

Family planning counseling during antenatal care and postpartum contraceptive uptake in Africa: a systematic review protocol

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Review question/objective: The objective of this review is to systematically identify, appraise and synthesize the best available evidence on the effect of family planning counseling during antenatal care attendance on postpartum contraceptive uptake.

The review question is, what is the effect of family planning counseling during antenatal care attendance on postpartum contraceptive uptake in Africa?

Keywords antenatal care; contraception uptake; family planning counseling; postpartum period

Background

Women in low-income countries face a greater risk of unwanted pregnancy and unsafe abortions compared with women in developed countries.¹ This increased risk has been attributed to the high demand and limited access to family planning services by women in this setting.² Research shows that one in every four women aged 15–49 years who are married or in a relationship would wish to time or control their child bearing but are not using any method of family planning.^{3,4} Despite the fact that contraceptive use has a direct and positive impact on reducing global maternal deaths by almost a third each year,^{5,6} this opportunity has not been fully exploited in low-income countries particularly those in Africa.⁷

Postpartum women are among those with the greatest need for timing or limiting births.⁸ However, because of lack of knowledge and limited availability of family planning services, some women end up not using any method of modern contraception during the postpartum period.^{9–13} Giving mothers the opportunity to time their pregnancies is

likely to reduce maternal and child mortality by 30% and 10%, respectively.^{14,15} In addition, contraceptive use within the first 12 months after childbirth has the potential of reducing the risk of undesired pregnancy outcomes, preterm birth, low birth weight and small size for gestational age.^{16–18} However, because of the low prevalence of postpartum contraception,¹⁹ women in Africa are still victims of these undesired pregnancy outcomes and the high maternal mortality rate.^{20,21}

Provision of family planning information is an essential aspect any time a pregnant woman accesses antenatal care (ANC).²² The current ANC protocol gives an opportunity for health workers to counsel pregnant women on the importance of family planning and the contraceptive options available when they come for the ANC services.^{23,24} During ANC visits, pregnant women should receive information on the methods, that is methods available, possible side-effects and resumption of contraception after childbirth.²⁵ Such information is likely to increase their knowledge base about family planning and subsequent uptake of contraception in the future.^{26–28}

In recent years, ANC attendance in Africa has increased; over two-thirds of pregnant women have at least one ANC contact with a healthcare

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provider before childbirth.²⁹ Such a milestone reveals increased opportunity of providing pregnant women with information on family planning during their visits to ANC clinics.³⁰ Nevertheless, researchers examining the effect of family planning counseling during ANC visits on the use of contraceptives in the postpartum period have revealed mixed results.³¹

In Kenya, counseling on contraceptive methods during ANC visits increased the uptake of all contraceptives during the postpartum period including the permanent methods,³² whereas a study carried out in the rural settings of Uganda revealed that receiving family planning education prenatally had no effect on postpartum contraceptive use.³³ However, a randomized controlled multi-country study that included only one African country, South Africa, found that family planning counseling during ANC had a moderate effect on contraceptive use during the first year postpartum period.³⁴

This kind of mixed information results in the improper implementation of the family planning services during the continuum of maternal health care because of the lack of reliable evidence of the effect of planning education during ANC on future use of contraception in the postpartum period especially in Africa where resources are limited. To the best of our current search, there seems no published quantitative systematic review assessing the effect of family planning education at ANC on the uptake of contraception in Africa. Therefore, this review is intended to provide evidence of the relevance of family planning counseling during ANC attendance on postpartum contraceptive use in Africa.

Inclusion criteria

Types of participants

This review will consider studies that include women in Africa in the reproductive age group of 15–49 years attending ANC. Studies of women not from an African setting and women using traditional methods of family planning will be excluded. These include rhythm/moon beads, withdrawal and folk methods. These methods will be excluded from our selection because these can be easily used by women without professional guidance.

Types of intervention(s)

The review will consider studies that evaluate the provision of family planning counseling information

or education to pregnant women who have attended ANC services compared with those who have not received the family planning counseling during ANC.

Outcomes

This review will consider studies that include the uptake of any kind of contraception during the postpartum period or within one year after childbirth.

Types of studies

This review will consider both experimental and epidemiological study designs including randomized and non-randomized controlled trials, quasi-experimental, before and after studies, retrospective and prospective cohort studies, case control studies and analytical cross-sectional studies for inclusion.

This review will also consider descriptive epidemiological study designs including case series, individual case reports and descriptive cross-sectional studies.

Search strategy

The search strategy aims to find both published and unpublished studies. A three-step search strategy will be utilized in this review. An initial limited search of MEDLINE and CINAHL will be undertaken followed by analysis of the text words contained in the title and abstract, and the index terms used to describe the article. A second search using all identified keywords and index terms will then be undertaken across all included databases. Third, the reference list of all identified reports and articles will be searched for additional studies. Studies published in English will be considered for inclusion in this review. Studies published since year 2000 will be considered for inclusion in this review, as this is the period when the World Health Organization introduced focused ANC in provision of maternal health care.³⁵

Databases to be searched:

PubMed, CINAHL, PopLine, LILACS, MedNar and Embase.

The search for unpublished studies will include theses and dissertations from academic institutions, reports from non-government organizations and government documents.

Initial keywords/search terms:

“Antenatal care” OR “antenatal services” OR “antenatal visits”] AND [“post-partum family planning use” OR “family planning use in the first twelve months after child birth” OR “Contraceptive use in

the postpartum period” OR “Contraceptive use in the first twelve months after child birth”

For this systematic review, the following definitions will be used:

Antenatal care that refers to the health services that a woman receives to monitor the health and progress of her pregnancy and her wellbeing during her pregnancy provided by skilled healthcare provider.

Postpartum contraception that means prevention of unintended and closely spaced pregnancies through the first 12 months following childbirth by use of modern family planning methods such as contraceptive pills, intrauterine devices, implants, injectables, emergency contraception, condoms and female and male sterilization.

Assessment of methodological quality

All articles selected for inclusion in the review will be subjected to a rigorous, independent appraisal. Regardless of their score, we will include relevant articles and discuss their individual limitations and risk of bias and how they may impact the results of this review.

Standardized critical appraisal instruments from the Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instruments (JBI-MAStARI) will be used. Any disagreements that arise between the reviewers will be resolved through discussions, or with a third reviewer. Critical appraisal tools are attached as Appendix I.

Data extraction

Quantitative data will be extracted from articles included in the review using the standardized data extraction tool from JBI-MAStARI. The data extraction tools are attached as Appendix II.

Data synthesis

Quantitative articles if appropriate will be pooled in statistical meta-analysis using the JBI-MAStARI. All results will be subjected to double data entry. The effect sizes, expressed as relative risk (for dichotomous data, e.g. use of contraceptives in the postpartum period) and their 95% confidence intervals will be calculated for analysis. Heterogeneity will be assessed using the standard χ^2 test. Where statistical pooling is not possible, the findings will be presented in narrative form.

Acknowledgments

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Appendix I: Appraisal instruments
MAStARI appraisal instruments

JBI Critical Appraisal Checklist for Randomised Control / Pseudo-randomised Trial

Reviewer Date

Author Year Record Number

	Yes	No	Unclear	Not Applicable
1. Was the assignment to treatment groups truly random?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were participants blinded to treatment allocation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was allocation to treatment groups concealed from the allocator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were the outcomes of people who withdrew described and included in the analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Were those assessing outcomes blind to the treatment allocation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Were the control and treatment groups comparable at entry?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were groups treated identically other than for the named interventions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were outcomes measured in the same way for all groups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Were outcomes measured in a reliable way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Was appropriate statistical analysis used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: Include Exclude Seek further info.

Comments (Including reason for exclusion)

JBI Critical Appraisal Checklist for Descriptive / Case Series

Reviewer Date

Author Year Record Number

	Yes	No	Unclear	Not Applicable
1. Was study based on a random or pseudo-random sample?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were the criteria for inclusion in the sample clearly defined?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Were confounding factors identified and strategies to deal with them stated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were outcomes assessed using objective criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. If comparisons are being made, was there sufficient descriptions of the groups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was follow up carried out over a sufficient time period?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were the outcomes of people who withdrew described and included in the analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were outcomes measured in a reliable way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was appropriate statistical analysis used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: Include Exclude Seek further info

Comments (Including reason for exclusion)

JBI Critical Appraisal Checklist for Comparable Cohort/ Case Control

Reviewer Date

Author Year Record Number

	Yes	No	Unclear	Not Applicable
1. Is sample representative of patients in the population as a whole?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are the patients at a similar point in the course of their condition/illness?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Has bias been minimised in relation to selection of cases and of controls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are confounding factors identified and strategies to deal with them stated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are outcomes assessed using objective criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was follow up carried out over a sufficient time period?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were the outcomes of people who withdrew described and included in the analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were outcomes measured in a reliable way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was appropriate statistical analysis used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: Include Exclude Seek further info.

Comments (Including reason for exclusion)

Appendix II: Data extraction instruments
MAStARI data extraction instrument

**JBI Data Extraction Form for
Experimental / Observational Studies**

Reviewer Date

Author Year

Journal Record Number

Study Method

RCT Quasi-RCT Longitudinal
Retrospective Observational Other

Participants

Setting _____

Population _____

Sample size

Group A _____ Group B _____

Interventions

Intervention A _____

Intervention B _____

Authors Conclusions: _____

Reviewers Conclusions: _____

Study results

Dichotomous data

Outcome	Intervention () number / total number	Intervention () number / total number

Continuous data

Outcome	Intervention () number / total number	Intervention () number / total number