully informed and
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3 323 voluntary [13,32]. Evidence from five studies reported that routine screening for IPV to
4 324 identify abused women during HIV/AIDS care services is necessary [24,28,30,38,40].
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6 325 Furthermore, evidence from a Ugandan study also highlighted that HCWs should inform
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8 326 HIV-discordant couples appropriately on their reproductive options and referral systems and
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10 327 link couples with counselling services on sexual violence [27].
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13 328 A study also proposed a way forward by improving public awareness and family counselling
14 329 as a strategy of IPV prevention [35]. Four studies recommended that promoting gender
15 330 equity, empowering women economically, as well as promoting positive masculinities that
16 331 support and protect women are measures to prevent IPV [23,26,35,45]. Moreover, two
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18 332 studies reported the involvement of males in programs of IPV prevention [23,35].
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22 333 **Discussion**

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25 334 This scoping review was aimed at mapping the evidence of IPV against women living with
26 335 HIV/AIDS in SSA. It revealed evidence of IPV experience among women with HIV/AIDS,
27 336 how HIV/AIDS status disclosure influences its prevalence, and proof of the association of
28 337 socio-demographic characteristics with IPV. The implications for future practice and
29 338 recommendations were also made evident.
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34 339 The experience of IPV varies among SSA countries. On average, 30.2% of HIV-positive
35 340 women had experienced IPV. This overall finding corresponds to the results of Ugandan and
36 341 Kenyan studies [13,38,40]. Of the types of IPV, emotional abuse was the most common form
37 342 of violence reported among HIV-positive women [28-30,36,38]; sexual violence was found
38 343 to be the least common type of abuse among HIV-positive women [24,29,30,36]. As a result
39 344 of this type of violence, women delayed accessing ART for fear of further violence,
40 345 experienced denial of healthcare or discrimination in healthcare settings, employment,
41 346 education, housing and enforced HIV testing [6,7,41]. In light of these findings, studies
42 347 highlighted strategies to protect women from IPV by the integration of violence identification
43 348 and care into other healthcare services (sexual, reproductive, and HIV/AIDS-related services
44 349 such as HIV testing and counselling services) [13,26,28,32]. It was suggested that the
45 350 integration of the family, policymakers, community members, as well as funders and program
46 351 implementers in gender-based violence prevention programs, were a way forward [23].
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57 352 The WHO data in 2018 showed that 25.7 million people are living with HIV/AIDS in Africa
58 353 [46], indicating that HIV/AIDS continues to be one of the significant causes of disease
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3 354 burden in SSA [46, 47], causing substantial health problems in the region. However, studies
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5 355 have highlighted that the effect of the HIV/AIDS epidemic varies in different countries of
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7 356 SSA [47]. Significant to this study, research in Africa has also shown that there is a strong
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9 357 association between HIV infection and IPV [48]. This relationship between the two health
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11 358 problems is complex and iterative [49]; because of this, countries with a high HIV/AIDS
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13 359 prevalence, for instance, South Africa and Nigeria, account for a high prevalence of violence
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15 360 (67.3%) [25] and (65.8%) [29] respectively. The studies in this review included countries
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17 361 with a varying range of HIV/AIDS prevalence; as reported in 2016, these were Swaziland
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19 362 (27.2%), South Africa (18.9%), Zambia (12.4%), Uganda (6.5%), Kenya (5.4%), Tanzania
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21 363 (4.7%), Cameroon (3.8%), Nigeria (2.9%) and Ethiopia (1.1%) [50]. Moreover, IPV can itself
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23 364 also be both a risk factor for and a consequence of HIV/AIDS [51]. Therefore, IPV needs safe
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25 365 monitoring, screening and intervention among HIV-positive women in healthcare settings
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27 366 [49].

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29 367 Evidence of IPV following HIV/AIDS status disclosure was found in nine studies reviewed
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31 368 [13,23,30,29,32-36]. If our study had searched only for the effect of HIV/AIDS disclosure
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33 369 without IPV, more evidence of the consequences of HIV/AIDS status disclosure could have
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35 370 come to light. Moreover, stigma, abuse, marriage disruption and financial withdrawal were
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37 371 evident consequences of HIV test result disclosure [13,23,29,30,33,34]. Therefore, there is a
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39 372 need for safe disclosure such as couple counselling, mutual disclosure between partners,
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41 373 separate counselling sessions for men, and facilitated disclosure [13,23,35]. One study also
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43 374 reported that HIV/AIDS counsellors should evaluate the advantages and disadvantages of
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45 375 status disclosure among women [32]. The Zambian study suggested training counsellors to
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47 376 facilitate discussions with women about IPV [32]. Moreover, evidence from two studies
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49 377 showed that ensuring women's fully informed and voluntary decision making to disclose their
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51 378 HIV/AIDS serostatus is required [13,32].

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53 379 A study in Uganda showed that the socio-demographic status of being married was associated
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55 380 with a higher risk of IPV [20]. Another type of marital status, such as being divorced, was
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57 381 also associated with IPV in another context [12]. Hence, the prevention strategy for IPV
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59 382 should be emphasised for both married and divorced women. Age could also be a risk factor,
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383 depending on the country. A study in Zimbabwe identified that older women, >40 years, were
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385 at increased risk for IPV [12]. Contrary to this, a study in Uganda showed that older age
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represented a lower risk for IPV [20]. Corresponding with this, a survey in Nigeria showed
that younger partners (20–39) were at increased risk of IPV [15]. However, from these

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3 387 findings, we realised that violence could affect all age groups; hence the importance of
4 388 improving public awareness and providing family counselling as a strategy for IPV
5 389 prevention [14].
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9 390 Women who are living with HIV/AIDS not only experienced with IPV but also other type of
10 391 violence/stigma/discriminations. A study in South Africa showed that higher levels of
11 392 depressive symptoms and greater perceived stigma were associated with physical and
12 393 psychological IPV[42]. It also showed that psychological IPV and physical IPV were also
13 394 individually associated with high perceived stigma and higher levels of depressive
14 395 symptoms[42].
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20 396 Studies revealed that other socio-demographic aspects, such as higher household asset value
21 397 were protective against IPV [40]. To this end, promoting gender equity, and empowering
22 398 women economically, as well as promoting positive masculinities that support and protect
23 399 women should be considered to protect against IPV [23,26,35,39]. Concerned bodies are also
24 400 aware that traditional masculine norms, for instance, aggressiveness and male suppression of
25 401 emotional vulnerability, can lead to physical violence [52]. Moreover, a male partner's heavy
26 402 drinking and aggressive behaviour, that men believe to be an accepted norm of masculinity
27 403 lead to violence [53]. Hence, wise disclosure of HIV/AIDS status assisted by healthcare
28 404 workers, mutual disclosure, and involving males in programs for IPV prevention is advisable.
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37 405 Health systems should address violence because of its significantly harmful effects on
38 406 women's health and well-being, including their mental, sexual and reproductive health [54].
39 407 Intimate partner violence seems to be a preventable health problem. Thus the health system
40 408 needs to develop a response that can provide women with a multisectoral and women-centred
41 409 response providing privacy, confidentiality and accountability, empowerment of women's
42 410 decision making, and immediate assistance in a holistic way [54].
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48 **Strengths and limitations**

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50 412 We used an approved MMAT tool to check the quality of appraisal of the included studies.
51 413 We also used public health and social science databases for title screening. By doing so, we
52 414 obtained all relevant published studies; however, we could have found additional pertinent
53 415 articles if other bibliographic databases had been searched. Other terms, rather than the
54 416 keywords we searched, could have existed in a different database. In our search, we included
55 417 articles published in the English language only; therefore, we may have missed critical points
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3 418 published in studies presented in another language. Furthermore, this scoping review was a
4
5 419 huge undertaking, and it only includes results up to the date of 10 April 2019.
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8 420 **Conclusion**

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10 421 Overall, this scoping review provides a summary of the existing literature showing the
11 422 evidence of IPV experiences among women with HIV/AIDS. We found evidence of IPV
12 423 experience from almost all of the studies included. On average, one-third (30.2%) of HIV-
13 424 positive women experienced IPV among the included studies. Psychological, emotional or
14 425 verbal abuse was the most common form of violence reported among HIV-positive women.
15 426 Furthermore, two other relevant categories of evidence reviewed are the negative influence of
16 427 HIV/AIDS status disclosure on IPV and the association of socio-demographic characteristics
17 428 with IPV and what the resulting implications are for practice. Psychological and emotional
18 429 abuse were the most common form of violence reported. Sexual violence was found to be the
19 430 least common type among HIV-positive women. The review showed the difficulty of women
20 431 who experienced IPV in engaging in HIV/AIDS care, the interruption of their ART treatment,
21 432 and that stigma, abuse, and financial withdrawal were some of the consequences that
22 433 followed from IPV. As this review has shown, IPV was associated with HIV/AIDS status
23 434 disclosure and having an HIV-negative spouse was a risk factor for IPV. In particular, there is
24 435 evidence of a heightened risk for partner violence, shame, abuse, marriage disruption, and
25 436 financial withdrawal following serostatus disclosure.
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39 437 Therefore, the review highlighted the need for strategies such as the integration of IPV
40 438 screening and care into other healthcare services (sexual, reproductive and HIV/AIDS
41 439 services). Moreover, safe disclosure such as couple counselling, mutual disclosure between
42 440 partners, separate counselling sessions for men, and facilitated disclosure is vital. The review
43 441 has also emphasised routine screening for IPV to identify abused women attending
44 442 HIV/AIDS care services. Most importantly, there is a need for further research among special
45 443 population groups and on health systems barriers to screening for IPV and for a focus on how
46 444 victims are treated.
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53 445 **Recommendations for future research**

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55 446 For future research, we suggest investigating the differences and similarities of the IPV
56 447 experiences for women living with or without HIV/AIDS and the associated factors in the
57 448 different regions of the various countries in SSA. The lived experience of women, both living
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3 449 with and without HIV/AIDS, and the HCW's experience of IPV screening and its barriers still
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5 450 need to be further studied.

6 7 451 **Acknowledgements**

8
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12
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16
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18 19 457 **Contribution**

20
21 458 MM: Conceived the topic and drafted the study as part of his PhD study; he was involved in
22
23 459 the design and analysis. **NK** and **MT**: Supervised and guided the review, engaged in the
24
25 460 design, analysis and revisiting of the manuscript critically for relevant intellectual content.
26
27 461 All three authors read and approved the final manuscript. MM, NK and MT agreed to be
28
29 462 accountable for all aspects of the work.

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32
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34
35 465 (UKZN).

36 37 38 466 **Patient and public involvement**

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40 467 We didn't let the patient and/or public to involve in the design, reporting, or dissemination
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42 468 plans of this research.

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45 469 **Patient consent for publication:** Non-applicable

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47 470 **Ethical approval:** This is a scoping review, and the consent to participate was not applicable.

48
49 471 **Consent for publication:** Not applicable.

50 51 52 472 **Data sharing statement**

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54
55 473 We will share all evidence from our data search and analysis upon reasonable request.

56 57 58 474 **Competing interests**

59
60 475 All authors declare that they have no conflict of interests.

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18 483 KwaZulu-Natal, South Africa.

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44 664 [Insert] Fig1: The PRISMA 2009 flow diagram
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46 665 [Insert]Fig 2: Study design
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48 666 [Insert] Figure 3: Distribution of countries

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For peer review only

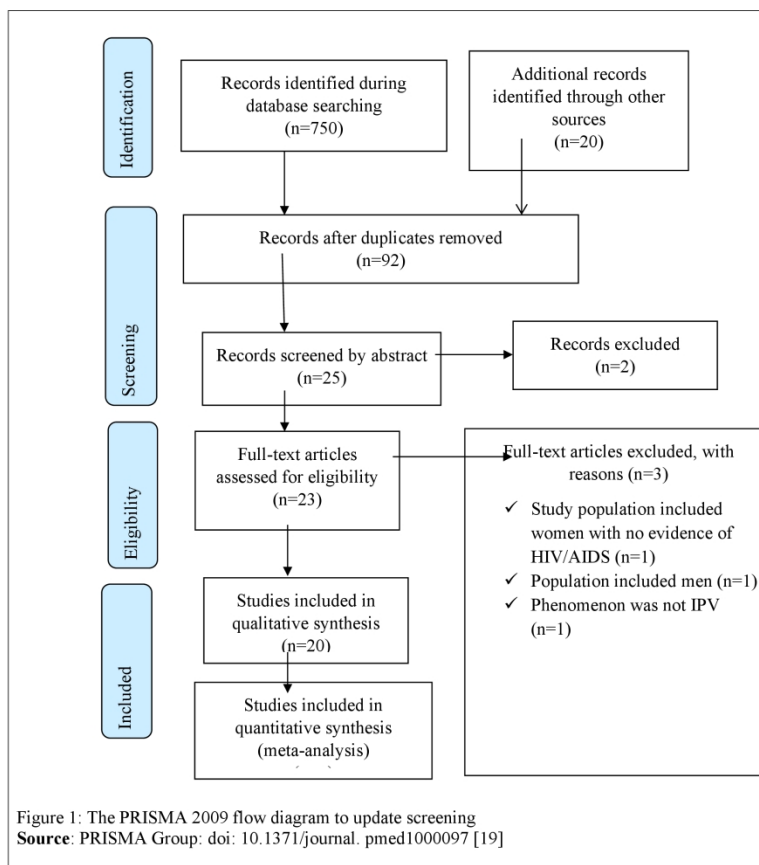


Figure 1

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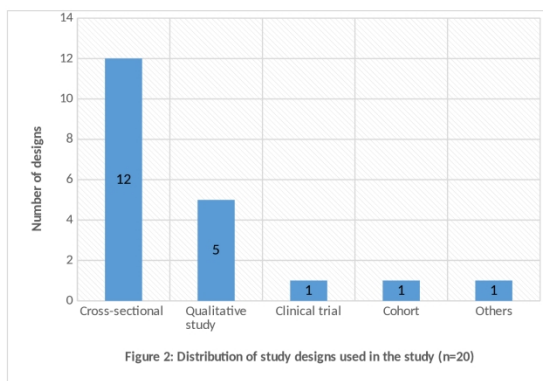


Figure 2

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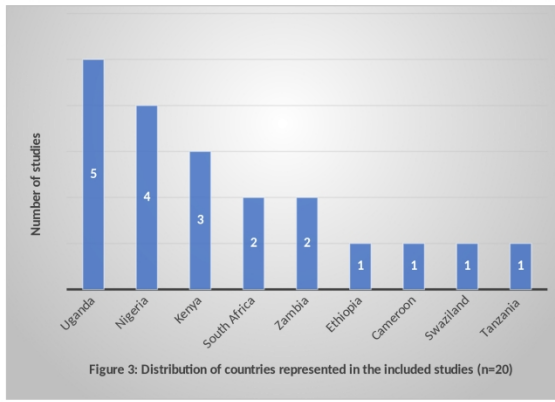


Figure 3

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Supplementary file 1: Search strategy

Population	Concept	Keywords	Date	No.found
Women living with HIV/AIDS	Intimate partner violence	("intimate partner violence"[MeSH Terms] AND "women"[MeSH Terms]) AND HIV[Title] OR "domestic violence"[MeSH Terms] AND "africa"[MeSH Terms] AND ("2009/01/01"[PDAT] : "2019/04/01"[PDAT])	08 April 2019	750

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Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	



SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	
Limitations	20	Discuss the limitations of the scoping review process.	
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: 10.7326/M18-0850.

