ÉDITORIAL

Renforcer les systèmes de données pour promouvoir la santé et les droits sexuels et reproductifs en Afrique subsaharienne

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Le développement de la santé et des droits sexuels et reproductifs (SDSR) en Afrique subsaharienne est fondamentalement entravé par la « pauvreté des données de santé »[1]. Si de nombreux pays à revenu élevé ont réalisé des progrès significatifs dans le renforcement de leurs systèmes de données de santé, l'Afrique subsaharienne continue de faire face à d'importantes lacunes[1–3]. Malgré le besoin crucial de pratiques fondées sur des données probantes, le paysage régional des données est caractérisé par une méconnaissance généralisée de la valeur intrinsèque de données exactes. De nombreux pays de la région ne disposent pas de recensements de population réguliers, de dossiers de santé fiables ni de systèmes fonctionnels d'état civil et de statistiques vitales.

L'exactitude des données est souvent compromise par une réticence profondément ancrée des populations à fournir des informations personnelles. Dans de nombreux contextes africains, les tabous culturels, les croyances religieuses et la méfiance envers les « étrangers » entraînent des taux de refus élevés lors des enquêtes menées auprès des ménages et dans les établissements de santé. Par exemple, une étude menée en Afrique du Sud a mis en évidence comment des femmes peuvent refuser de parler de santé reproductive en raison d'une opposition religieuse ou par crainte d'être jugées par les chercheurs[4]. Les données sont parfois sujettes à la falsification et au biais de désirabilité sociale. Les personnes interrogées « apprennent » souvent à répondre de manière à minimiser la longueur des questionnaires, par exemple en déclarant moins de partenaires sexuels pour éviter les questions complémentaires.[5]

Plus grave encore, la crainte de répercussions juridiques ou sociales conduit à la dissimulation active d'informations sensibles par les individus et les établissements de santé. Des personnes ont déclaré avoir menti sur leur statut sérologique ou sur les violences sexistes qu'elles ont subies par crainte d'une intervention policière ou de la stigmatisation sociale.[4]

Même lorsque des données sont disponibles, on observe une minimisation et une non-utilisation systématiques des informations factuelles pertinentes pour la prise de décision et la planification stratégique. L'institutionnalisation du suivi fondé sur les données demeure faible et les plans annuels sont souvent élaborés sans tenir compte des informations sanitaires courantes.[6] Dans de nombreux cas, la planification fondée sur des données probantes est supplantée par l'ingérence politique et le népotisme, où les intérêts politiques — plutôt que les données empiriques — déterminent quels programmes de santé sont mis en œuvre et qui est nommé pour les diriger.[7] Sans s'attaquer à ces barrières culturelles et structurelles, les systèmes de données continueront de produire des informations de mauvaise qualité qui ne permettront pas d'améliorer significativement les résultats en matière de santé sexuelle et reproductive dans la région.[1,8]

Depuis la Conférence internationale sur la population et le développement (CIPD) du Caire en 1994 et jusqu'aux Objectifs de développement durable (ODD) pour 2030, la santé sexuelle et reproductive est reconnue comme un droit humain fondamental.[9–11] Ce droit est désormais inscrit dans les politiques nationales de santé et les cadres juridiques de nombreux pays.

Le droit à la santé sexuelle et reproductive comprend l'accès à la contraception, aux soins de fertilité et d'infertilité, aux services de santé maternelle et périnatale, à la prévention et au traitement des infections sexuellement transmissibles, à la protection contre les violences sexuelles et sexistes, et à l'éducation à des relations saines et sans risque.[12] comprend également le droit à l'information et la capacité de faire des choix éclairés concernant sa vie reproductive.

Lorsque cet accès est retardé ou refusé, les conséquences peuvent être graves, notamment le décès, un handicap permanent et des difficultés socio-économiques. Pour que ces droits se concrétisent, les systèmes de santé ont besoin de systèmes de données robustes. Des données précises, actualisées et

REVIEW ARTICLE

A systematic review of unintended pregnancy among adolescents living with HIV in Africa

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Abstract

Adolescent pregnancy remains a significant public health concern across Africa, with Eastern and Southern regions experiencing the highest burden. Among adolescents living with HIV(ALHIV), the challenge is intensified by socio-economic, cultural, and healthcare factors that increase vulnerability to unintended pregnancy. This systematic review examined the prevalence of unplanned pregnancy and associated factors among adolescents living with HIV in Africa. Following PRISMA guidelines and registered in PROSPERO (CRD42024564479), a search of Medline, EMBASE, and CINAHL identified relevant studies published between 2011 and 2023. Of the 550 retrieved articles, only three met the inclusion criteria. Reported prevalence rates varied widely, ranging from 18.8% in South Africa to 60.0% and 73.9% in Kenya, indicating a substantial and uneven burden across settings. Factors associated with unintended pregnancy included involvement with boyfriends or acquaintances rather than spouses, reflecting limited agency and structural vulnerabilities. Documented adverse outcomes included miscarriage, stillbirth, and abortion, although one study did not specify outcomes. Overall, the review highlights persistently high rates of unplanned pregnancy among adolescents living with HIV and underscores the need to integrate sexual and reproductive health services into HIV care, address stigma, and strengthen context-specific interventions. *(Afr J Reprod Health 2026; 30 [12]:105-114).*

Keywords : Unintended pregnancy, HIV, Adolescents, Africa

Résumé

Les grossesses adolescentes demeurent un problème majeur de santé publique en Afrique, les régions de l'Est et du Sud étant les plus touchées. Chez les adolescentes vivant avec le VIH (AVVIH), ce défi est exacerbé par des facteurs socio-économiques, culturels et liés aux soins de santé qui accroissent leur vulnérabilité aux grossesses non désirées. Cette revue systématique a examiné la prévalence des grossesses non planifiées et les facteurs associés chez les adolescentes vivant avec le VIH en Afrique. Conformément aux directives PRISMA et enregistrée dans PROSPERO (CRD42024564479), une recherche dans Medline, EMBASE et CINAHL a permis d'identifier les études pertinentes publiées entre 2011 et 2023. Sur les 550 articles recensés, seuls trois répondaient aux critères d'inclusion. Les taux de prévalence rapportés variaient considérablement, allant de 18,8 % en Afrique du Sud à 60,0 % et 73,9 % au Kenya, ce qui témoigne d'une prévalence importante et inégale selon les contextes. Parmi les facteurs associés aux grossesses non désirées figurait le fait d'avoir des relations avec des petits amis ou des connaissances plutôt qu'avec des conjoints, reflétant un manque d'autonomie et des vulnérabilités structurelles. Les issues défavorables documentées incluaient les fausses couches, les mortinaissances et les avortements, bien qu'une étude n'ait pas précisé ces issues. Globalement, cette analyse met en évidence des taux toujours élevés de grossesses non désirées chez les adolescentes vivant avec le VIH et souligne la nécessité d'intégrer les services de santé sexuelle et reproductive aux soins du VIH, de lutter contre la stigmatisation et de renforcer les interventions adaptées au contexte. *(Afr J Reprod Health 2026; 30 [12]: 105-114).*

Keywords: Grossesse non désirée, VIH, Adolescentes, Afrique

Introduction

Adolescent pregnancy is a major public health problem across African communities. The prevalence rates in the Eastern and Southern African regions are two times the world average at 92 births per 1,000.[1] Available literature indicates that Sub-Saharan Africa (SSA) suffers the highest adolescent pregnancy rates, with almost 20% of girls being affected.[2] Addressing this issue necessitates an understanding of the underlying factors. These factors include cultural norms, socio-

economic conditions, and limited access to reproductive health education and services.[3]

The interplay of cultural beliefs, healthcare accessibility, and socio-economic circumstances significantly influences adolescent pregnancy rates in Africa. Early marriage, inadequate access to contraceptives, and a lack of comprehensive sexual education all contribute to the vulnerability of young girls.[4,5] Societal expectations and cultural pressures often lead to early pregnancies, further exacerbated by gaps in education and healthcare systems.[6,7] The consequences extend beyond the individual, affecting families and communities by increasing maternal and infant mortality rates. Moreover, unplanned pregnancies can disrupt education, thereby perpetuating cycles of poverty and inequality.[8] The World Health Organisation (WHO) has issued recommendations aimed at reducing unplanned pregnancies among adolescents in developing countries, highlighting the need for improved reproductive health outcomes. [9, 10]

In addition to the challenges of adolescent pregnancy, young girls living with HIV face a unique set of risks that complicate their health and socio-economic status.[8, 11] Despite advancements in the global fight against HIV/AIDS, adolescent girls in Africa experience disproportionately high infection rates, largely due to socio-economic disparities and limited access to healthcare services. Many adolescents grapple with stigma, [12] discrimination, poverty, and barriers to healthcare [13, 14], which hinder their ability to seek treatment and preventive services.[15-17] The intersection of HIV and unplanned pregnancies further complicates their situation, as the health implications for both the mothers and their infants are profound [18]. Unplanned pregnancies among adolescents with HIV[19] can lead to additional health risks, such as complications during pregnancy and childbirth [20-22] which require adequate prenatal care that is often lacking due to stigma, inadequate health education and healthcare infrastructure.[23-25] Addressing these intertwined issues requires a multifaceted approach that not only enhances access to education and healthcare but also empowers adolescents to make informed choices about their sexual and reproductive health.[26-28]

Existing literature on this subject is fragmented, featuring varying methodologies and inconsistent findings.[19], which complicates the development of effective prevention strategies.[29] In this context, a systematic review was essential to bridge the gap in understanding the prevalence and factors associated with unintended pregnancies among adolescents living with HIV (ALHIV) in Africa. This review aimed to appraise the available evidence to provide comprehensive insights into the prevalence, determinants, and associated outcomes of unintended pregnancy in this vulnerable population.

Methods

This systematic review was registered with the International Prospective Register of Systematic Reviews (PROSPERO) under registration number CRD42024564479. The review was conducted per the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.[30]

Eligibility criteria

The systematic review focused on peer-reviewed journal articles from Africa. The papers were included if they: were observational studies in health facilities and communities; involved data collection between January 1, 2011 and December 31, 2023; were written in English; focused on the prevalence of pregnancy, its predictors and outcomes among adolescent girls aged 10 to 20 years living with HIV. Non-peer-reviewed articles, policy reports and grey literature were excluded.

Search strategy

EMBASE, Medline, and CINAHL databases were searched for articles published between January 1, 2011 and December 31, 2023. The reference lists of eligible full texts were searched to retrieve articles missed during the search. The key terms used for the search included "pregnancy", "gestation", “unplanned pregnancy”, "adolescent", "youth”, and HIV and “Human immunodeficiency virus” **(Supplementary File 1).**

Selection of sources of evidence

After retrieving articles from primary sources, they were imported from Endnote into Covidence software for subsequent screening and analysis. Duplicates were removed and the titles and abstracts

of articles were assessed against eligibility criteria. Two reviewers (HM and RK) independently reviewed and screened the titles and abstracts of the articles found in the original search to determine their eligibility for inclusion. Thereafter, the full texts of potentially eligible studies were obtained, and the final selection for inclusion into the review was conducted by the two reviewers. Any discrepancies regarding study inclusion were resolved through discussion or by consulting a third reviewer (EN). A PRISMA flow diagram summarizing the search and study selection process (**Figure 1**). At table containing all included studies has been added **(Table 1)**

Quality assessment and risk of bias

The methodological quality of papers to include in the review was assessed using a slight adaptation of the checklist for critically appraising prevalence studies from Joanna Briggs Institute **(Supplementary File 2).** Critical appraisal of the articles was conducted by two reviewers who were independent of each other **(Supplementary File 3).** The reviewers then discussed the results of their critical appraisal for their final appraisal. Any disagreements were resolved through discussion or by consulting a third reviewer if the discussion failed to resolve the disagreement.

Data extraction

Data from the included studies were extracted two independent reviewers (HM, RK) using an adapted data extraction tool that was developed by HM and reviewed by RK. The adapted extraction tool was used in both the initial stages of study screening (to confirm study relevance) and selection and the later phase of data extraction from the selected studies. The customized data extraction tool was used to collect relevant information on the (1) key study characteristics (e.g., Title, author, publication year, number of participants, study design, country, patient population characteristics) and (2) detailed information on the study context and population and (3) prevalence of pregnancy in the population, factors associated and outcomes. Disagreements on study selection and data extraction was resolved by consensus between the two reviewers, failure to which a third author arbitrated. Prior to use, the extraction form was piloted on at least two studies identified randomly from the list of included studies to ensure uniformity among the two independent reviewers.

Quantitative data analysis and synthesis

Data from all included studies were compiled in an Excel (Microsoft Corporation) and synthesized into two different tables in line with the two objectives of the review: determining the prevalence of unintended pregnancies among adolescents living with HIV in Africa and assessing the contributing factors to unintended pregnancies and outcomes among adolescents living with HIV in Africa. Following a thorough article screening process, a small number of studies were obtained for data extraction therefore a meta-analysis was not performed.[31]

Ethical approvals

Ethical approval for the study was obtained from the London School of Hygiene and Tropical Medicine MSc Research Ethics Committee, LSHTM MSc Ethics ref: 30314.

Results

The initial electronic literature search yielded a total of 550 articles. Following the removal of duplicates and review of titles and abstracts, 56 met the eligibility criteria for full article review. Only 3 articles were included for data extraction. (Figure 1).

Features of included studies

The review encompassed three studies that examined the prevalence and contributing factors of unintended pregnancies among adolescents living with HIV in Africa. The studies in this review were done in Kenya and South Africa. They all used cross-sectional designs. The largest study,[5], was conducted in Kenya and included 757 participants. This article reported an increased prevalence of unintended pregnancies at 73.9%. The same study identified significant associated factors, such as pregnancies caused by boyfriends, fiancés, or acquaintances rather than husbands, and noted adverse outcomes including miscarriage, stillbirth, and abortion. In contrast, the study by [32] in South Africa involved 303 participants and found a lower

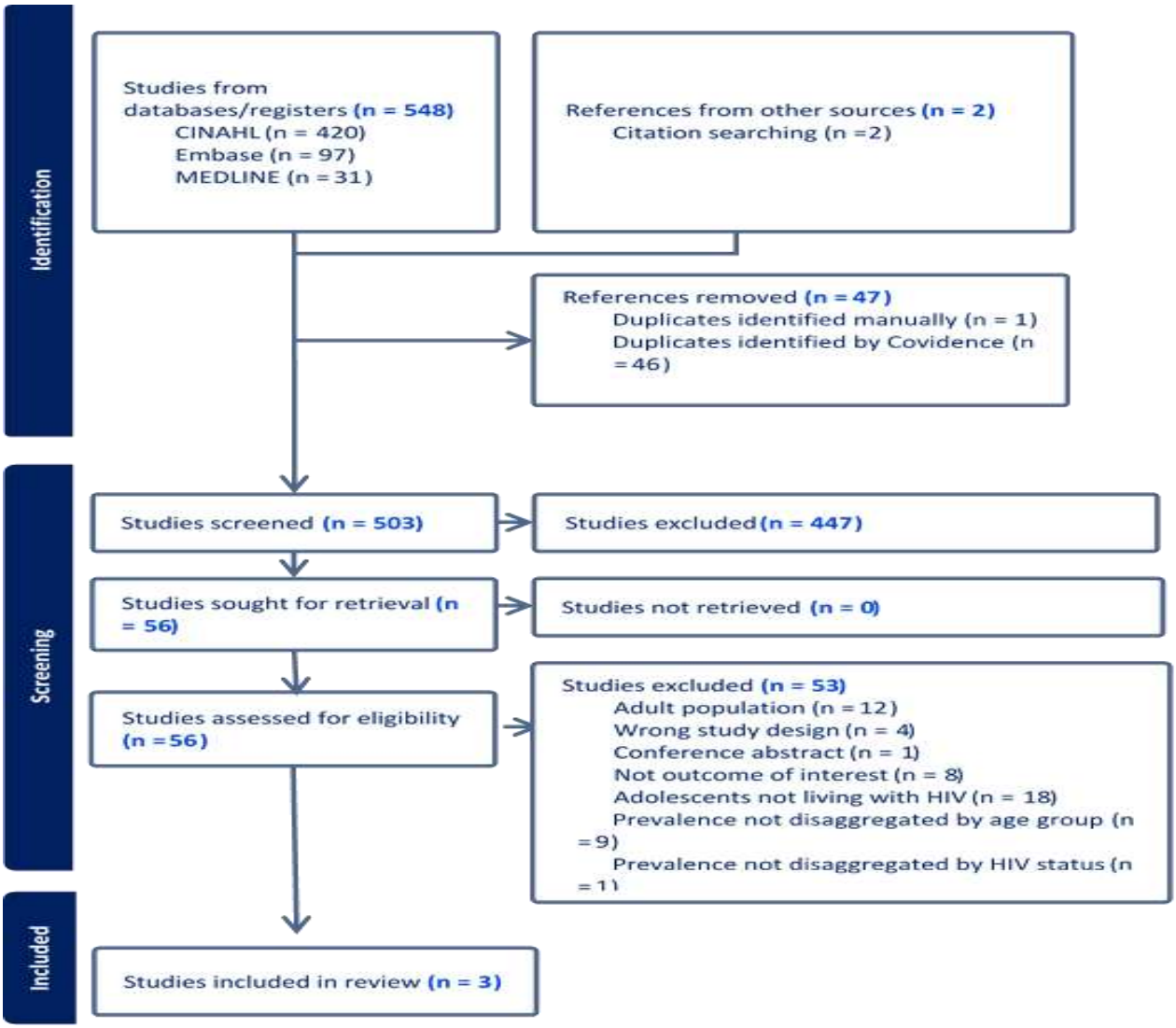

Figure 1: Prisma chart flow showing literature search

prevalence of 18.8%. However, this study did not detail the associated factors or outcomes of unintended pregnancies. Lastly, [33] a study also conducted in Kenya with a sample size of 98, reported a prevalence of 60% but did not provide information on the associated factors. The characteristics of these studies are summarised in Table 1.

Prevalence of unintended pregnancy

The reported prevalence rates across studies ranged from 18.8% in South Africa to 60% and 73.9% in Kenya (Table 1). The study by [5] in Kenya reported the highest prevalence at 73.9%, suggesting that nearly three-quarters of the adolescent girls living with HIV experienced unintended pregnancies. This highlights the critical need for targeted interventions in Kenya to address this public health concern. In contrast, the South African study[32] reported a considerably lower prevalence of 18.8%.

Factors related to unplanned pregnancy

Unplanned pregnancy among teenagers infected with HIV was related to different factors across the papers in this review. Data from the study conducted in Kenya,[5] reported that the involvement of fiancés, boyfriends, or other acquaintances, rather than husbands, in the pregnancy was an important factor contributing to unplanned pregnancy. However, the other two studies[32,33]

Table 1: Summary of studies included in the systematic review.

Reference	Author(s)	Year of Publication	Country	Design	Sample size	Prevalence (%)	Factors associated with unintended pregnancy	Outcomes of unintended pregnancy
[5]	Obare, Francis, Anke van der Kwaak, and Harriet Birungi.	2012	Kenya	Cross-sectional	757	73.9	Boyfriend/fiancé or other persons(friend/acquaintance/stranger) other than husband being responsible for the pregnancy.	Miscarriage, Stillbirth, Abortion
[32]	Olagbuji, Biodun Cooper, Diane Mathews, Catherine Moodley, Jennifer	2022	South Africa	Cross-sectional	303	18.8	Not stated	Not stated
[33]	Awuor, Silas Onyango	2021	Kenya	Cross-sectional	98	60	Not stated	Abortion

included in the review did not explicitly state the factors linked to unplanned pregnancies.

Outcomes of unintended pregnancy

For the articles included in this review, the outcomes of unplanned pregnancy varied. The study conducted in Kenya [5] reported stillbirth, miscarriage, and abortion. Another article from Kenya,[33], reported abortion as the common outcome of unplanned pregnancy among adolescent girls infected with HIV. The article from South Africa [32] did not report outcomes associated with unplanned pregnancy among adolescent girls infected with HIV in this review.

Discussion

This systematic review emphasises the high prevalence, underlying factors, and serious consequences of unintended pregnancy among teenagers infected with HIV in Africa. These findings align with and expand upon existing literature, underscoring the critical challenges faced by this vulnerable population. The reported prevalence rates of unintended pregnancies varied from 18.8%[32] to 73.9%[5] This difference across articles from different countries may be attributed to variations in the study methods, the difference in populations selected for the study, and the accessibility of health facilities that offer sexual and reproductive management for teenagers infected with HIV.[34-36]

A study from Kenya.[5] revealed a high prevalence of unplanned pregnancies among ALHIV, echoing other research that highlights significant challenges in consistent contraceptive access and use for this group. Healthcare access disparities further exacerbate unplanned pregnancy rates in young girls already managing HIV.[37]

In this review, the only aspect that was linked to unplanned pregnancy in young girls infected with HIV was reported in the study done in Kenya.[5] Having boyfriends, fiancés, or other acquaintances, rather than husbands, significantly contributed to being exposed to unplanned pregnancy in this population. Existing literature links limited access to SRH services and socio-economic barriers, such as scarce contraceptive options, insufficient sexual education, and stigma around HIV and adolescent sexuality.[38-40] Additionally, healthcare systems in several African countries are not adequately equipped to provide adolescent-friendly services, further limiting access to ALHIV.[41]

Limited access to SRH services not only increases the likelihood of unplanned pregnancies but also exacerbates negative outcomes, such as unsafe abortions and miscarriage.[39] To reduce unplanned pregnancies among young adolescent girls, particularly those living with HIV, it is critical to enhance SRH services with a focus on accessibility and adolescent-friendly approaches, ensuring these services are inclusive and accessible for all, including key populations. Improved SRH services can significantly support the well-being of young girls by mitigating the risks and consequences associated with unplanned pregnancies.

Insufficient education plays a major role in elevating the occurrence of unplanned pregnancies among teenagers infected with HIV in Africa.[42-44] While the studies included in this review do not identify inadequate education as the determinant of unplanned pregnancy, existing literature indicates that adolescents' lack of crucial knowledge about sexual and reproductive health such as information on contraception and safe sex practices leaves them at greater risk for unintended pregnancies.[45-48] Furthermore, a lack of education exacerbates existing vulnerabilities, such as gender inequality and HIV-related stigma, which further limit adolescents' ability to make informed choices about their sexuality. [40, 46]

This review indicates that the presence of boyfriends, fiancés, or other acquaintances as being responsible for pregnancy is a contributing factor to unwanted pregnancy among ALHIV. This finding suggests the complexity of sexual relationships and the potential lack of stable partnerships among ALHIV, which may contribute to unintended pregnancies. The review emphasises that understanding sexual relationship dynamics, along with the influence of social support and family environment, is crucial in addressing unintended pregnancies among ALHIV, as supportive families can enhance access to reproductive health services. Adolescents from dysfunctional families often lack support for informed sexual health decisions, with studies showing social support is crucially impacts

health outcomes for HIV affected teenagers.[49]Unplanned pregnancies in HIV-positive adolescents across Africa result in serious health risks for both mother and child, as highlighted by the systematic review. Miscarriage, stillbirth, and unsafe abortion are common outcomes of unintended pregnancies among adolescent girls living with HIV (ALHIV). [5] These adverse outcomes are particularly concerning given the immunocompromised status of HIV-positive adolescents, who face increased risks of preterm labour, low birth weight, and maternal mortality due to compromised prenatal care access. [5, 33]The limited availability of safe, legal abortion services also drives a high prevalence of unsafe abortions, a significant health risk that often leads to severe infections, haemorrhage, and even death, as noted in both regional studies and comparative reviews on high-fertility areas within sub-Saharan Africa. [50-52] Furthermore, unplanned pregnancies increase the likelihood of mother-to-child HIV transmission, especially when antiretroviral therapy (ART) is not adhered to consistently, making prenatal ART support vital.[53-55]

Additionally, stigma related to HIV and unintended pregnancy exacerbates mental health issues such as depression and anxiety in ALHIV, often reducing access to social support and essential health services. Addressing these psychosocial and healthcare barriers is crucial for enhancing the well-being of HIV-positive adolescents and reducing adverse pregnancy outcomes. [50, 56]

Implications for policy and practice

The findings of this review have significant implications for both policy and practice. At the policy level, governments and health authorities should prioritise the integration of adolescent-friendly sexual and reproductive health (SRH) services within existing HIV care programs.[57] Policies that support comprehensive sexual education, easy access to a range of contraceptive options, and safe abortion services are critical to reducing unplanned pregnancies among ALHIV.[9, 58] Health policies must also explicitly address stigma reduction, ensuring that both HIV-related and adolescent-specific barriers to care are minimised.[59]

From a practice perspective, healthcare providers should adopt a holistic approach that combines medical care with psychosocial support for ALHIV.[60] Training healthcare workers in adolescent-friendly service delivery can improve communication, confidentiality, and trust, which are essential for encouraging the use of SRH services.[61] Community-based interventions, including parental engagement and peer support programs, can also strengthen social support networks and improve adolescents' ability to make informed sexual and reproductive health choices.[62]

Furthermore, targeted interventions addressing the social determinants of health, such as poverty, education, and gender inequality, are necessary to complement clinical care.[63] Strengthening collaborations between schools, healthcare facilities, and community organisations can enhance access to SRH information and services, empowering adolescents to prevent unintended pregnancies while managing their HIV effectively.[64] By translating these findings into actionable policies and practices, stakeholders can improve health outcomes and overall well-being for this vulnerable population.

Strengths and limitations

This systematic review was conducted according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (**Supplementary File 4**) and has several strengths, including a rigorous, standardised approach and a comprehensive search strategy across reliable databases, enhancing the robustness of findings. The use of independent reviewers and clear inclusion criteria improves credibility by minimising bias.

However, limitations include language bias from excluding non-English studies, the omission of grey literature, potential publication bias, and variability in study designs, settings, and populations, which limit the generalizability of the results. Additionally, the small number of included studies may restrict the depth of conclusions. Nevertheless, the review offers valuable insights into unplanned pregnancies among HIV-infected teenagers.

Conclusion

In conclusion, addressing unplanned pregnancies among adolescent girls with HIV in Africa requires

targeted interventions in sexual health education, contraceptive access, and socio-economic barriers. Continued research will enhance understanding and inform effective strategies, ultimately improving health outcomes for ALHIV and their families.

Recommendations

We recommend an integrated approach to improve access to sexual education, family planning, and HIV services for adolescents, while addressing socio-economic barriers such as poverty, stigma, low education, and limited healthcare access.

Consent for publication

Not applicable

Data availability

The data and materials utilised for this study are shown in the Supplementary files.

Conflict of interest

All authors declare no competing interests.

Authors' contributions

Conceptualisation: MH; Methodology: MH; Formal analysis, M H; FL, writing original draft preparation: MH; Writing, reviewing and editing: FL, CT, RK, HM; Supervision: EN. All authors read and reviewed the manuscript and approved the final version.

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