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Review

Impacts of COVID-19 on accessibility of Sexual and reproductive health services: scoping review

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Abstract: Introduction: Since its discovery in late 2019, the novel coronavirus (SARSCOVID-2) that causes COVID-19 has spread fast, prompting the World Health Organization (WHO) to designate the disease a worldwide pandemic on March 11, 2020.The epidemic has profoundly altered the preexisting global sexual and reproductive health landscape .The virus's load has put ordinary services in jeopardy and harmed other health priorities. This encompasses both the provision and the supply of contraceptives, sexual health, new born and maternal health services. This Scoping review therefore mapped the availability evidence on the impact and effects of the COVID-19 disease outbreak on sexual and reproductive health. **Methods:** The methodological framework by Arksey and O'Malley guided this scoping review. A literature search was conducted from the following databases: Embase, PubMed, CINAHL, Scopus, WOS, and AJOL. The preferred reporting items for systematic reviews and meta-analyses (PRISMA) flow diagram and the preferred reporting items for systematic reviews and meta-analyses extension for scoping reviews (PRISMA-ScR) checklist were used to document the review process. The Strobe critical review checklist was used to determine the quality of the included studies. **Results:**19 studies were reviewed, out of which 4 were cross sectional studies, 1 was an observational study, 1 was a descriptive analytical study and the rest were qualitative studies .Majority of the studies showed evidence on the impact of COVID-19 and family planning service, maternal and child services, and three studies reported on COVID-19 and sexual behaviour. Five of the nineteen included studies reported on the impact of COVID-19 and family planning service. **Conclusion**: This scoping review has granted the assessment of the impact of novel SARS-CoV-2 on Sexual and reproductive health services with regards to sexual behaviour, family planning and maternal, neonatal and child health. From the 18 articles identified and reviewed, the overall responses stipulated a significant reduction in client's utilization of services due to challenges experiences in service implementation such as stock outs. In addition, low demand for reproductive health services by clients due to restrictions imposed on the movements of people to curb the spread of the virus. It is therefore important that Governments and relevant stakeholders in Maternal and Sexual Reproductive Health prioritize development of policies and practices that protect women from the impacts of the pandemic. Furthermore, regular audits to detect trends in MSRH are necessary to inform on going mitigation efforts.

Keywords: family planning service and COVID-19; maternal; Neonatal and child health service and COVID-19; sexual behaviour and COVID-19; SARSCOVID-2 and family planning

1. Introduction

Since its discovery in late 2019, the novel coronavirus (SARS-COV-2) that causes COVID-19 has spread quickly, prompting the World Health Organization (WHO) to proclaim the disease a global pandemic on March 11, 2020[6]. The epidemic has profoundly altered the pre-existing global sexual and reproductive health landscape. The virus's load has put ordinary service delivery in jeopardy and harmed other health goals [2]. This covers contraceptive distribution, sexual health, new-born, and maternal health services [2,11]. Over two decades ago, the United Nations recognised the significance of an adequate re-

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sponse to an individu-al's reproductive health requirements as a panacea for universal socio-oeconomic development at the Internation-al Conference on Population and Development (ICPD) [16]. It was also agreed that family plan-ning and other sexual and reproductive health care services be distributed equally [1, 16].

Around 200 million women are susceptible to pregnancy difficulties, making adverse sexu-al and reproductive health outcomes a substantial problem worldwide [14]. Between pregnan-cy and the postpartum period, around half a million women die from these complications. 68000 women are estimated to have died as a result of improp-er abortion practises.In addition, 3.3 million newborns are stillborn each year, and 2 million babies die in their first week of life [2].This is also linked to the annual acquisition of more than 340 million new sexually transmitted bacterial and protozoa illnesses [16, 14].

While the impact of the COVID19 epidemic and lockdown has clearly impacted people from all walks of life, the impoverished, marginalised, and socially excluded are the most vulnerable and are likely to be disproportionately affected [16, 13]. National mandates to contain the pandemic, such as complete or total lockdowns, curfews, and temporary closure of non-essential services (elective survey, cancer treatment, sexual and reproductive health [10], the re-sulting economic slowdowns have adverse effects on accessing, using, and providing RMNCAH services, particularly in low and middle income countries, and have a signifi-cant impact on individuals' physical and mental health, as well as their quality of life [2,14].Authors at the Guttmacher Institute and others have proposed that a sudden halt in the supply of SRH services will resut in an unexpected increase in poor Sexual and Reproductive Health [6].Using a thorough scoping review, this study maps the effects of COVID19 on sexual and reproductive health.

2. Materials and Method

2.1. Study Design

A scoping review was conducted by searching for original articles on the impact of COVID-19 on sexual and reproductive health, this included family planning services, maternal and child health service, and sexual behaviour globally between December 2019 and October 2022 using Arksey and O'Malley's [25] scoping review framework methodological enhancement for scoping review projects guidelines. In addition we also followed the preferred reporting items for systematic reviews and meta-analyses extension for scoping reviews (PRISMA-ScR) guidelines [24], while the Joanna Briggs Institute checklist, the strobe critical review checklist, and the authority, accuracy, coverage, objectivity, date, and significance (AACODS) checklist were used for the assessment of the studies [23].The study protocol was developed but not yet registered.

2.2. Research Question

The research question was: what are the impacts of COVID-19 on sexual and reproductive health in terms of access to family planning, maternal, neonatal and child health services, and sexual behaviour?

To effectively answer the research question, we adopted the population, concept, and context (PCC) framework developed by the Joanna Briggs Institute [23] to determine the eligibility of our primary research question, as illustrated in table below. The table 1. Shows the Population concept context (PCC) framework for defining the eligibility of the studies for the primary research question.

Table 1. Population concept context (PCC) framework for defining the eligibility of the studies for the primary research question.

Criteria	Determinants	Description
P—Population	All population	People whose sexual and reproductive health has been impacted by COVID-19 disease.

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C—Concept	Family planning services	This is determined by family planning service availability to people. The services include availability and access to contraceptive service of choice during the COVID-19 disease pandemic.
	Sexual behaviour	Determines if there has been any change in sexual behaviour in terms of engagement in non-use of condom, multiple sexual partners, or transactional sex during the COVID-19 pandemic.
	Maternal ,neonatal and child health service	This is determined by maternal and child health service availability to people in any country. The service includes availability and access to maternal and child health services of choice during the COVID-19 pandemic.
C—Context	All countries	Countries that reported the impact of COVID-19 on sexual and reproductive health between December 2019 and January 2022.

2.3. Data sources and Literature Search

A systematic literature search was conducted on studies published in peer-reviewed journals and grey literature with a focus on the study's research question. It's worth mentioning that eight electronic databases were searched, and these were PubMed, Excerpta Medica dataBASE (Embase), Cumulative Index of Nursing and Allied Health Literature (CINAHL), Scopus, Web of Science (WOS), and Africa Journals Online (AJOL).In addition a search was also conducted on the Google Scholar website. They were searched for relevant studies published in English between December 2019 and January 2022 with the following key terms: "Coronavirus 2019" OR "COVID-19" with "Family planning use" "Family planning service" OR "Contraceptive use" "Contraception use" "Maternal health service" "Child health service" and "Sexual behaviour". Boolean terms (AND/OR) were used to separate our keywords. The searched was also thoroughly done through the reference lists of the included articles to source relevant literature.

2.4. Study Selection

The study selection was conducted in two stages. Firstly, we performed a comprehensive title screening from the resources retrieved from the databases mentioned above. Secondly, the studies that did not address the study's research question along with all the duplicates were excluded. Lastly, all included studies that qualified for abstract and full-text screening were uploaded on Endnote X9 software and screened by four reviewers (Muyembe Chisotwa, Margareta Kasonde, and Josphat Nkole). Discrepancies between the reviewers at abstract and full-text screening stages were resolved by involving screeners (Nkisu Kasapatu and Josphat Nkole) through a discussion.

2.5. Eligibility Criteria

2.5.1. Inclusion Criteria

The scope review study included qualitative and quantitative primary studies conducted globally. These include:

- Articles published in English.
- Articles published between December 2019 and January 2022.
- Research articles reporting information regarding the impact of COVID-19 on family planning services, maternal, neonatal and child health service, and sexual behaviour.
- Articles that explored any study design published in peer-reviewed journals addressing the research question of this study.

2.5.2. Exclusion Criteria

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The review did not include studies that do not report the impact of COVID-19 on family planning, maternal, neonatal and child health services, and sexual behaviour. The review also excluded studies conducted in any language other than English. Articles such as commentaries and editorials were not considered as well.

2.6. Condition or Domain Being Studied

This review investigated the global impact of coronavirus 2019 on sexual and reproductive health.

2.7. Participants/Population

The study population of interest included all persons who have been affected by COVID-19 whilst accessing any sexual and reproductive health service. In Addition to that, persons who had experienced any setback in sexual and reproductive health as a result of COVID-19 were also included.

2.8. Data Charting

The articles included in this study were thoroughly read, and data from these articles were organized into different themes using NVivo 10 (QSR International, Burlington, VT, USA) [26]. The data were extracted with the following headings: author and year, study setting (country), study design, population, mean/age range of participants, percentage of males, percentage of females, family planning service and COVID-19, maternal ,Neonatal and child health service and COVID-19 ,sexual behaviour and COVID-19.

2.9. Quality Assessment of the Included Studies

One external, independent reviewer completed the quality assessment, which was confirmed by Josphat Nkole and Chisotwa Muyembe. The strobe critical review check list [27] was used for quality assessment.

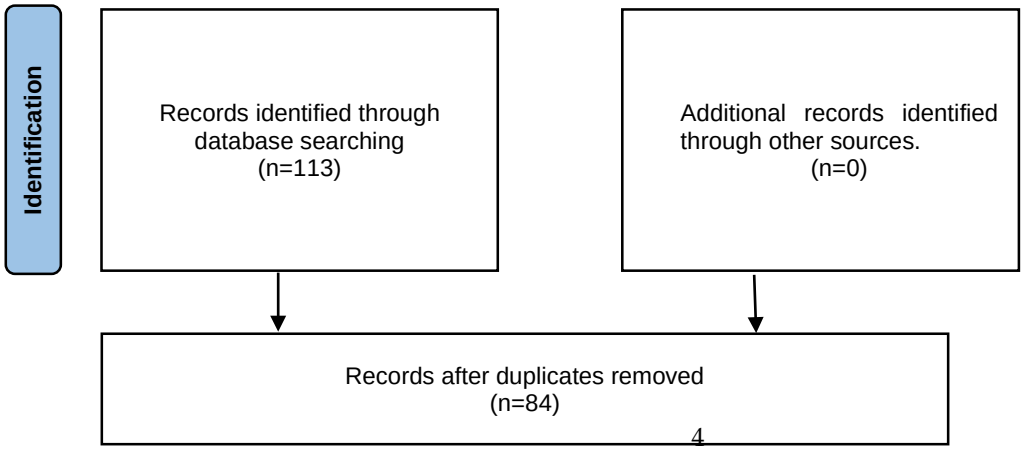
2.10. Collating, Summarizing, and Reporting the Results

A descriptive and narrative account of the sampled data extracted from the included studies was analysed using thematic content analysis. Data were extracted based on the following covid-19 outcomes: impact of COVID-19 on family planning services, impact COVID-19 on maternal, neonatal and child health services, and impact of COVID-19 on sexual behaviour.

3. Results

3.1. Screening Results

Following the database search, the scope identified eighty-four (84) research from a total of 113 publications that were eligible following title screening and duplicate removal. Following the abstract, a total of thirty-two (32) articles were eliminated. As a result, 20 articles were chosen for review. The findings of the article screening are shown in the diagram below.



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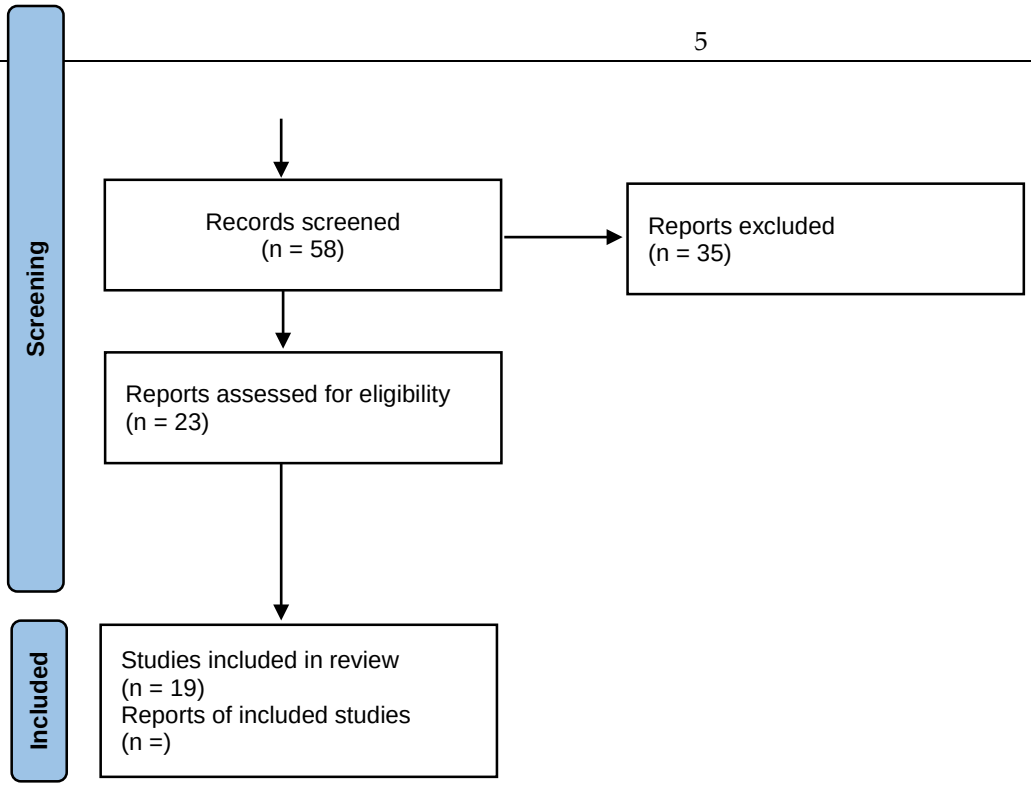

Figure 1. PRISMA flow-chart of the study selection process. Source: Adapted from Moher et al [28]. The preferred report items for systematic and meta-analysis (PRISMA) flow chart for the screening and selection of studies in this review is shown in Figure 1.

3.2. Characteristics of the Included Studies

The studies were conducted in a variety of countries around the world, including high-income countries (HICs) and low-middle-income countries (LMICs): approximately 37 percent of the studies were conducted in Africa, involving countries such as Nigeria, Kenya, Ethiopia, Uganda, and sub-Saharan Africa, about 10% in the United States, 5% in China, Portugal, and India, and about 10% in the United States. Six percent of the studies were carried out in 30 different countries, including LMICs and various African countries.

Of the 19 studies, 4 were cross sectional studies [1, 14, 10], 1 was an observational study [15], 1 was a descriptive analytical study [8] and the rest were qualitative studies.

Majority of the studies showed evidence on the impact of COVID-19 and family planning service, maternal and child services, and three studies reported on COVID-19 and sexual behaviour [1,20,14,10].

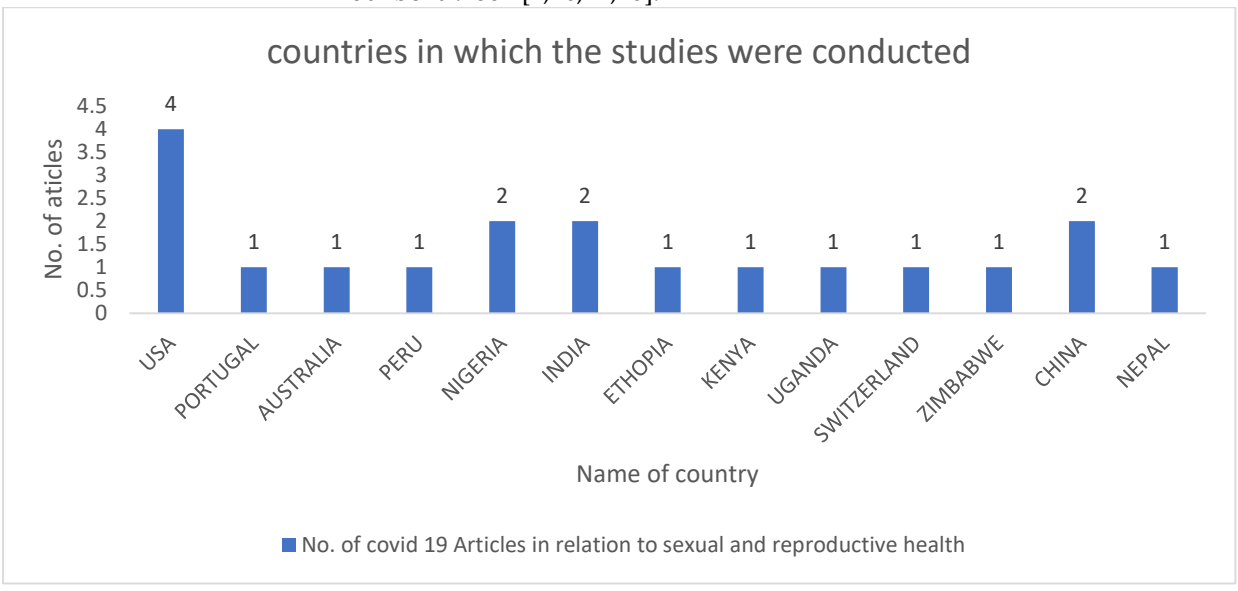

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Figure 2. Distribution of the countries represented in the included studies (n = 19).

3.3. Quality of Evidence from the Included Studies

All the included studies received a high quality score during the quality assessment. Moreover, the included studies were deemed to have a low chance of bias.

One of the most common sexual and reproductive health service impacted by the outbreak of COVID-19 was Maternal and child health services with reports in the changes in the delivery of these service including antenatal, intra partum and post natal services. Equally, Contraceptive use or family planning service disruption was reported but most countries including the United States of America, China, and Uganda among other countries, with majority studies reporting limited access to contraceptive of choice. Other services disrupted include sexual behaviour with changes in pattern of sexual behaviour countries like the USA and availability of medicines.

 doi:10.20944/preprints202206.0054.v1

Author and Year	Study Setting (Country)	Study Design	Population (n) (Sample Size and Target Pop)	COVID-19 and Family Planning Services	COVID-19 and Maternal and Child Services	COVID-19 and Sexual Behaviour
Riley J. Steiner et al, 2021 [3]	Atlanta, Georgia-USA	Descriptive study	n= 729			Among physicians whose practices provided intrauterine device/implant placement/removal or clinic-based sexually transmitted infection testing before the COVID-19 pandemic, 51% and 36% indicated disruption of these services during the pandemic, respectively.
Judith A. Berg et al, 2021[4]	USA					Enforced stay-at-home orders compounded by work from home or employment loss amplified family violence
Patricia M. Pascoal et al,2020[5]	Portugal	Qualitative study	39 clinical sexologists aged between 32 and 73 years old.			This framework highlights the role of mental health, as well as the contextual nature of

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						sexual problems, and subsequently, their relational nature. Also, it demonstrates that the current pandemic has brought into light the debate of e-Health delivery within clinical sexology
Taylor R et al, 2020 [6]		Comment				This illustrative scenario is, therefore, likely a conservative estimate of the potential effects of sexual and reproductive health service disruptions
Deborah J Bateson et al, 2020 [7]	Australia	Editorial comment				Such limitations to services may lead to a rise in self-managed abortions often carried out safely using online telemedicine services; however, where such services are unavailable, the risk of unsafe

 doi:10.20944/preprints202206.0054.v1

						abortions may increase
Mahesh C. Puri & Lucy Stone, 2020 [8]	Nepal					The national lockdown imposed in Nepal as a response to the COVID-19 pandemic is having indirect consequences on sexual and reproductive (SRH) in Nepal. Although the Government of Nepal and partners have committed to ensuring the continuity of SRH services during the pandemic, this comment aims to illustrate the potential impacts to SRH if these commitments are not met
Lalescka Araceli, 2021 [9]	Peru				Peru is going through a pandemic originated by coronavirus disease (COVID-19) and we	

 doi:10.20944/preprints202206.0054.v1

					continue to maintain mandatory social isolation as a preventive measure to reduce infections. Due to this event, many health establishments had to suspend care, also affecting Sexual and Reproductive Health (SRH) services, especially external consultation services	
Usha R. K, 2021 [11]	India			The International Planned Parenthood Federation reported anticipated shortage of contraception as the lockdown measures led to reduction in the manufacturing of contraceptives.		

 doi:10.20944/preprints202206.0054.v1

Babatunde A, 2020 [1]	Africa	Commentary				Emerging and re-emerging infections are here to stay and SRH researchers across Africa have an important role to play in boosting national preparedness for future epidemics and pandemics.
Garumma T F et al, 2020 [2]	Ethiopia	Commentary				United Nations Population Fund (UNFPA) recently stated that Ethiopia's midwives grapple with COVID-19 while ensuring safe delivery According to the Voice of America, health workers reported that COVID-19 travel restrictions in Ethiopia are forcing pregnant women to give birth at home
Shikuku et al , 2021 [14]	Kenya	Cross- sectional study	Hospital data for the first four months (March-			There was a significant increase in the proportion of

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			June 2020) of the pandemic and the equivalent period in 2019 were compared			clients revisiting the hospitals for FP services from 53.0% to 56.6%. In contrast, a significant reduction was reported in the new clients seeking FP services from 47.0% to 43.3% (P<0.0001)
Burt J F, et al, 2021 [15]	Uganda	Observational study	routinely collected data from Electronic Medical Records, was carried out, in Kawempe district, Kampala			During the 3-month lockdown, the number of antenatal attendances significantly decreased and remain below pre-COVID levels (370 fewer/month)
Bolarinwa A.O et al,2021 [16]		Scoping review				Three studies showed evidence on the impact of COVID-19 and family planning services, six studies reported on maternal and child services and eleven studies reported on sexual health (sexual behaviour)

 doi:10.20944/preprints202206.0054.v1

Okeoma O. et al, 2020 [17]	USA	commentary				Physical and resource constraints may limit the use of telehealth among youth, and there may be conditions and symptoms for which virtual visits may not be appropriate or sufficient.
Jennifer T et al,2021 [29]			convenience, online panels, and population-representative			Fewer respondents reported physical or sexual partner violence during COVID-19 measures (1063/15144, 7.0%) compared to the period before COVID-19 measures (1469/15887, 9.3%). C
Grant M and Mugove G. M, 2021 [19]	Zimbabwe					Sexual activities persist even in pandemics, and might reportedly even increase in some resource limited settings with increased idleness.

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Li et al, 2020 [6]	China	Journal		the COVID-19 pandemic and related containment measures, 22% of participants (n=212) reported a decrease in sexual desire; 41% (n=396) experienced a decrease in the sexual intercourse frequency; 30% (n=291) reported an increase in the frequency of masturbation; 20% (n=192) reported a decrease in alcohol consumption before or during sexual activities, and 31% (n=298) reported a deterioration in partner relationships during the pandemic		

 doi:10.20944/preprints202206.0054.v1

Ashish et al, 2021[21]	Nepal	Cross- sectional	The survey enrolled 1314 participants			Participants from 22-24-year age group were twice as likely to experience sexual violence compared to girls and participants from 18-21year age group (OR:2.25; CI:1.04– 4.84).
Babatunde A et al, 2021[1]	Nigeria	Cross-sectional	307 primary health centres (PHCs) in 30 Local Government Areas in 10 States, representing the six geopolitical regions of the country			There was a significant reduction in clients' utilization of the services during the lockdown, and the difference between States before the pandemic, during, and after the lockdown. . Reported difficulties during the lockdown included stock-out of drugs (25.7%), stock-out of contraceptives (25.1%), harassment by the law enforcement agents (76.9%), and transportation difficulties (55.8%)

 doi:10.20944/preprints202206.0054.v1

3.4. Themes from Included Studies

3.4.1. COVID-19 and Family Planning Services

Five of the nineteen included studies reported on the impact of COVID-19 and family planning service. In a cross sectional study conducted in Kenya by Duncan N. *et al* [14] it was noted that there was a significant reduction was reported in the new clients seeking FP services from 47.0% to 43.3% (P<0.0001) [1,20,10].

During the peri-COVID-19 period, there was an overall decrease in new ANC clients, uptake of long-term family planning methods, and an increase in short-term contraceptive use, according to the same cross-sectional survey. In the early months of the epidemic, it appears that current FP users were more motivated to continue using it than never-users. Jessica Florence Burt et al [15] reported in a comparable study conducted in Kampala, Uganda, that the median number of antenatal care attendances were 894 per month (IQR 808–1035) in the first 9 months before to lockdown at the end of March 2020. During the 3 months of lockdown, there were 539 fewer visits a month compared with pre lockdown (95% CI 195.0 to 516.3; p=0.001). After the lifting of restrictions, the overall trend was for 370 fewer attendances compared with previous periods (95% CI 202.7 to 536.3; p=0.001) [1, 20]. Another study focused on the impact of COVID-19 on men who have sex with men (MSM) in the United States found that 9.4 percent of participants had decreased access to condoms, while 5.4 percent reported less condom use [29]. Sanchez et al [29] found that 89.4 percent and 92.9 percent of participants, respectively, had no change in condom access or use due to COVID-19, while condom access and usage were unchanged due to COVID-19.

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3.4.2. COVID-19 and Family planning supplies

According to Lalescka in 2021 [9, 4], the COVID-19 crisis had an impact on medical and other essential supply chains, negatively affecting the import, availability, and distribution of modern contraceptives, emergency contraception, antiretrovirals for HIV/AIDS, antibiotics to treat STIs, and medications for maternal and neonatal health, among other inputs from national health programmes [9]. In 2020 Mahesh Chandra Puri [8] estimated the annual impact of a 10% proportional decline in short-acting reversible contraceptive use in Nepal caused by reduced access to SRH services resulting in an estimated 131,700 additional women with an unmet need for modern contraceptives and an estimated 19,000 extra unintended pregnancies over a 12-month period. Taylor Riley et al [6], assumed that the 10% proportional decline would be the same for services for the following modern contraceptive methods: oral contraceptive pills, the injectable, the patch, the ring, emergency contraceptive pills, male and female condoms, the lactational amenorrhea method, fertility awareness–based methods, the IUD, the implant, and other supply methods, such as spermicide foam and diaphragm.

In 2021, Krishna [11] reported that method wise the loss was estimated at 530,737 sterilizations, 709,088 IUCDs, 509,360 injectable contraceptives, 20 million cycles of OCPs, 827,332 ECPs and 342.1 million condoms. A reduction in implants (long-term) uptake (16.5% to 13.0%) ($p<0.05$) was reported [14].On the other hand in 2021 adelekan et al. reported difficulties during the lockdown included stock-out of drugs (25.7%), stock-out of contraceptives (25.1%), and transportation difficulties (55.8%). Only 2% of the PHCs reported the availability of gowns, 18% had gloves, 90.1% had hand sanitizers, and a temperature checker was available in 94.1%. The COVID-19 pandemic, on the other hand, is already having a negative impact on the contraceptive supply chain by disrupting the manufacture of key pharmaceutical components of contraceptive methods or the methods themselves (e.g., condoms), as well as delaying contraceptive commodity transportation[6,3]. Furthermore, equipment and personnel involved in providing sexual and reproductive health services may be diverted to meet other requirements, clinics may close, and people may be hesitant to seek sexual and reproductive health care at health facilities.

3.4.3. COVID-19 and Maternal and Child Services

The study revealed that from the articles that were included in the inclusion criteria that noted seven of them met the criteria. In the year 2020, Sanchez *et al* [29] affirmed that during COVID-19 lockdown showed that 62% of pregnant women felt a lack of interpersonal care while using virtual consultations, which affected how much information they disclosed to their healthcare workers. The study further revealed that 14% of the participants could not express themselves well over the phone, as they believed that discussing sensitive matters over the telephone was inappropriate.

Another study conducted in Nigeria in 2021 by Babatunde Adelekan [22] found that 94.8 percent of the selected PHCs in the ten States supplied prenatal care services prior to the lockdown. During the lockdown, they all continued to provide this service, and after the shutdown, the percentage increased to 97.7%. Only Gombe, inside States, saw a drop of about 10% during the lockdown. The majority of PHCs (81.8 percent) provided delivery services prior to the shutdown, according to the report. The proportion increased slightly during the lockdown to 83.7% and 94.1% after the lockdown. Within States, all the sampled PHCs in the FCT offered delivery care before the lockdown, and between 74.2% and 94.7% of the PHCs in the various States offered delivery care except in Lagos where 37.5% reported offering delivery care. The percentage of PHCs offering intra partum care remained stable or increased in all the States, during and after the lockdown except in Gombe where the proportion post-lockdown returned to the pre-COVID level [7, 12].

The study also focused the attention towards child care. Under this thematic area, it was noted that the Childcare was offered in 90.2% of the PHCs before COVID-19. There was a slight decrease to 87.9% during the lockdown and an increase to 95.1% after the

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lockdown. In the various States, all the sampled PHCs in FCT, Akwa Ibom and Sokoto offered childcare before the pandemic, and the least percentage was in Kano where 70% offered childcare. During the pandemic, all the States except Akwa Ibom, Borno, and Kaduna experienced some decrease in the proportion of PHCs that offered childcare. After lockdown, Akwa Ibom noted that there was a decline, whereas other States experienced some increase [1, 22].

In another study conducted in Uganda in 2021 by Jessica Florence Burt et al [15] affirmed that Immunizations were offered on all nine scheduled immunization days in every month in 2019 and 2020. The median number of immunization clinic attendances in the pre-COVID period was 5871 (95% CI 5643 to 6094). Meanwhile the lifting of lockdown, there have been 960 fewer monthly attendances (771 to 2248; p=0.04) (figure 3C). There was no change in the rate of children receiving Bacille Calmette-Guerin (BCG) at birth, oral polio, pneumococcal or rotavirus vaccines since the end of lockdown, although fewer children now attend the immunization clinic. The increase in the rate of measles vaccine receipt is due to a catch-up campaign after a long stock out.

3.4.4. COVID- 19 and sexual behaviour

Ashish et al 2021 [21] reported Participants from 22-24 –year age group were twice as likely to experience sexual violence compared to girls and participants from18-21 year age group (OR:2.25;CI:1.04–4.84).Participants from urban municipalities were 29% less likely to report SRH services disruption than participants from rural municipalities (OR-0.71,95%CI:0.55–0.91) . Participants with disability were twice as likely to report disruption than participants without disability (OR-2.35, 95%CI: 1.453.82).

In 2022 Li et al [20] found that due to the COVID-19 pandemic and related containment measures ,out of the 967 participants , 22% of participants (n=212) reported a decrease in sexual desire; 41% (n=396) experienced a decrease in the sexual intercourse frequency; 30% (n=291) reported an increase in the frequency of masturbation; 20% (n=192) reported a decrease in alcohol consumption before or during sexual activities, and 31% (n=298) reported a deterioration in partner relationships during the pandemic [16].

Pascoal at al [5] reported sexuality as a source of conflict, but also the experience of solitude due to the absence and difficulty finding partners during pandemic. The study also pored that roles such as parenting were believed to pressure couples and relationship dynamics because they jeopardy the erotic atmosphere and chance of erotic involvement.

3.4.5. COVID-19 and Maternal / perinatal mortality

Shikuku et al [14] found in Kenya in 2021 that the proportion of adolescent (10–19 years) maternal fatalities increased considerably from 6.2 percent to 10.9 percent from the pre- to peri-COVID-19 phase (P0.009) during the 4-month interval. During the same time period, the proportion of new stillbirths increased significantly from 0.9 percent to 1.0 percent (P = 0.0066). During the two years, however, the proportion of neonatal mortality decreased from 1.1 percent to 1.0 percent (P0.0001), with no changes in the rates of macerated stillbirths.

4. Discussion

This paper sought to review studies on the impact of COVID-19 on the accessibility of sexual and reproductive health services around the globe. It is clear from literature that there have been disruptions in maternal, neonatal, child and sexual and reproductive health services due to prioritized attention towards the COVID-19 pandemic [1], thus, this paper used the scoping review to show how various studies have proven a drop in sexual reproductive health services in health facilities around the globe caused by the response to the COVID-19 pandemic [3, 4, 5, 7].

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Findings from various studies show that pregnant women had difficulties assessing maternal care and delivery services due to COVID 19 related measures [5, 6]. Studies in Africa show a severe impact that lockdowns restrictions had on maternal health, new born and child health services [15, 19]. Maternal services aim to reduce maternal and new born morbidity and mortality and any reduction in their availability can lead to increased rates of still births, mother to child transmission and other maternal complications[4,6,19]. There are a variety of reasons as to why antenatal care and vaccination clinic attendance dropped so dramatically during the lockdown. As documented in various African countries, government guidelines at the onset of the pandemic resulted in the closing of public transportation, which a major number of patients rely on to get to healthcare institutions, affecting their physical ability to get care [11, 12, 14].

Studies also show a decrease in the access of HIV/STI testing and abortion services. Because of the focus on COVID 19 testing and lockdown restrictions, HIV/STI testing had been disrupted, resulting in patients not knowing their HIV status, increasing the risk of spread of HIV [14]. Due to a lack of STI testing services, a large proportion of STIs went untreated [16, 20]. On abortions, during the pandemic, the number of medication abortions grew among women who had abortions, whereas the number of surgical abortions decreased due to lockdowns and other COVID restrictions that led to a disruption of abortion services in hospitals. Studies have found that advances like telemedicine with or without in-person follow-up visits for medication abortions are safe, accessible, and free of problems [22, 24].

In regards to contraceptive accessibility, studies show that during national lockdowns, there is high unmet need for family planning which in turn leads to unplanned pregnancies [22]. Due to social distancing, our findings on the influence of COVID-19 on family planning services revealed a discontinuation in the preferred method of family planning [2, 15]. Prior to the pandemic, the choice of family planning method had always been a sexual and reproductive health issue. However, because of limited access to preferred option during the COVID-19 pandemic, this effect was amplified [19]. Despite having the same access to condoms during COVID-19, the study found that individuals had fewer sexual partners. COVID-19 social distancing guidelines and stay-at-home orders issued by the national Healthcare of government may be to blame for this shift in behaviour [3]. During the COVID-19 outbreak, however, some studies in this review observed reduced access to PREP prescriptions and drugs, as well as decreased transactional sex, particularly among MSM [3, 15].

COVID-19 lowered sexual desire and frequency of sexual intercourse in many young individuals, according to the findings, after examining several studies on sexual behaviour and COVID-19.During the lockdown periods, there was also a significant drop in alcoholrelated sexual outcomes and riskysexual activity.Increased parental supervision or intervention, lower personal freedom in general ,and poor mental health and partner relationships are all possible causes of these changes in sexual behaviour[2].

Masturbation and the use of pornography were shown to have increased during the lockdown periods, according to research. Although masturbation may have helped some people achieve sexual fulfilment while avoiding infection with COVID-19, a high masturbation rate has been associated to a lower quality of life and sexual satisfaction. Regularly viewing pornography can have a negative impact on sexual function and quality of life [20].

5. Strengths

Majority studies indicated selection of a large sample size which promoted generalization of results across countries.

6. Limitations

Some authors reported recall bias and selection bias as a potential weakness of the studies.

7. Conclusion

This scoping review has granted the assessment of the impact of novel SARS-CoV-2 on Sexual and reproductive health services with regards to sexual behaviour, family planning and maternal, neonatal and child health. The total results indicated a considerable decline in client utilisation of services due to obstacles encountered in service delivery, such as stock outs, from the 18 articles discovered and analysed. Furthermore, clients have a reduced need for reproductive health care as a result of restrictions placed on people's movements to prevent the virus from spreading. Governments and relevant stakeholders in Maternal and Sexual Reproductive Health must, however, emphasise the creation of policies and practises that safeguard women from the pandemic's effects. Regular audits to detect MSRH trends are also required to advise ongoing mitigation measures.

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