

Enhancing sexual and reproductive health services uptake in Sub-Saharan Africa: the role of community Pharmacists in promoting self-care interventions: a systematic review

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ABSTRACT

BACKGROUND: Low uptake of sexual and reproductive health (SRH) services is influenced by system-level and socio-cultural barriers. Despite the potential of community pharmacists to offer self-care interventions on SRH, their role remains underutilized in the sub-Saharan Africa (SSA) region due to a lack of guidelines and awareness.

METHODS: A systematic search strategy was employed to identify peer-reviewed articles published in the English language between 2013 and 2023. The search was conducted from January 2023 to June 2023 in Research4life, PubMed, and Cochrane databases. Eligible studies focused on community pharmacists' interventions related to self-testing, self-management of sexually transmitted infections (STIs), self-abortion management, Human Immunodeficiency Virus (HIV), pre- and post-exposure prophylaxis (PrEP and PEP), and self-management of contraception in SSA.

RESULTS: The initial database search produced 7487 articles after removing duplicates, out of which 65 articles were appraised for full-text screening after the title and abstract screening. Ultimately, 11 articles were included in the review, covering selfcare interventions for sexual and reproductive health services, including modern contraceptives, pre-exposure prophylaxis (PrEP), medical abortion pills, and HIV self-testing. The studies highlighted that community pharmacists play a crucial role in offering counseling, education, and faster service delivery, particularly for adolescent girls and young women.

CONCLUSION: Community pharmacists in sub-Saharan Africa contribute in promoting access to, and use of self-care interventions for sexual and reproductive health services. Governments and policymakers should prioritize the development of standardized guidelines to support community pharmacists in delivering quality SRH services

Keywords: Sexual health, Reproductive Health, Community Pharmacist, Selfcare Interventions

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INTRODUCTION

Sexual and reproductive health (SRH) services encompass a wide range of support, including sexual education, safe sex practices, modern contraceptive guidance, testing, treatment for sexually transmitted infections (STIs), as well as safe abortions and post-abortion care [1-3]. While self-care interventions can be defined as instruments that support people's capacity to promote health, prevent disease, maintain health, and deal with illness and disability with or without the assistance of a healthcare professional [4]. The uptake of SRH services in the sub-Saharan Africa (SSA) region was low for a long time; for example, according to data from the United Nations Department of Economic and Social Affairs, the prevalence of modern contraceptive use among women of reproductive age (15-49) in Sub-Saharan Africa was notably low, measuring at 21.1% and 28.5% in the years 2007 and 2019, respectively [5,6]. The region has a high prevalence of unplanned pregnancies, unsafe abortions, untreated sexually transmitted diseases (STDs), as well as increasing cases of new infections, including HIV/AIDS [7].

The root causes of the low uptake of SRH in the SSA are categorized into systemic barriers, including but not limited to: corruption, lack of healthcare facilities, economic weakness, negative attitudes and stigma from some healthcare providers, armed conflicts, lack of awareness, poor quality of the services including lack of privacy and long waiting time, inequality and gender barriers [8-13]. While the individual barriers include socio-cultural barriers of feeling shy and ashamed for unmarried couples, lack of SRH knowledge, both direct and indirect costs, and fear of side effects [14,15]. Civil wars, armed conflicts, and natural threats in many African countries have been a cause of the destruction of infrastructures, including schools and healthcare facilities, which resulted in an increase in humanitarian crisis [16,17], limited accountability and transparency in the public and private sectors due to corruptions [18].

Community pharmacies serve as the most accessible healthcare facilities for the public due to their convenient operational hours, free consultation, and well-trained staff [19-22]. Pharmacists operating in community pharmacy settings, commonly known as community pharmacists, have increased their role from the traditional practice of preparing and dispensing

drugs to the modern pharmacy practice to meet patient expectations [20,23-25]. Thus, various products intended for self-care intervention for SRH, such as self-testing for pregnancy, HIV, and other sexually transmitted diseases, self-sampling kits for human papillomavirus (HPV) and drug products for self-management of STI infections and abortion, drugs for HIV both pre and post-exposure prophylaxis are available in community pharmacies [26]. While self-care interventions can empower individuals and give autonomy about their SRH on the one hand, they reduce reliance on healthcare facilities on the other hand. By empowering individuals to take an active role in managing their sexual and reproductive health, self-care interventions ensure that individuals can access the care they need, even in challenging circumstances when traditional healthcare services may be less accessible, such as during the Covid-19 pandemic [2,10,27,28].

However, Studies consistently show that governments and policymakers often underutilized the potential of community pharmacists in providing SRH services [29,30]. We therefore synthesize evidence to assess the extent and limitations regarding the involvement of community pharmacists in enhancing access to and utilization of sexual and reproductive health services within the Sub-Saharan African countries.

METHODS

We took this review to fill the gap in knowledge on the role of community pharmacists in increasing access to and use of self-care interventions for sexual and reproductive health. According to Levac et al. [31]. We (1) Formulated a research question (2) Identified pertinent studies by adhering to the established protocol and search strategy across the chosen databases, (3) applied predefined criteria to select studies for inclusion, (4) organized data through charting, and (5) we compiled and succinctly summarized the obtained findings, and then we wrote the reports.

Search strategy and inclusion criteria: Rigorous search strategy and Preferred reporting items for systematic reviews and meta-analyses (PRISMA) extension for systematic reviews was employed from January 2023 to June 2023 to identify the studies to include[32]. Research4Life, PubMed, and Cochrane databases were searched using key terms as per Annex 1 for the last ten years (2013

to 2023). Results were exported to Endnote. Then, duplicates were removed by the endnote referencing manager. Only work published in English was considered.

Studies selection: Peer-reviewed papers focused on the community pharmacists' intervention in sexual and reproductive health, based in sub-Saharan Africa, reported on the self-testing of sexually transmitted diseases including HIV, self-sampling of human papillomavirus, self-management of STIs and self-abortion management, HIV pre and post-exposure prophylaxis and self-management of contraception were selected. The first screening of studies focused on titles and abstracts only and was conducted by one author per each of the selected databases. One author per each database also conducted the second screening. The reasons for exclusion were noted for discussion among the three authors, while all authors did the third and last screening together. The work to be included was agreed upon among all authors.

Quality assessment: We used the Joanna Briggs Institute (JBI) tool to assess the quality of each of the studies included in our research [33]. The tool addresses the possibility of bias in the study design, conducts, and data analysis. Each included paper was assessed independently by each author. Then, papers with poor quality were collectively discussed by all authors to determine their inclusion or exclusion.

Data extraction and synthesis: The included study characteristics were first plotted based on the research context: pharmacists' interventions for SRH, the study's objective, the method used, and the findings. We conducted a content analysis of the findings for each included study using an

a priori framework to identify the information regarding the use of self-care interventions for SRH, a region where the study took place, and pharmacists' role, attitudes, and perceptions of the access and use of self-care interventions [34].

RESULTS

The initial database search identified 7,487 articles after removing duplicates; 7,422 articles were excluded during the title and abstract screening phase. The reasons for exclusion included articles that were not original research, written in languages other than English, not relevant to the role of community pharmacists in providing Sexual and Reproductive Health (SRH) services, and studies conducted outside of Sub-Saharan Africa (SSA) countries. Following the initial screening, 65 articles were selected for full-text assessment. Among these, 54 articles were excluded because of unclear methodology (22), not focused on the role of community pharmacists (12), not accessible (4), and not focusing on self-care interventions (16), as shown in figure 1. The remaining articles were included based on predefined eligibility criteria, including relevant population, interventions, context, and study outcomes, as outlined in Table 1. Among the articles that were appraised, nine of them focused on emergency contraception and modern contraceptives in general. Additionally, three articles reported on Pre-exposure prophylaxis (PrEP), two articles discussed HIV self-testing and only one article reported on medical abortion pills. In terms of geographical distribution, the majority of the studies (84%) were conducted in Kenya. While Tanzania, Nigeria, the Democratic Republic of Congo, Ghana, and Ethiopia each had only one study each conducted in their respective countries.

Table 1: Conditions for inclusion criteria

Characteristic	Eligibility criteria
Population	Participants of all ages and genders who participated in the studies
Interventions	Self-care interventions for sexual and reproductive health services
Context	Studies conducted in any sub-Saharan African country
Outcomes	Reported on the role of community pharmacists in the SRH components
Type of Study	Original research study
Publication year	Literature published between 2013 to 2023
Language	Articles published in English

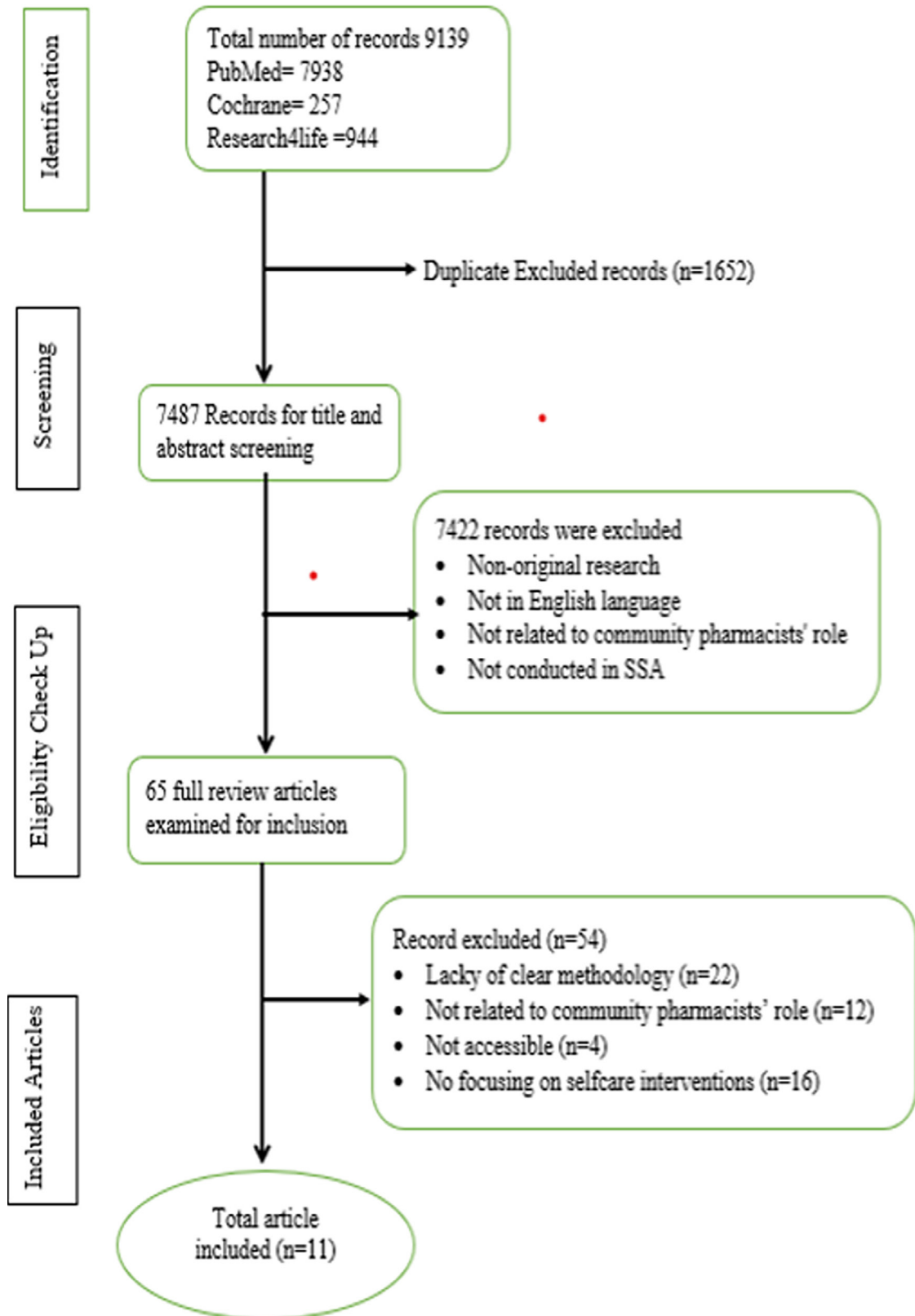


Figure 1: Flow diagram and search results

Table 2: Summary of included studies

Year and References	Country setting	Population	Area of SRH	Study design	Findings
2016 Carroon et al., [35]	Nigeria and Kenya	Pharmacies and drug shop users	Short-acting contraceptive	Cross-sectional study	Drug shops and pharmacies are the primary sources of short-acting contraceptives in urban areas in Kenya and Nigeria. They provide a rich opportunity for family planning access to younger and unmarried individuals.
2017 Belachew et al., [36]	Ethiopia	Pharmacists	Emergency contraception	Cross-sectional study	Pharmacists play a crucial role in counseling women during the dispensing of emergency contraception. They possess the necessary skills and positive attitudes to effectively address the limiting factors associated with emergency contraceptive access and utilization.
2017 Mugo et al., [37]	Kenya	Users of pharmacy services	HIV test kits	Cross-sectional study	In Kenya, pharmacy-based HIV self-tests are proven to be feasible and in high demand. However, the cost of these test kits is likely to be a significant barrier, limiting access for many individuals.
2018 Hernandez et. al, [38]	DRC	Pharmacy staff and users	Emergency contraception	Cross-sectional study	Pharmacies represent a novel delivery strategy for emergency contraception, which can effectively address the disparities in the health network and healthcare infrastructure. Additionally, the study emphasizes that pharmacists possess the capability to meet the specific contraceptive needs of women residing in Kinshasa, Democratic Republic of Congo.
2019 Gonsalves et al., [39]	Kenya	Pharmacists, Users and Key Informants	Injectable contraceptive	Cross-sectional qualitative study	Community pharmacies in Kenya have extended their services to include injectable contraception. However, the absence of standardized regulations governing the provision of these services raises concerns, and some may view it as a potential illegal activity.
2020 Gonsalves et. al., [40]	Kenya	Pharmacists and pharmacy users	Emergency contraceptives and condoms	Cross-sectional mixed methods study	Young individuals utilize community pharmacy-based contraception services and have reported that community pharmacies offer benefits such as faster service, privacy, and unlimited access.
2020 Gonsalves et al., [41,42]	Kenya	Young people aged between 18-24	Modern contraceptives (condoms and emergency contraception)	Mixed method study	In coastal Kenya, a large number of young people utilize community pharmacies as their primary source of modern contraception. Users highly value the pharmacists' role for the convenience, privacy, non-judgmental attitudes, and faster delivery services they offer.
2021 Roche et. Al., [43,44]	Kenya	Pharmacy clients and pharmacy service providers	Pre-exposure prophylaxis (PrEP)	Cross-sectional qualitative study	Community pharmacies are competent settings in delivering Pre-Exposure Prophylaxis (PrEP) for HIV with speed, safety, affordability, and utmost confidentiality to customers.
2023 Hunter et al., [45]	Tanzania	Adolescent girls and young women (AGYW)	HIV self-testing and contraception	Randomized controlled trial (RCT)	In Tanzania, drug shops provide friendly services to Adolescent Girls and Young Women (AGYW), and the study reported them as an effective strategy to address the sexual and reproductive health service needs of adolescent girls and young women.
2023 Nana et al., [46]	Ghana	Pharmacists and pharmacy users	Medical abortion pills	Cross-sectional qualitative study	The utilization of medical abortion pills from pharmacies is increasing among Ghanaian women despite legal condemnation. However, the illegal status of these pills makes the service expensive and more difficult to access.
2023 Omollo et al., [47]	Kenya	Pharmacy users	HIV testing and PrEP	Cross-sectional study	Pharmacies provide high-quality PrEP services to their clients, including counseling on the medication's safety and potential side effects. Users highly value these pharmacy services, appreciating the respectful and dignified treatment they receive.

DRC: Democratic republic of Congo

Modern contraceptive: In our literature search, we identified 7 articles reporting on community pharmacist interventions in the provision of contraceptives in Sub-Saharan Africa. Among these, three articles focused on condom utilization [35,40,41], five on emergency contraceptive uptake [36,38,40,41], two on oral contraceptive uptake [35,45], and one study investigated the role of community pharmacists in providing injectable contraceptives [39]. Overall, the studies demonstrated that pharmacies and drug shops in the SSA region have the potential to significantly enhance access and uptake of modern contraception, as shown in Table 2. The study findings indicate that community pharmacists possess the necessary skills and knowledge to facilitate faster delivery, provide education on potential benefits and side effects, and treat their customers respectfully, displaying positive attitudes and non-judgmental behaviors [48]. Their friendly services cater particularly well to adolescents and young individuals who may feel shy or reluctant to seek such services in other healthcare settings [49,50], owing to the privacy and affordability they offer [43,51]. However, the lack of standard guidelines for certain services, such as injectable contraceptives, may raise concerns and be regarded as quackery [21,39].

Pre-exposure prophylaxis: Our literature search identified 2 studies focused on pre-exposure prophylaxis (PrEP) conducted in community pharmacies in Sub-Saharan Africa context. One study aimed to evaluate the acceptability of the provision of PrEP at the retail pharmacy settings in Kenya [43]. Participants expressed their satisfaction with the safety, privacy, and respect they received during the process, along with the affordability of services at the community pharmacy. Another study conducted in Kenya focused on PrEP delivery concluded that community pharmacists possess the ability to provide counseling on medication adherence, safety, and potential side effects to their customers to protect themselves from new HIV infections [44,47,52].

Medical abortion pills: Our literature search identified one study that examined the provision of medical abortion pills for self-care abortion within community pharmacy settings in Ghana through the exploratory approach involving both pharmacy staff and users. The findings revealed an increase in

the number of Ghanaian women seeking abortion pills from community pharmacies despite the legal condemnation of dispensing such medications at community pharmacy settings. Despite the legal restrictions, pharmacists continued to provide support and assistance to women seeking voluntary abortions. However, it was observed that the accessibility and affordability of these abortion pills remained challenging for many individuals due to the strict dispensing practices in secrecy [46].

Self-testing for HIV: The studies identified during our search examined the role of community pharmacists in promoting HIV self-testing and demonstrated that community pharmacists provide pre-test and post-test counseling, with the timing of counseling varying depending on the test results [37]. Furthermore, a separate study focusing on Adolescent Girls and Young Women (AGYW) indicated that this demographic often relies on pharmacy shops to obtain HIV self-testing kits and contraception pills. Generally, self-test kits at community pharmacies are accessible and feasible. However, the cost per kit could be a barrier for individuals with limited financial resources, potentially limiting their access to these crucial testing resources [45,53-55].

DISCUSSION

This study aimed to synthesize evidence concerning the role of community pharmacists in promoting access and use of self-care interventions for SRH in the Sub-Saharan African context. Through our literature search, we identified studies that shed light on the pharmacists' role in promoting the self-managed use of both emergency and non-emergency contraception, as well as HIV testing and Pre-exposure prophylaxis (PrEP). The findings revealed that community pharmacists play a feasible and significant role in facilitating self-care interventions. They provide friendly services for young and adolescent individuals who are vulnerable and at high risk of encountering barriers such as judgmental attitudes, discrimination, stigma, lack of privacy, and long waiting times at other healthcare settings [41,56,57]. As a result, pharmacists play a significant role in enhancing access and use of SRH services despite the absence of standardized guidelines and legal restrictions in many countries. However, this lack of regulation may increase the costs of these services.

Few studies have focused on the role of community pharmacists in promoting self-care interventions for SRH. Meanwhile, the Sub-Saharan Africa region faces challenges with low uptake of SRH services due to various factors [8,9], resulting in a high number of sexual violence cases, unintended pregnancies, elevated maternal mortality rates from unsafe abortions, higher fertility rates, and an increase in STI [7,13,58]. To address this issue, we conducted a systematic review to synthesize insights on the feasibility of community pharmacists contributing to increased uptake of SRH services among individuals. We found that community pharmacists in SSA serve as easily accessible healthcare professionals, offering convenient, private, and fast services to promote self-care interventions. This finding aligns with studies conducted in developed countries such as Canada, the United States of America, and European countries, where community pharmacies are widely utilized by individuals seeking SRH services. The accessibility of these pharmacies, with extended opening hours and a non-appointment schedule to meet pharmacists, makes them a popular choice for SRH needs [59-64].

We found that self-testing for HIV, self-uptake of PrEP, and various types of injectable and oral contraception at community pharmacy settings are easily accessible and feasible in the SSA region. However, in many of these countries, the government and regulatory bodies have not harmonized or provided standard guidelines for the provision of sexual and reproductive health (SRH) services in community pharmacy settings. This lack of standardization affects the in-service training and quality of service offered by community pharmacists. Meanwhile, in developed countries, community pharmacists sought additional training after a pharmacy degree in the form of continuous professional development (CPD), allowing them to provide SRH services in community pharmacy settings. For instance, in Canada, community pharmacists sought additional training and authorization to prescribe and administer HPV vaccines and injectable contraception [30,63].

Strengths and Limitations

This is the first systematic review to synthesize evidence on the role of community pharmacists in promoting access and use of SRH services through self-care interventions within the context of SSA. The findings have the potential to inform

and influence governments and policymakers in recognizing the valuable contributions of community pharmacists as qualified healthcare providers in delivering SRH services. Thus, empowering citizens in Sub-Saharan Africa with autonomy over their sexual and reproductive health. However, some articles meeting the eligibility criteria might have been missed due to limited access to certain databases, and the limited number of included studies may not generalize the entire Sub-Saharan African region. Further original studies that specifically focus on the involvement of community pharmacists in promoting self-care interventions related to sexual and reproductive health are needed.

CONCLUSION

Community pharmacists in the Sub-Saharan Africa region are trained healthcare professionals who actively promote access to and utilization of self-care interventions for sexual and reproductive health. These self-care interventions have the potential to empower individuals, particularly adolescent girls and young women who are vulnerable and at high risk, by granting them autonomy over their SRH decisions. Governments and policymakers should prioritize the establishment of standard guidelines for the provision of sexual and reproductive health services in community pharmacy settings in order to ensure consistent and quality care.

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