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International Journal of Population Studies

REVIEW ARTICLE

COVID-19 and access to family planning among women of reproductive age in sub-Saharan Africa: A scoping review

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(This article belongs to *Special Issue: Population and Reproductive Health Dynamics under Covid-19 in Sub-Saharan Africa*)

Abstract

This study examined the impact of COVID-19 on access to family planning for women of reproductive age (defined as ages 15 – 49) in sub-Saharan Africa (SSA). Employing a scoping review methodology, we retrieved relevant literature spanning the pre-COVID-19 and COVID-19 eras, drawing information from major electronic databases. Inclusion criteria required studies addressing family planning and sexual and reproductive health among women of reproductive age in SSA. This review encompassed 36 published studies, with two-thirds of these originating from the pre-COVID-19 period. The majority of the studies utilized quantitative methodology (89%). While some evidence corroborates our hypothesis regarding the impact of COVID-19 on family planning services in SSA, initial findings somewhat downplayed this impact. However, a sensitivity bias test revealed a discernible effect of the COVID-19 pandemic on women's access to family planning services. The results of this review hold significance for policymakers and program implementers striving to mitigate the impact of COVID-19 on access to family planning services among women in SSA.

Keywords: Family planning; Access to family planning; COVID-19; Women; Scoping review; Sub-Saharan Africa

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Citation: Adedini, S.A., Ogunwemimo, H., Odimegwu, C.O. (2024). COVID-19 and access to family planning among women of reproductive age in sub-Saharan Africa: A scoping review. *International Journal of Population Studies,* 10(1): 365. https://doi.org/10.36922/ijps.365

Received: September 19, 2022

Accepted: December 1, 2023

Published Online: December 21, 2023

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1. Introduction

The coronavirus disease 2019 (COVID-19) has adversely impacted the public health and socioeconomic conditions of individuals, families, and societies across the world (Buheji *et al.*, 2020; Das *et al.*, 2022). Various stakeholders and multilateral organizations, including the International Monetary Fund (IMF), World Bank, and World Health Organization (WHO), have issued warnings regarding the potentially devastating consequences of the COVID-19 pandemic (WHO, 2020). This pandemic represents the most significant global public health emergency since the Spanish flu that ravaged the world in the 20th century (Dasgupta *et al.*, 2020). Before the widespread

distribution of COVID-19 vaccines, many countries across the world implemented stringent control measures, such as the lockdown of socioeconomic activities, restrictions on local movements, and the suspension of international travel, aimed at curbing human contacts and mitigating the spread of the disease.

The COVID-19 measures effectively contained the transmission of infections and mortality, preventing the health-care systems of many countries from reaching a catastrophic situation (Gummerson *et al*., 2021). However, these COVID-19 restrictions brought forth unintended consequences, including the loss of livelihood and income, disruptions in education, engagement in unsafe sexual behaviors, and a decline in access to health-care services, including essential sexual and reproductive health services such as family planning (Bahamondes & Makuch, 2020; Dasgupta *et al*., 2020; Gummerson *et al*., 2021; Herawat*i* *et al*., 2020). Globally, health-care systems faced heightened strain as COVID-19 spread, resulting in the prioritization of pandemic-related health-care provision and the suspension of numerous routine health-care services in many countries (Sharm*a et al*., 2020).

Women and girls in low- and middle-income countries have been recognized as a vulnerable group in the context of the COVID-19 pandemic (Burzynska & Contreras, 2020; Connor *et al*., 2020). Scholars posit that COVID-19 risk factors exhibit gendered patterns rather than being gender-neutral, highlighting that females face increased vulnerability to risk exposure and encounter greater disadvantages in accessing essential life-saving resources (Siriwardhane & Khan, 2021; Spagnol*o et al*., 2020; Stanton & Bateson, 2021). Moreover, many international organizations have articulated that the gender dimension of the pandemic and its control measures may exert a long-lasting impact on the health and well-being of millions of women and girls in low- and middle-income countries. Researchers contend that the COVID-19 pandemic, along with various restrictive measures implemented to curb its spread, could leave considerable numbers of women and girls without access to critical sexual and reproductive health-care services (Dasgupta *et al*., 2020; Stanton & Bateson, 2021).

Before the outbreak of COVID-19, prevailing power dynamics in many sub-Saharan African (SSA) societies predominantly disadvantaged women and girls (Adedini *et al*., 2014; Aina, 1998; Odimegwu *et al*., 2015). The region's culturally laden gender norms carried adverse implications for reproductive health and various outcomes among women and girls (Adedini *et al*., 2014; Adeleke, 2016). Additionally, existing studies indicate that preceding epidemics, such as human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS), Ebola virus disease (EVD), and Middle East respiratory syndrome (MERS), exerted a disproportionately greater impact on marginalized and vulnerable groups, particularly women and girls (Fan, 2020). The unequal distribution of resources, limited access to health-care services, diminished decision-making authority, lower educational status, and restricted mobility collectively impede women's capacity to meet their socioeconomic needs and access health-care services during pandemics (FAO, 2017). In light of the sociocultural values and practices that underpin gender inequalities within households, women and girls often experience heightened tensions during pandemics, elevating their vulnerability to domestic violence (IASC, 2015; 2020). Such circumstances may further impede their access to family planning services amid a pandemic.

Family planning, encompassing pregnancy planning, child spacing, and limiting, aims to enhance the overall well-being and quality of life for women and their children (Sharma *et al*., 2020). We posit that the COVID-19 pandemic may detrimentally impact the circumstances of women and girls, particularly by restricting their access to family planning services in SSA, where health-care systems exhibit relative fragility compared to the global north. The challenges faced by women in accessing family planning services are likely exacerbated by the impact of the COVID-19 pandemic. Against this background, we pose the following question: What is the impact of COVID-19 on the access to family planning services among women of reproductive age (defined as ages 15 – 49) in SSA? The study furnishes essential insights derived from a review of published studies focused on the access and utilization of family planning methods among women in their reproductive years during the pre-COVID-19 and COVID-19 eras in SSA. Consequent to the potential impact of the two major COVID-19 spread preventive moves – lockdowns and shutdowns – implemented globally, including in SSA, which restricted movements, our hypothesis posits that COVID-19 would adversely affect women's access to family planning services and constrain their utilization of these services.

2. Materials and methods

We conducted a scoping review of relevant literature, adhering to the Joanna Briggs Institute's guidelines for scoping reviews. We synthesized and analyzed evidence from relevant studies published during the pre-COVID-19 period (2010 – 2019) as well as those published from 2020 to the end of March 2022. To compile our comprehensive review, we systematically searched and retrieved relevant literature from major electronic databases, including Web of Science (WoS), MEDLINE, African Journals Online, and

Bioline International. All study designs were considered for inclusion, with the exception of opinion pieces, protocols, and review articles. To meet our inclusion criteria, studies were required to specifically address the aspects of access to or utilization of family planning and/or contraception among adolescent girls and women of reproductive age in SSA.

2.1. Searching for eligible studies

The study sought to examine the impact of COVID-19 on access to family planning services among adolescent girls and women of reproductive age in SSA through a scoping review. Guided by Joanna Briggs Institute (JBI)'s Population, Concept and Context (PCC) approach (Peters *et al.*, 2015), we conducted a literature search using relevant keywords in the search strategy, supplemented, where applicable, by the use of Medical Subject Headings (MeSH). Specifically, the databases searched for relevant articles included MEDLINE, WoS, African Journals Online (AJOL), and Bioline. Additionally, Google Scholar was explored for related articles. Ab initio, keywords such as "access," "family planning services," "women," and "sub-Saharan Africa" were employed in searches on AJOL and MEDLINE. Identified studies were subjected to pre-review to locate synonymous keywords used by authors addressing similar concepts. Subsequently, additional related keywords for each concept were identified and incorporated into subsequent extended searches. For instance, alongside "access," related keywords included "use," "uptake," "utilization," "practice," and "going for." Adhering to the PCC guide during the general search across the databases, synonymous keywords were employed in the "Population" category, corresponding to women in this study. These included "girls," "adolescent girls," and "female." In the "Concept" category, which pertains to family planning services in this study, keywords such as "Family Planning" and "Contraception" were used. Both "family planning services" and "Contraception" were truncated to ensure the retrieval of all relevant articles. Additionally, within the "Context" category, along with "sub-Saharan Africa," each of the 47 countries was employed. Where applicable among the databases, the Boolean operator OR was applied within a concept and its related keywords, while AND was used to combine all themed concepts in the searches.

2.2. Identification of relevant studies

Specifically, 1,404 articles were retrieved from WoS, and AJOL returned a total of 100 relevant articles. Bioline returned 24 articles, and 3,888 articles were retrieved from MEDLINE (PubMed). These numbers of articles resulted from our consideration of the time COVID-19 disease was detected, which was late in 2019. To mitigate potential selection bias and avoid presumptions about an increase in family planning issues due to the recent renewed interest in linking family planning to development in SSA (Harpham *et al.*, 2021), we confined our consideration to articles published between 2010 and the end of March 2022. This strategy means that articles published from 2010 to 2019 would represent the pre-COVID-19 period. From other sources, such as Google Scholar, we retrieved 14 articles. Therefore, the total number of retrieved articles amounted to 5,430. All articles published in languages other than English language were excluded to facilitate ease of access.

2.3. Inclusion and exclusion criteria

To be eligible for inclusion in this review, articles must, firstly, address the topics of access or use (or related keywords) of family planning (or similar keywords) among women and must have been conducted in one or more countries in SSA. Additionally, all articles must represent primary research conducted between 2010 and the end of March 2022. This temporal criterion ensured that the data for analysis in such studies were current and roughly indicative of the level of access to family planning services at the time of publication. Essentially, studies included in the review adhered to cross-sectional designs. In contrast, studies categorized as mere commentaries, reviews, or those focusing on subjects other than reproductive adolescent girls and women were excluded. Additionally, articles that relied on secondary data in their analyses were excluded to avoid the duplication of findings from the same dataset. Furthermore, studies involving subjects inherently disadvantaged in access to family planning services, such as refugees, sex workers, pastoralists, and others, were excluded. This exclusion aimed to mitigate potential biases associated with extreme access levels among these populations.

2.4. Selection of studies for review

From the total pool of retrieved articles (5,430) resulting from restrictions on the period of interest, we conducted an assessment of article titles and removed duplicates to ensure a focused examination of all concepts of interest. This process yielded 226 articles. Subsequently, after reviewing abstracts and method sections to further ascertain the relevance of articles to the current review, 113 articles were selected. At the final stage, a thorough examination of the full texts was undertaken to confirm each remaining study as primary research, focused on adolescent girls and women, and in compliance with all other inclusion criteria. This comprehensive review culminated in the final inclusion of 36 articles for this review paper. The details of the article selection process are depicted in Figure 1.

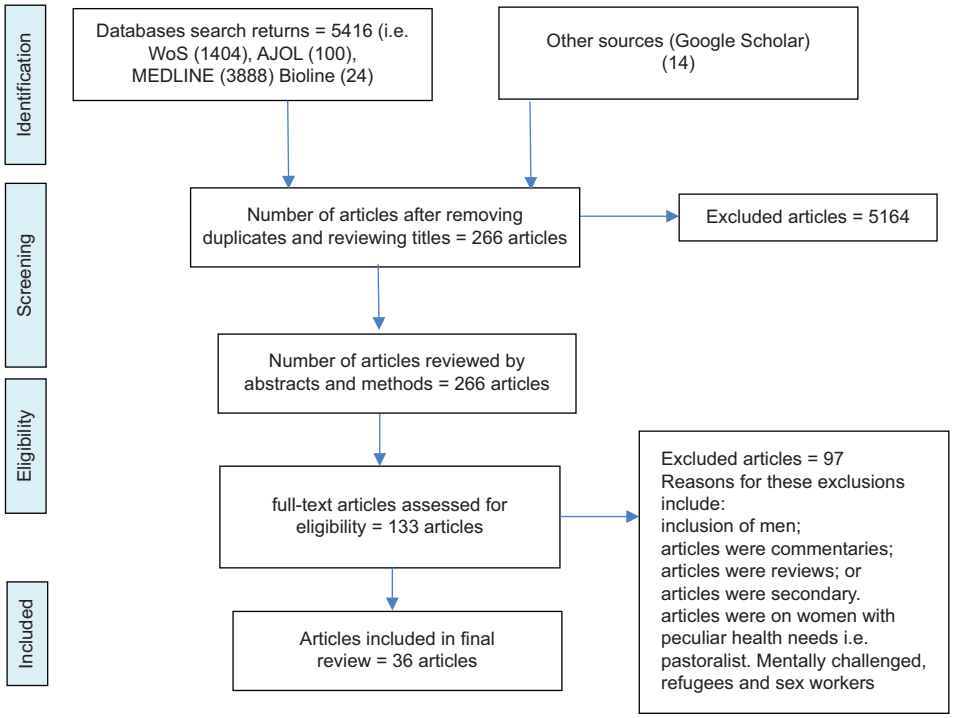

Figure 1. Flow chart of the article selection process

2.5. Characteristics of selected studies

As illustrated in **Table 1**, the studies selected for this review originated from nine countries in SSA, with the majority emanating from Nigeria (13 articles) (Adefalu *et al.*, 2019; Aliyu *et al.*, 2015; Anate *et al.*, 2021; Aniwada *et al.*, 2017; Bolarinwa *et al.*, 2021; Chingle *et al.*, 2013; Esike *et al.*, 2017; Idowu *et al.*, 2020; Ogboghodo *et al.*, 2017; Olarewaju *et al.*, 2019; Umoh & Abah, 2011; Umukoro *et al.*, 2020; Utoo & Araoye, 2012), followed by Ethiopia (10 articles) (Alemayehu *et al.*, 2021; Dingeta *et al.*, 2021; Ejeta *et al.*, 2021; Endriyas *et al.*, 2017; Gebremedhin *et al.*, 2018; Gujo & Kare, 2021; Melka *et al.*, 2015; Melkie *et al.*, 2021; Mokwena Kebogile & Bogale Yenealem Reta, 2017; Tilahun *et al.*, 2022). Kenya contributed four articles (Mukthar *et al.*, 2014; Mumbo *et al.*, 2021; Ontiri *et al.*, 2019; Owuor *et al.*, 2018), while Ghana had three studies (Afriyie & Tarkang, 2019; Apanga & Adam, 2015; Krakowiak-Redd *et al.*, 2011). Uganda had two articles selected for review (Muyama *et al.*, 2020; Ouma *et al.*, 2015). One article each was reviewed from Rwanda (Uwimbabazi *et al.*, 2020), the Gambia (Anyanwu & Alida, 2017), Tanzania (Damian *et al.*, 2018), and Lesotho (Akintade *et al.*, 2011). Consequently, the coverage of this review spans across the Western, Southern, and Eastern countries in SSA. In addition, two studies followed a qualitative design (5.5%) (Adefalu *et al.*, 2019; Uwimbabazi *et al.*, 2020) and two articles adopted a mixed-method design (5.5%) (Endriyas *et al.*, 2017; Ontiri *et al.*, 2019), while a quantitative design was adopted for the remainder (88.9%). Furthermore, 64% of the reviewed studies represented the pre-COVID-19 period.

3. Results

As previously mentioned, all studies included in this review are primary research endeavors that encompass the population (adolescent girls and women), concepts (access to family planning services), and context (SSA) of interest. It is pertinent to point out that the concept of access to family planning services is inferred from the ability of adolescent girls and women to uptake family planning services during the two periods of interest. Articles reviewed during the COVID-19 period employed terms such as "uptake," "utilization," and "use" to characterize access to family planning services. In contrast, studies reviewed during the pre-COVID-19 period, in addition to using "uptake," "utilization," and "use," also incorporated terms such as "practice" and "acceptance" to describe family planning uptake. For the purpose of this study, adolescent girls and women of reproductive age whose use of any family planning method were described by any of these terms are considered to have a form of access to family planning.

Through our overall comprehensive search, we identified no cross-sectional primary study that met our inclusion criteria and specifically addressed the direct

Table 1. Characteristics of studies selected for review

S/N	Author	Pub year	Country	Purpose	Study population	Methods	Family planning method	Outcomes	Key findings related to objective
1	Tilahun, T. Bekuma, T. T., Getachew, M., Oljira, R., & Seme, A.	2022	Ethiopia	to assess barriers and determinants of postpartum family-planning uptake among women visiting MNCH services in public health facilities of western Ethiopia	postpartum mothers 15-49 years who have given birth in the last 12 months of the study period and visiting the selected hospitals and health centers	Quantitative facility-based cross-sectional study design	Post-Partum Family Planning (PPFP)	51% uptake	Moderate access
2	Alemayehu, A., Demissee, A., Feleke, D., & Abdella, M.	2021	Ethiopia	to assess level and determinants of long-acting family planning method among reproductive age women in Harar, Eastern Ethiopia	845 women of reproductive age	Community-based cross-sectional study design	LARC	74.7% LARC use	High access
3	Dingeta, T., Oljira, L., Worku, A., & Berhane, Y.	2021	Ethiopia	to assess the association between contraceptive utilization and socio-cultural factors among young married women in Eastern Ethiopia	3039 married women aged 14–24	Community-based survey	Any contraceptive method	14.1% current CPR	Low access
4	Anate, B. C., Balogun, M. R., Olubodun, T., & Adejimi, A. A.	2021	Nigeria	to assess the knowledge and utilization of family planning and determine predictors of utilization of family planning among postpartum women attending primary health care centers (PHCs) in a selected rural area of Lagos State	325 postpartum women attending PHCs aged 15-49 years	Descriptive cross-sectional study	Post-Partum Family Planning	38.5% using modern method	Moderate access
5	Melkie, A., Addisu, D., Mekie, M., & Dagnew, E.	2021	Ethiopia	to determine the utilization and factors associated with an immediate postpartum intrauterine contraceptive device	423 women who gave birth at selected hospitals of west Gojjam zone	Multi-level facility-based cross-sectional study	immediate postpartum intrauterine contraceptive device	4.02% used immediate postpartum intrauterine contraceptive device	Low access
6	Mumbo, E. M., Mutisya, R., & Ondigi, A.	2021	Kenya	to determine the contraception among HIVpositive women in Kwale County	347 HIV-positive female clients ages 15-49 attending Comprehensive Care Clinics	Cross-sectional design	Modern contraceptive use	79% CPR	High access
7	Gujo, A. B., & Kare, A. P.	2021	Ethiopia	to assess the utilization of LARCs and associated factors among reproductive-age women in Wondo Genet District, Southern Ethiopia	376 women of reproductive age	Institution based cross-sectional study	IUCD and Implant	37.8% use of long-acting reversible contraceptives	Moderate access

(*Cont'd...*)

Table 1. (Continued)

S/N	Author	Pub year	Country	Purpose	Study population	Methods	Family planning method	Outcomes	Key findings related to objective
8	Ejeta, L. T., Demeke, H. Z., Desta, B. F., Kibret, M. A., Gebre, G. K., Beshir, I. A., Gari, L. T., Tsegaye, Z. T., & Tefera, B. B.	2021	Ethiopia	to assess the determinants of facility-based FP and delivery service utilization in the six regions of Ethiopia	3778(FP-related) women of reproductive age	Cross-sectional design	Any family planning method	62.7% current users	Moderate access
9	Bolarinwa, O. A., Olaniyan, A. T., Saeed, B. Q., & Olagunju, O. S.	2021	Nigeria	to examine the influence of spousal communication and attitude toward family planning (FP) use among young mothers in the peri-urban area of Osun State	420 young mothers who had at least a child in the year preceding the survey age 15-30 years	Household-based cross-sectional design	Any contraceptive method	82% FP use	High access
10	Idowu, A., Ukandu, G. C., Mattu, J., Olawuyi, D., Abiodun, A., Adegboye, P., Chibu-Jonah, C., Siakpere, A. E., Ishola, A. E., Adeyeye, T., & Alabi, S.	2020	Nigeria	to assess the contraceptive use and its determinants among reproductive age women in Ejigbo, Osun State,	405 women of reproductive age	Cross-sectional design	Current users of contraception	33%	Moderate access
11	Muyama, D. L., Musaba, M. W., Opito, R., Soita, D. J., Wandabwa, J. N., & Amongin, D.	2020	Uganda	to determine the prevalence and factors associated with postpartum contraceptive use among teenage mothers in Mbale City	511 teenage mothers	Cross-sectional design	PPFP	61.50%	Moderate access
12	Umukoro, E., Edje, K., Agbonifo-Chijiokwu, E., Moke, E., Egbenede, E., & Emma-Ugulu, I.	2020	Nigeria	to assess the use and effects of contraceptives among female secondary school students in Abraka	250 female students aged 8-23 years	Descriptive cross-sectional study	Modern contraceptive use	58.8% current CP users	Moderate access
13	Uwimbabazi, C., Ukizinkuru, M., Nkubito, P., Runyange, N., Nyamwasa, D., Verhoeven, D., Randy, W., Hitimana, N., & Musabyimana, J. P.	2020	Rwanda	to analyze the use of immediate PPFP and identify motivators and barriers and their relationship in influencing the use of immediate Post Partum FP(PPFP) among Rwandan women at Kacyiru Hospital (KH), Kigali	28 women aged 21-49 years	Qualitative design	PPFP	67.9% accepted immediate PPFP	Moderate access

(*Cont'd...*)

Table 1. (Continued)

S/N	Author	Pub year	Country	Purpose	Study population	Methods	Family planning method	Outcomes	Key findings related to objective
14	Ontiri, S., Ndirangu, G., Kabue, M., Biesma, R., Stekelenburg, J., & Ouma, C.	2019	Kenya	to assess the factors associated with uptake of long-acting reversible contraception by women seeking family planning services in public health facilities in Kakamega County	423 women aged 15-49 years residing in Kakamega County in the last six months prior to the survey, and visiting the FP clinic for uptake of contraception services.	Public facility- based mixed-method cross-sectional design	LARC uptake	20.60%	Low access
15	Afriyie, P., & Tarkang, E. E.	2019	Ghana	to assess the factors influencing the use of modern contraception among married women in Ho West District	225 married women aged 18 and 49 years residing in the Ho West district	Descriptive cross-sectional design	Current modern contraceptive use	64.40%	Moderate access
16	Olarewaju, S. O., Olaniyan, Y., & Odusolu, Y. O.	2019	Nigeria	to assess the knowledge, attitude and practice of contraception among HIV positive women of reproductive age group attending ART/PMTCT clinics in Ogbomoso	270 HIV-positive women age 18-49 years attending PMTCT/ART clinics	Descriptive cross-sectional design	Any contraceptive method	44.1% current CP users	Moderate access
17	Adefalu, A. A., Ladipo, O. A., Akinyemi, O. O., Popoola, O. A., Latunji, O. O., & Iyanda, O.	2019	Nigeria	to explore specific factors that influence contraceptive uptake and demand in North-West Nigeria	250 community resident women aged 15-45 years	Qualitative design (Women-only FGD)	FP services and contraceptives	Increasing demand	Improved access
18	Owuor, H. O., Chege, P. M., & Laktabai, J.	2018	Kenya	to determine the predictors of uptake of post-partum family planning (PPFP)	259 post-partum women, accompanying their children for first measles vaccination	Descriptive cross-sectional design	PPFP	78.40%	High access
19	Gebremedhin, A. Y., Kebede, Y., Gelagay, A. A., & Habitu, Y. A.	2018	Ethiopia	to assess postpartum family planning use and its associated factors among women in extended postpartum period in Kolfe Keranyo sub city of Addis Ababa	803 women who have had live births during the preceding data collection year	Community-based cross-sectional study design	PPFP	80.30%	High access
20	Damian, D. J., George, J. M., Martin, E., Temba, B., & Msuya, S. E.	2018	Tanzania	to determine the prevalence and factors influencing modern contraceptive use among HIV-positive women in northern Tanzania	672 HIV-positive women	Cross-sectional design	Current modern contraceptive use	54%	Moderate access

(*Cont'd...*)

Table 1. (Continued)

S/N	Author	Pub year	Country	Purpose	Study population	Methods	Family planning method	Outcomes	Key findings related to objective
21	Endriyas, M., Eshete, A., Mekonnen, E., Misganaw, T., Shiferaw, M., & Ayele, S.	2017	Ethiopia	to assess the status and factors affecting contraceptive utilization among women of reproductive age	3205 non-pregnant women aged 15–49 years	Community based cross-sectional mixed-method design	Current modern contraceptive use	53.30%	Moderate access
22	Mokwena Kebogile & Bogale Yenealem Reta.	2017	Ethiopia	to examine the fertility intentions of a sample of women living with HIV/ AIDS, and to describe the utilisation of contraception methods used	362 of women aged 18-49 years who attended the HIV clinic in Adama Hospital Medical College age	Cross-sectional quantitative study	Modern contraceptive use	65.7% use of CP	Moderate access
23	Ogboghodo, E., Adam, V., & Wagbatsoma, V.	2017	Nigeria	to assess the prevalence and determinants of contraception among women of child-bearing age in a rural community in Edo State	295 sexually active community permanent resident women of child bearing age (15-49)	Descriptive cross-sectional study	Any contraceptive method	26.4% CPR	Low access
24	Esike, C., Anozie, O., Ani, M., Ekwedigwe, K., Onyebuchi, A., Ezeonu, P., & Umeora, O.	2017	Nigeria	to find out the reasons for low FP uptake	330 women of reproductive age group	Cross-sectional study	Any contraceptive method	58.2% current CP users	Moderate access
25	Anyanwu, M., & Alida, B. W. N	2017	The Gambia	to nvestigated the uptake of LARC among women of reproductive age seeking for family planning services at a health facility in the Western region of The Gambia	160 women of reproductive age	Facility based cross-sectional study	Long-acting reversible contraceptives	89% current LARC users	High access
26	Aniwada, E. C., Okpoko, C. C., Uleanya, N., Umeobieri, A. K., & Okechi, U. C.	2017	Nigeria	to ascertain prevalence, pattern and predictors of family planning use among women living in an urban slum	281 area resident women aged 15-49 years	Community based descriptive cross-sectional study	Any contraceptives including modern methods	35.6% current CP users	Moderate access
27	Ouma, S., Turyasima, M., Acca, H., Nabbale, F., Obita, K. O., Rama, M., Adong, C. C., Openy, A., Beatrice, M. O., Odongo-Aginya, E. I., & Awor, S.	2015	Uganda	To determine obstacles to family planning use among rural women in Northern Uganda	424 women of reproductive years	Descriptive mixed-method cross-sectional analytical study.	Current contraceptives use	54.20%	Moderate access

(*Cont'd...*)

Table 1. (Continued)

S/N	Author	Pub year	Country	Purpose	Study population	Methods	Family planning method	Outcomes	Key findings related to objective
28	Melka, A. S., Tekelab, T., & Wirtu, D.	2015	Ethiopia	to understand the determinant factors of long acting and permanent contraceptive methods use among married women of reproductive age in Western Ethiopia	1012 married women of reproductive age	Community-based cross sectional study	Long-acting reversible contraceptives	20% LARC users	Low access
29	Apanga, P. A., & Adam, M. A.	2015	Ghana	to investigate the factors that influence the decision of women in fertility age to go for family planning services	280 women aged 15-49 years	Cross-sectional quantitative survey	Any contraceptives including modern methods	18% FP ever use	Low access
30	Aliyu, A. A., Dahiru, T., Oyefabi, A. M., & Ladan, A. M.	2015	Nigeria	to determine contraceptive knowledge, determinants, contraceptive prevalence and use of modern family planning	309 women of reproductive age attending outpatient clinic of the Comprehensive Health Centre, Sabon Gari	Cross-sectional descriptive study	Any contraceptives including modern methods	12.3% CPR	Low access
31	Mukthar, V. K., Maranga, A., Kulei, S., & Chemoiwa, R. K.	2014	Kenya	to determine the uptake and factors associated with the uptake of modern contraceptives among women of reproductive age (15-49 years) attending Maternal Child Health and Family Planning Clinics/Units in Rift Valley Provincial Hospital	261 women of reproductive age (15-49 years) who attended MCH/ FP Clinic at the Rift Valley Provincial Hospital	Descriptive cross-sectional study	any modern contraceptive	90.4% ever used CP	High access
32	Chingle, M., Banwat, M., Lar, L., & Zoakah, A.	2013	Nigeria	to assess the contraceptive uptake among women of reproductive age in a rural community in Jos SouthLGA	400 women of reproductive age residing in Giring	Cross-sectional descriptive study	Modern contraceptives	55.2% ever used CP	Moderate access
33	Utoo, P., & Araoye, M.	2012	Nigeria	to determine the awareness and pattern of utilization of family planning methods among women attending the under-five clinic for immunization	165 mothers attending the under-five clinic for immunization	Cross-sectional study	Modern contraceptives	44.8% ever used FP	Moderate access

(*Cont'd...*)

Table 1. (Continued)

S/N	Author	Pub year	Country	Purpose	Study population	Methods	Family planning method	Outcomes	Key findings related to objective
34	Umoh, A. V., & Abah, M. G.	2011	Nigeria	to document the awareness of contraception and its use in Uyo, South-south	522 women attending antenatal care	Cross-sectional study	Any contraceptives including modern methods	52.6% ever used FP	Moderate access
35	Krakowiak-Redd, D., Ansong, D., Otupiri, E., Tran, S., Klanderud, D., Boakye, I., Dickerson, T., & Crookston, B.	2011	Ghana	identify which family planning methods women recognized, had ever used and currently use	85 women aged 15-49 years	Cross-sectional study	Any contraceptives including modern methods	54.9% current CP use	Moderate access
36	Akintade, O. L., Pengpid, S., & Peltzer, K.	2011	Lesotho	to assess the level of awareness of contraceptives and utilisation of family planning services among young women in Lesotho	363 female undergraduate students aged 18-40 yearss	Quantitative descriptive survey	Any contraceptives including modern methods	55.3% current CP users	Moderate access

restrictive impact of COVID-19 on access to family planning services among adolescent girls and women in SSA. Therefore, the studies assessed in this review focus on examining the use of family planning before and during the COVID-19 period. Across the selected studies, family planning services were categorized into six thematic approaches: Contraceptive prevalence rate (CPR), post-partum family planning (PPFP), long-acting reversible contraception (LARC), any method of contraception including modern methods, modern contraception (mCP), and current contraceptives use.

All studies, except those employing qualitative design, reported the proportion of adolescent girls and women of reproductive age who accessed family planning. These proportions were subsequently used to categorize the level of access into high, moderate, and low. A proportion of 70% and above for adolescent girls and women of reproductive age accessing family planning was categorized as a high access level, while a range of 30 – 60% access was designated moderate access level. Any reported proportion < 30% was categorized as low access to family planning services.

In view of this categorization, during the COVID-19 period, eight of the reviewed articles (61.5%) indicated that adolescent girls and women of reproductive age had moderate access to family planning services, compared to 13 of the articles (56.5%) reviewed for pre-COVID-19 period. Additionally, concerning high family planning access levels, three articles (23.1%) showed high access during the COVID-19 period, while four articles (17.4%) demonstrated high access among adolescent girls and women of reproductive age in the pre-COVID-19 period. Furthermore, 15.4% of study subjects during the COVID-19 period had low access to family planning services, and 21.7% of adolescent girls and women of reproductive age had low access to these services pre-COVID-19 period.

We also conducted a sensitivity analysis to compare the 3 years preceding the COVID-19 period (2017 – 2019) with the COVID-19 period (2020 to March 2022). The result revealed 13 articles for each of these two periods. The findings indicated that during the 3 years preceding the COVID-19 outbreak in SSA, 8 articles (61.5%) depicted moderate access to family planning services, mirroring the observation for the COVID-19 period (eight articles [61.5%]). Similarly, two articles (15.4%) showed low access to these services, consistent with the findings during the COVID-19 period. Additionally, three studies (23.1%) demonstrated high access to family planning services among adolescent girls and women of reproductive age in the period before the emergence of COVID-19, aligning with the observation during the COVID-19 period.

4. Discussion

This review systematically maps the evidence concerning the impact of COVID-19 on access to family planning services among adolescent girls and women of reproductive age in SSA. As the transmission of COVID-19 rapidly spread across countries, various stringent measures, including the

lockdown of socioeconomic activities and restrictions on local and international travel, were implemented (Devi, 2020; Hugelius *et al*., 2021; Zajenkowski *et al*., 2020). While these control measures significantly contributed to stemming the spread of the disease, they also gave rise to numerous negative unintended consequences, such as heightened violence against women, substance abuse, increased risky sexual activities, and reduced access to critical health-care services, such as sexual and reproductive health-care services (Avena *et al*., 2021; Roesch *et al*., 2020; Spagnolo *et al*., 2020). This scoping review aims to furnish key evidence on the impact of COVID-19 on access to family planning services among adolescent girls and women of reproductive age in SSA.

Guided by JBI's scoping review guidelines, we included 36 articles in our review that met our inclusion criteria. These articles focused on nine SSA countries, spanning the Western, Eastern, and Southern regions. There were 17 studies from West Africa, 18 from East Africa, and 1 from Southern Africa. The majority of the studies employed quantitative methodology, with slightly over one-third of the reviewed papers concentrating on the COVID-19 era.

The restrictions imposed during the COVID-19 period appeared to exert a critical influence beyond health-care services access, potentially impacting the execution of primary studies. Notably, our search procedure yielded no studies directly examining the impact of COVID-19 on access to family planning services among adolescent girls and women in the African sub-region. However, to align with the focus of this review, we assessed the level of contraceptive access through various family planning methods across studies selected for this review. These methods included CPR, mCP use, PPFP, current contraceptive use, LARC, and any method of contraception, including modern methods. For each of these method categories, the proportion of respondents who utilized the methods was employed to determine the level of access to family planning during the periods of interest.

In comparing the 10-year pre-COVID-19 period with the 2.3 years of the COVID-19 period, the results revealed findings somewhat contrary to the hypothesis. Notably, when assessing different levels of categorizations, a higher proportion of adolescent girls and women of reproductive age had moderate access to family planning services during the COVID-19 period compared to the period preceding the pandemic outbreak. Similarly, in the comparison of these periods concerning high family planning services access, the results indicated that study subjects had approximately six more percentage points during the COVID-19 period than in the pre-COVID-19 period. Regarding low levels of access to family planning services, the findings suggested a higher proportion of adolescent girls and women of reproductive age (less than a seven percentage point difference) had low access to family planning services before the COVID-19 outbreak compared to during the pandemic. These results suggest that adolescent girls and women of reproductive age had improved access to family planning services during the COVID-19 period than before the pandemic. However, it is essential to consider the potential bias introduced by the length of the comparison periods. To confirm and better understand these results, a sensitivity bias test was conducted.

In this analysis, we compared the last 3 years preceding the pandemic outbreak to the 2.3 years of the ongoing pandemic. Coincidentally, each period comprised 13 articles. However, the COVID-19 period encompassed one qualitative and 12 quantitative designs, while the pre-COVID-19 period included one mixed-method, one qualitative, and 11 quantitative designs. The results revealed a stagnation in access to family planning services among adolescent girls and women of reproductive age. Despite recent efforts to enhance family planning services for these groups through a series of reproductive health interventions (Adedini *et al.*, 2018; Babalola *et al.*, 2019; Benson *et al.*, 2018; Henry *et al.*, 2021; Tweya *et al.*, 2018), within the sub-region, nothing has changed in the period just before the COVID-19 period and approximately 2½ years into the pandemic. While it is possible that other factors may jointly contribute to this poor access to family planning services among this group of interest, the COVID-19 pandemic likely played some role in restricting access to these reproductive health and other services in the region. The restriction was, in part, due to the movement restrictions imposed to curb the spread of the virus during that time.

Furthermore, a comprehensive understanding of how movement restrictions during the lockdown could impact access to family planning services emerges when considering the underlying reasons for the low utilization of these services in the sub-region. In Ethiopia, for instance, during the pre-COVID-19 period, factors such as limited access to counseling and educational levels were identified as common barriers to family planning service access (Aliyu *et al.*, 2015; Apanga & Adam, 2015; Esike *et al.*, 2017; Melkie *et al.*, 2021; Ogboghodo *et al.*, 2017). However, throughout the period of movement restrictions, adolescent girls and women of reproductive age might not have had seamless opportunities to reach their service providers for both health and other types of education. Additionally, school-age girls might have been deprived of access to their schools. If school served as the primary

avenue for regularly accessing family planning services prior to the pandemic, the lockdown likely disrupted this access. One argument is that they may not have perceived the immediate need for contraception, as they may not have had access to their sexual partners during the lockdown.

In addition, economic activities were disrupted during the lockdown, with evidence suggesting that people's means of meeting economic needs were adversely affected. Considering that the cost of services (Ogboghodo *et al.*, 2017) and low income (Esike *et al.*, 2017; Gujo & Kare, 2021) have been identified as factors influencing access to family planning services, a plausible connection can be drawn between low access to family planning services and the disruption in economic activities due to the lockdown. Several specific reasons were commonly adduced for the low access to family planning during the COVID-19 period, including poor access to family planning information, limited availability of family planning counseling services, and reduced exposure to family planning messages in the media (Dingeta *et al.*, 2021; Melkie *et al.*, 2021).

This study exhibits both strengths and limitations. Our thorough search of relevant electronic databases employed well-defined search terms, ensuring a comprehensive approach; however, it is acknowledged that the search may not have captured all relevant articles. Additionally, the exclusion of articles not published in English and those unavailable online may have inadvertently overlooked potential contributions to this study. Despite these limitations, the scoping review has furnished valuable evidence regarding the impact of COVID-19 on access to family planning services among women in SSA.

5. Conclusion

This study reveals that COVID-19 has affected women's access to family planning services. Contrary to exacerbating such access, however, the findings demonstrate a stagnant level of access to family planning services. Therefore, efforts aimed at improving access to reproductive health services, including family planning, have proven ineffective during the COVID-19 era, particularly when movement restrictions were imposed across countries. The results of this review highlight a number of potential target areas for policy, programming, and research aimed at improving women's access to family planning services during the pandemic in SSA. There is a critical need for appropriate measures to counter the disruption of family planning services during the outbreak of any form of disease or epidemic. Furthermore, conducting additional studies that specifically examine the impact of COVID-19 on access to family planning services, along with the exploration of the broader aspects of sexual and reproductive health among women, is imperative in SSA. This imperative arises from the scarcity of evidence regarding the impact of COVID-19 on access to family planning services in the region.

Acknowledgments

The paper was presented at the Conference on Population and Reproductive Health Dynamics Under COVID-19 in Sub-Saharan Africa that was hosted by the University of the Witwatersrand, South Africa through its Demography and Population Studies Programme. The Conference was supported under the auspices of the Science Granting Councils Initiative in Sub-Saharan Africa (SGCI) and administered by South Africa's National Research Foundation in collaboration with Canada's International Development Research Center (IDRC), the Swedish International Development Cooperation Agency (Sida), South Africa's Department of Science and Innovation (DSI), the Fons de Recherche due Quebec (FRQ), the United Kingdom's Department of International Development (DFID), the United Kingdom Research and Innovation (UKRI) through the Newton Fund.

Funding

None.

Conflict of interest

No potential conflict of interest was reported by the authors.

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Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Availability of data

Not applicable.

Further disclose

The earlier version of this manuscript was reviewed by the organizers of the Conference on Population and Reproductive Health Dynamics under COVID-19, which

was held on March 14–16, 2022, in Johannesburg, South Africa. Comments from the assigned reviewers are gratefully acknowledged.

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