

What Works in Family Planning Interventions in Sub-saharan Africa: A Scoping Review

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ABSTRACT

Introduction: This scoping review was aimed to map the available evidence on family planning intervention in Sub Saharan Africa. Even though there were systematic reviews conducted in this setting on family planning interventions, the need for this scoping review stems from the need to provide an updates on family planning intervention across Sub Saharan Africa. It is essential to establish an adequate evidence base to support the design of policies aimed at improving family planning interventions. Furthermore, condensing evidence across different settings allows a meaningful comparison of experiences and facilitates knowledge transfer across countries. Therefore, this scoping review tried to summarize what works in family planning interventions in Sub Saharan Africa.

Methods: The overall focus was to review the overall body of evidence on a given topic, with focus on width rather than depth. We conducted our scoping review according to the 'York Methodology' described by Arksey & O'Malley. This allowed us to appraise and condense evidence across study types into one single interpretation.

Result: Five studies were reviewed in this study. All of the studies were specific to countries in Sub-Saharan Africa. Among the five quantitative studies, the majority used cross-sectional study design while the remaining used quasi-experimental study design. From studies reviewed, demand creation through (mass media, community mobilizations), messages from religious leaders, advocacy, social franchising, establishment of family planning task force, mobile outreach, and static service delivery were mentioned as means of family planning interventions.

Conclusion: Mass media coverage, demand generation, and advocacy and community mobilization were commonly used in family planning interventions across different Sub-Saharan African Countries. Accordingly, family planning interventions which used different these strategies were characterized by better use of modern contraception in these setups.

Keywords: Family planning intervention; Sub-saharan Africa; Scoping review

ABBREVIATIONS: Couple Years Protection (CYP); Demographic Health Information System (DHIS); Demographic Health Survey (DHS); Health Information Management System (MIS); Intra Uterine Device (IUD); Information Education and Communication (IEC); Long Acting Reversible Contraceptive/Permanent Methods (LARC/PM); Millennium Development Goals (MDG); Sustainable Development Goals (SDG); Sub Saharan Africa (SSA)

INTRODUCTION

In less developed countries, about one-fourth of pregnancies

are unintended—that is, either unwanted or mistimed. One particularly harmful consequence of unintended pregnancies is unsafe abortion. An estimated 18 million unsafe abortions take place each year in less developed regions, contributing to high rates of maternal death and injury in these regions. In addition, unwanted births pose risks for children's health and wellbeing. It also contributes to rapid population growth in resource-strapped countries [1].

In developing region, estimated 214 million women have an unmet need for family planning leading to excessive health costs to individuals and families as well as socio economic consequences for

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nations [2] and 225 million women in developing regions had an unmet need for modern contraception (Of this total, 160 million were using no method and 65 million were using a traditional method) [3]. Individual families and broader communities are empowered when women have the ability to control the frequency and timing of births. Family planning is therefore a central component of a healthy and sustainable society. For specific measures like infant or maternal mortality, to broader indicators of employment, education and life-expectancy, a highly-functioning family planning program is beneficial to the overall health of a nation [4]. Furthermore, family planning has been found to be an essential approach for countries to achieve their Millennium Development Goals (MDGs), particularly goals four and five for improved child and maternal health outcomes [5]. Since 2015, it is also one aspect of the targets around universal access to sexual and reproductive health found in the Sustainable Development Goal SDGs (3.7 and 5.6) [6].

Forty eight of the 54 African countries are located in the Sub-Saharan Africa (SSA) region, with the government of each defining and shaping its own health services and delivery systems. Using survey data available from the Demographic and Health Surveys and Performance Monitoring and Accountability 2020, modern contraceptive practice was seen to be on the rise overall but with much geographic variation. Recent program initiatives include expanding long-acting contraceptive options, promoting and delivering contraceptive methods in the postpartum period, and relying on community health workers for contraceptive outreach and service delivery [7].

Even though there were systematic reviews conducted in this setting, the need for this scoping review stems from providing an updates on family planning intervention across Sub Saharan Africa through inclusion of both quantitative and qualitative studies. It is essential in establishing an adequate evidence base to support the design of policies aimed at improving family planning interventions. Furthermore, condensing evidence across settings allows a meaningful comparison of experiences and facilitates knowledge transfer across countries. Our scoping review thus aimed to map available evidence on family planning intervention in Sub Saharan Africa.

METHODS

Scoping studies allow researchers to review the sources and types of existing evidence related to a specific current status of knowledge related to a scientific topic. "Scoping" refers to the method of mapping, charting, and summarizing existing evidence taken from different published sources to gain a sufficiently comprehensive understanding of a given field of study. The overall focus is on reviewing the overall body of evidence on a given topic, with a focus on width rather than depth. We conducted our scoping review according to the 'York Methodology' described by Arksey & O'Malley. This allowed us to appraise and condense evidence across study types into one single interpretation. Hereafter, we describe our methodological approach in detail according to the York framework [8].

1. Identifying the research question(s)
2. Identifying the relevant studies
3. Study selection

4. Charting the data

5. Collating, summarizing, and reporting the data

Step1. Identification of research question

The main objective was to map the available evidence to provide an overview of family planning interventions in sub Saharan Africa. The primary research question was thus framed as: "What works in family planning interventions in Sub Saharan Africa?"

Step2. Identification of relevant studies

To address the research question, we identified the following Search terms: "Family planning", "Contraceptive use", "Family planning intervention", "Family planning program" and "Family planning intervention package". These search terms were further matched with Sub Saharan Africa to specifically include relevant studies. Using these terms we systematically searched relevant electronic data bases (PubMed and Google scholar) for quantitative, qualitative and mixed methods studies. Moreover, we searched reference lists of all retrieved studies to identify potentially additional studies matching our search strategy.

Step3. Selection of studies for review

We included studies published in English. Our review focused on the studies from 2000 to 2018 to assess the recent interventions on family planning in Sub Saharan Africa since the endorsement of MDG. We excluded studies on family planning interventions outside of the SSA region.

Inclusion/exclusion criteria

Large number of literatures was excluded due to the fact that the study focuses on family planning interventions.

Step4. Charting of key information

We sorted the information of the selected studies according to the following categories: 'authors', 'year of publication', 'study location', 'main study objective', 'study design' (i.e. study population, year of data collection), and 'methodological approach used in data analysis'. Information from review studies were further summarized as 'key findings'.

For all quantitative studies we also charted the prevalence estimates for family planning. All extracted information was mapped in data charting forms. Charting forms reflected the study typology (quantitative studies specific to single country and multi-country quantitative studies).

Step5. Collating and summarizing results

In the process of synthesizing the findings for this scoping review, each group member repeatedly reviewed the extracted evidence independently. To enhance the validity of the review, individually appraised findings were later triangulated and summarized. We analysed only quantitative information since there was no qualitative study among the studies included in the review. We collated quantitative key findings across studies.

RESULT

The flow diagram (Figure 1) shows the search retrieval. We identified 1032 potential titles and abstracts from data bases and 1 record was identified outside of the database. After removal of duplicates, screening revealed 30 potential records for which we

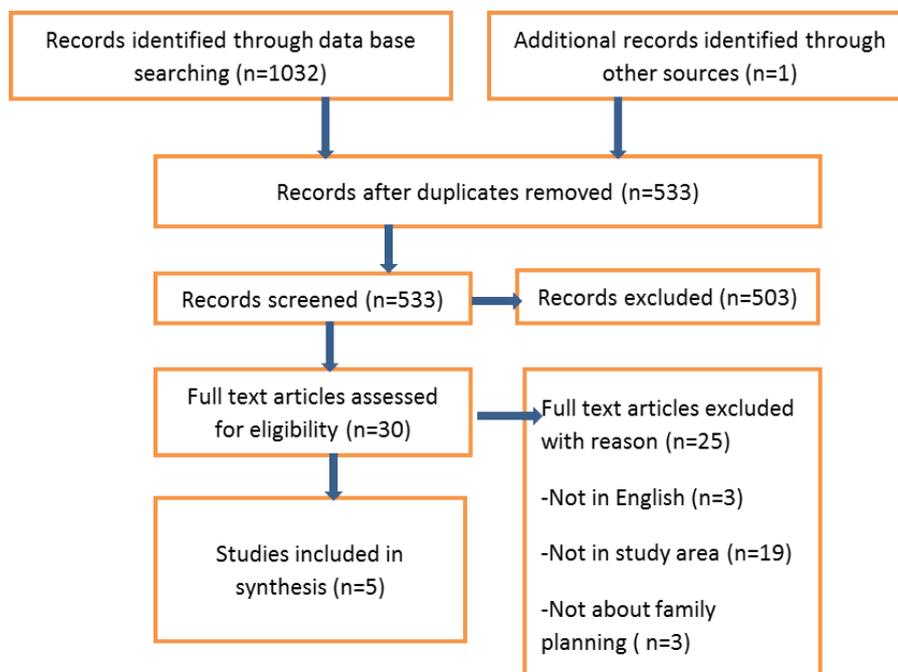


Figure 1: Review process adapted from PRISMA-ScR 2009.

Table 1: Illustrates the literature selection criteria of the study, May 2019.

Criteria	Inclusion	Exclusion
Study design	A quantitative, qualitative, and mixed method designs.	-
Location	Sub-Saharan Africa	Other parts of the world
Date	2000-2018	Before 2000
Language	English	Any other language
Research Focus	Main focus on intervention on family planning	-

excluded 25 that did not meet inclusion criteria. We ultimately deemed 5 articles as appropriate for inclusion, which included 5 full-text articles and abstracts.

Table 1 depicts the summary of quantitative evidence in respect to family planning interventions. All articles were quantitative studies and 4 were with a single country focus, one was a quantitative study with a multi-country or regional focus. Three studies were published in 2018 whereas two studies were published between 2000 and 2015. In terms of geographical distribution, all of the studies were specific to countries in Sub-Saharan Africa.

Majority of the reviewed studies used cross-sectional study designs (three of them were community-based and one was facility based) while the remaining used quasi-experimental study design. Four studies interviewed women in reproductive age and two studies extract data from secondary data sources. The data collection methods of the studies were survey, exit and face to face interview, semi structured questionnaire and from secondary data such as DHS, HMIS and facility registers.

From the studies reviewed, demand creation through (mass media, community mobilizations), messages from religious leader, advocacy, social franchising, establishment of family planning task force, mobile outreach and static service delivery were mentioned as means of family planning interventions.

Four of the studies reviewed, examined positive outcome results from interventions focused on demand generation for family planning. Study in sub Saharan Africa revealed demand generation

activities including education and awareness raising through community health workers and satisfied clients, road shows and paper-based flyers and posters [9]. Another reviewed study also showed the activities including concerts, football matches, traditional dances, speeches by various key community members and government officials, home visits and health talks by service providers for generating demand for family planning. As family planning intervention, mass media through the radio, television, or print media is an appealing strategy for the promotion of family planning because of its potential reach and ability to address often culturally taboo issues in an entertaining way [10].

From five studies reviewed two of them examined most positive behavioural results emerged from using mass media as family planning interventions. In Cameroon (2001), more than one-third of the women surveyed reported exposure to the Gold Circle campaign (52%) of whom mentioned being exposed to the campaign through television. The service statistics indicate that the campaign led to a significant increase in the demand for family planning services at Gold Circle clinics, with the number of new clients more than doubling immediately after the campaign launch [10]. One of the studies showed that the radio panel discussion comprised of religious leader about the importance of family planning use to maintain healthy mothers, children, and families and involves answering related questions from the audience and from radio listeners. It was found to have positive effect on contraceptive use [11].

The role of family planning messages from religious leaders was examined in two studies and found to be significantly associated

with higher modern contraceptive use. The study in Nigeria revealed significantly higher contraceptive uptake among women who had exposure to family planning messages from religious leaders relative to those with no exposure [12] and study in Malawi examined the role of the religious leaders were generally supportive of undertaking the events in their communities, including learning about the benefits of family planning and disseminating this information to their congregations [11]. In general, involving religious leaders in family planning messaging had positive results.

Advocacy was one of appealing strategy examined in one of the studies reviewed (Nigeria) in promotion of family planning. Advocating community members, policy makers, local government chairmen, and technocrats together with religious leaders to give statements in support of family planning in public gatherings and on the media was found to have positive result. Through these advocacy activities, eminent leaders, such as the emirs of Ilorin, Kano, and Zaria, made statements in support of family planning, which were repeatedly aired on radio and television [12].

Using mobile technology as family planning intervention was examined in one quantitative study from Burkina Faso and found to be positively associated with modern contraceptive use. Based on this study, cell phone ownership is significantly associated with modern contraceptive use in Burkina Faso. Women who owned a cell phone were more likely to report modern contraceptive use than those who did not [13].

One multi-country focus study in Sub-Saharan Africa examined the role of family planning interventions such as static clinics, mobile outreach units, and social franchising of private providers (partner with existing private healthcare providers) found to have positive effect on family planning use [9].

Study from Malawi examined family planning interventions such as establishment of family planning task force, family planning champions and provider training and mentoring. Established family planning community leadership groups in the catchment areas of the intervention sites then trained family planning champions, and together with the champions they developed the open days for their catchment area. It was found to have positive effect on contraceptive use. Based on this study from the pre-intervention year to the second post-intervention year, CYP increased among intervention group, whereas it decreased among comparison group. This shows the interventions led to an increase in CYP and LARC uptake [11].

DISCUSSION

We tried to elucidate what works in family planning interventions in Sub-Saharan Africa. Those studies which assessed the family planning interventions in this particular setup were considered in the study. Most of studies used cross sectional study design whereas some used experimental and quasi-experimental trials. Interviews, document reviews and self-administered questionnaires were used to collect the data.

A study from Cameroon on the impact of a regional family planning service among women of child bearing age showed that one-third of the respondents reported campaign exposure, indicating that the campaign had appreciable success in terms of reach. The campaign was conducted using mass media coverage including Television, Radio and Print materials [10]. On the other hand, a study conducted in Burkina Faso revealed that cell phone ownership among pregnant women was significantly associated with modern contraceptive use. The study further revealed that women who owned cell phones had a more method mix [13]. From this we can deduce that women access to appropriate information about family planning helps in improving family planning utilization.

Besides, a prospective quasi-experimental study conducted in Malawi revealed that the family planning interventions led to increase in CYP and LARC uptake. The intervention strategies used in this intervention study was community mobilization, demand creation, radio discussion, panel discussions with religious leaders, population weekends with religious leaders and creation of family planning task forces [11]. Similarly a research conducted in Nigeria on the role of religious leaders in contraceptive use revealed that advocacy through the booklet; media and demand creation were used as intervention strategies. This study further revealed that message from religious leaders was a predictor of modern contraceptive use [12]. Here, we can observe that advocacy, demand creation and mass media coverage with the involvement of different important stakeholders such as religious leaders improve the family planning utilization.

Further, a study from Sub-Saharan Africa showed that the use of family planning service strategies such as demand generation, social franchising of private sector providers and task sharing helped in improving the use of LARC services [13]. This finding is similar with the previous findings presented above. This implies that enhanced IEC use in family planning interventions could help better utilization of contraception in Sub-Saharan Africa.

Table 2 shows the correlations between intraoperative data of both

Table 2: Intra-operative parameters and postoperative complications.

First author, year of publication	Aim(s) and study design	Country and year of study	Study population and sample size	Data collection method & analysis	Type of intervention	Key finding	Limitation of study
Stella Babalola, et al. (2001) [10]	-To assess Impact of a Regional Family Planning Service. - Promotion Initiative in Sub-Saharan Africa - Cross sectional.	Cameroon (2001).	-All female in reproductive age groups. -Sample size (2517).	-Survey and DHS data.	- Mass-media coverage, print material. - Advocacy and community mobilization activities.	-Significant increase in the demand for family planning year services.	-Data incompleteness.

Clara Lemani, et al. (2018) [11]	-To assess the effect of family planning interventions at two health facilities in Malawi on couple years of protection (CYP). -Prospective quasi-experimental design.	Malawi (Feb 1, 2013 -Jun 30, 2016).	-Family planning utilizers.	-Family planning register and DHIS2.	-Demand generation -Radio discussion - Panel with religious leaders -Population weekends with religious leaders -Creation of family planning task forces -Establishment of family planning champions. -Provider training and mentoring.	- Increase in CYP and LARC uptake.	- Inconsistencies in filling the registers at the health facilities. - The radio discussion panel was broadcast nationally, and therefore the populations in the comparison communities were also exposed.
Thoai D, et al. (2013) [9]	-To evaluate the effectiveness of the program in expanding access to a range of LARC/PM. -Cross sectional.	Sub Saharan Africa (2013).	-All female in reproductive age who use IUD and PM methods -Sample size (6321).	-Client exit interviews and HMIS data. - Chi-square test.	-Social franchising of private sector providers. -Task sharing -Demand generation.	-The use of LARC/PM increased from 300,000 in 2008 to over 1 million in 2012.	
AR, Greenleaf, et al. (2018) [13]	-To assess the association between cell phone ownership and modern contraceptive. -Cross sectional.	Burkina Faso (Nov 2016 and Jan 2017).	-Women's of reproductive age. -Sample size (N=3215).	-House hold Survey. Regression analysis.	-mHealth (using mobile phone).	-High contraceptive use among cell phone user women.	-Measurement error about cell phone ownership.
Sunday, et al. (2018) [12]	-To assess the role of message from religious leaders in contraceptive use. -cross-sectional.	Nigeria	-Non pregnant women aged 15 to 49 years. -Sample size (9725).	-Face to face interview -Logistic regression.	-Religious leader message through sermon and media -Advocacy -Demand creation.	-Exposure to family planning messages from religious leaders increases contraceptive use.	-Social desirability bias.

groups. Although laparoscopic method of staging had a significantly longer time of the operation than laparotomy (p=0.04), but it had less intraoperative blood loss (p<0.001). Two patients which are operated by laparotomy had a blood loss more than 500 mL and required blood transfusion. No patients in the laparoscopic group were in need for blood transfusion.

CONCLUSION AND RECOMMENDATION

Demand generation, mass media campaign, panel discussions, advocacy, conducting public weekends on family planning, involvement of religious leaders and women's use of cell phones were found to be important in improving family planning interventions. Thus family planning interventions should be enhanced by these intervention strategies. Further studies should be conducted to identify the best family planning interventions in Sub Saharan Africa.

There were no significant differences between the both groups regarding patients' age, BMI, number of previous surgeries with abdominal incisions, histological grade of EC or FIGO stage.

DECLARATIONS

Ethical approval

Ethical clearance letter was received from IRB of Jimma University.

Competing interests

Authors' declare that they have no competing interests.

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AUTHOR'S CONTRIBUTION

All the authors developed the proposal, conducted the literature search and data charting, and data summary. TE and SG conducted the report writing. TE drafted the manuscript. All authors critically reviewed and approved the final manuscript.

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