

Women's decision in family planning use and its determinants in Ethiopia: A systematic review and meta-analysis protocol

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Protocol

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Abstract

Background

Low uptake of contraceptive use have much consequence on maternal and child health. Despite this effect, less emphasis was given to women's decision-making on family planning use in Ethiopia. Though there are studies conducted in different parts of the country on women's decision-making in family planning use, there are inconsistent findings. Thus, this systematic review and meta-analysis aimed to determine the pooled prevalence of women's decision-making in family planning use and its determinants in Ethiopia.

Methods

Preferred Reporting Items for Systematic Reviews and Meta-Analyses guideline will be followed to develop the review protocol. All observational studies will be retrieved using Medical Subject Heading (Mesh) terms or keywords from online databases PubMed, CINAHL, Google Scholar, and unpublished grey literature from May 10-11August/2021. The quality of the studies will be critically assessed using Joanna Briggs Institute checklist. Heterogeneity among studies will be examined using I-squared statistics. Funnel plots and Egger's test will be used to examine publication bias. The Meta-analysis will be performed using STATA version 14 software. Statistical significance will be determined at 95% CI.

Discussion

Improving women's autonomy on decision-making on reproductive health services including contraceptive use has a substantial advantage. There are studies on women's decision-making in family planning use and this systematic review and meta-analysis will help policymakers to develop appropriate interventions.

Introduction

Women's decision-making power in family planning use is the ability of women to decide freely independently or argue with their husbands or partners about family planning needs and choices [1]. Family planning (FP) is an effort done by couples to limit or space the number of children using family planning methods [2]. Women's decision-making on family planning use is associated with delayed marriage, access to accurate information, discuss freely family planning needs and choices with partners, members of the household, and the community, and independent decisions on fertility regulation, including increased health-seeking behavior to contraceptive [3, 4].

Women decision-making on family planning use provides benefits such as safeguards the health and rights of women, unplanned pregnancy and induced abortion, and reduce maternal and child mortality, and long-term reduction in fertility rates [4-7]. Women in low-income countries had deprived of their reproductive health rights [6, 8]. In developing countries, contraceptive use was low (40%), and the unmet need for family planning was 225 million people [9]. In sub-Saharan Africa, contraceptive use varies from 6.7% in Chad and 72% in Namibia [3]. In Ethiopia, contraceptive use was low (41.4%) and high unmet need 22%. Moreover, the total fertility rate (TFR) of 4.6 children per woman, maternal mortality 412 per 100,000 live birth, neonatal 30, infant 43, and under-five mortality rate per 1000 live birth were high [10, 11].

Low uptake of contraceptive use leads to high common childhood illness, lack of appropriate health, poor maternal and child health care, increase maternal and child mortality, increase workload of mothers, poor child growth, unfavorable impact on the economic status, and growth [2, 12-14]. Factors affecting women's decision-making on family planning use were educational level, socio-economic, domestic decision-making position and male partner influence, lack of knowledge, gender-based inequalities, and reproductive health services [14-20].

In Ethiopia, though the national 20-year health sector transformation plan [8], and national guideline for family planning Services [2] emphasized women's decision-making on family planning use, family planning use is still low. There is a lack of nationally representative data on women's decision-making on family planning use [10, 11]. Moreover, there are studies conducted in different parts of the country on women's decision-making in family planning [14, 15, 21-25]. However, there are inconsistent findings on prevalence and its determinants of women's decision-making on family planning use. Thus, this systematic review and meta-analysis aimed to determine the pooled prevalence of women's decision-making in family planning use and its determinants in Ethiopia.

Research question

- What is the pooled prevalence of women's decisions in family planning use in Ethiopia?
- What are the determinants of women's decisions in family planning use in Ethiopia?

Objectives

- To determine the pooled prevalence of women's decisions in family planning use in Ethiopia.
- To identify determinants of women's decisions in family planning use in Ethiopia.

Methods

Study Protocol and Reporting

The review protocol will be reported using the Preferred Reporting Items for Systematic review and Meta-analyses (PRISMA) guideline [26]. PRISMA-P 2015 checklist will be used for the review protocol report [27] (*Additional file 1*).

Eligibility criteria

All observational studies, including cross-sectional, case-control, and cohort studies will be included. Case reports, case series, and preprint will be excluded from the review. For quantitative and qualitative studies finding on women's decision-making in family planning use, we will only consider the quantitative result. Studies conducted at institution and community level will be included. Studies published in the English language alone will be included. There will not be a restriction on the publication date.

PECO search guide

Population: Married women of reproductive age group (15–49 years)

Exposure: determinates of women's decision-making in family planning use. Determinates are exposures that increase or decrease the likelihood of women's decision-making in family planning use among married reproductive-age women in Ethiopia. The determinates can be the educational status of partners, domestic decision-making position, male partner influence, lack of knowledge on contraceptives, gender-based inequalities, access to reproductive health services, etc.

Comparison: This is the reported reference group for each determinate. Education versus no education, male or women household decision-making position, male partner influence versus no influence, good knowledge on contraceptives versus poor, gender-based equalities versus inequalities, access versus no access to reproductive health services, etc.

Outcome: The primary outcome variable will be the overall prevalence of women's decision-making in family planning use among married women of reproductive age group. The secondary outcome variable will be the determinants of women decision-making in family planning use in Ethiopia. Women's decision-making in family planning use refers to women's decision-making in at least one of the following activities; freely family planning needs and choices with partners, independent or joint decisions on fertility regulation or family planning use and increased health-seeking behavior to contraceptive use.

Searching strategy and study selection

PubMed, Google Scholar, CINAHL online databases, and grey literature will be used to search studies from May 10-11 August /2021. In addition, cross-references searching of related studies will be done from the included studies. The searching of the studies will be done by (EW and SB). The studies will be retrieved and exported to Endnote version 8 reference manager to collect, organize and manage search results [28]. Removal of duplicates, irrelevant titles, and abstracts will be done. Procedure of articles selection and report results will be reported using PRISMA chart (*Additional file 2*). Full text selected studies will be evaluated further for quality.

The Medical Subject Heading (Mesh) terms search will be developed using authors key words, titles, abstracts and PMID of studies on women's decisions in family planning use. Terms search modification will be done based on the database used and Boolean operators will be used to search journal articles electronics databases (*Additional file 3*).

Quality assessments

The quality of studies will be assessed using their title, abstract, and full-text review before the inclusion of studies on the final systematic review and meta-analysis. Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument (JBI-MAStARI) will be used to assess the qualities studies [29]. The tool emphasizes explicit inclusion and exclusion criteria, standard measurement criteria, study subjects and setting, strategies to deal with confounding, exposure measurement validly and reliably, outcomes measurement, and appropriate statistical analysis (*Additional reference 4*). The full-text articles will be assessed by two authors (EW and SB). A quality scale of 50% and above will be considered and included in the final systematic and meta-analysis review. Disagreement among reviewers will be discussed by the third author (MA) to reach an agreement.

Data extraction and management

Piloting of the data extraction will be carried out independently by all authors on Microsoft Excel (2016) before the beginning of the actual data extraction. The actual data extraction will be done by the two authors (EW and SB). The data extraction tool will contain information on the first author name, publication year, study setting, study design, sample size, prevalence, odds ratio, lower and upper bound of the confidence interval, log transformation, and standard error of logarithm. Discrepancies in data extraction will be solved by discussing with a third author (MA). In case of missing data, or incomplete reports, we will contact the corresponding authors by email.

Data synthesis and analysis

Importing of extracted data to STATA version 14 for analysis will be done. A narrative synthesis of included studies will be done. Freeman Tuckey will be used for Square root transformation of data to avoid variance variability [30].

A random-effect model will be used to determine the pooled prevalence of women's decision-making in family planning use in Ethiopia [31]. Forest plots will be used to present the pooled prevalence and its determinants of women's decision-making in family planning use at a p-value of less than 0.05 [32]. The Cochran's Q [33], and I^2 statistics [34] will be used to identify heterogeneity across the studies. The I^2 statistic estimates the percentage of variations across studies. I^2 values of 25%, 50%, and 75% are low, moderate, and high heterogeneity respectively. The sources of heterogeneity will be using subgroup analysis and Meta-regression based on region and study settings (urban and rural) at p-value < 0.05. Moreover, sensitivity analysis will be done to investigate the effect size of studies. The funnel plot will be used to check publication bias using visual observation [32]. Statistical tests of Eggers and Begg's tests [35] will be done to check publication bias of the funnel plots. An asymmetry of the funnel plot indicates publication bias. A p-value of < 0.05 will be used to declare publication bias.

Discussion

This systematic review and meta-analysis protocol aim to determine the pooled prevalence of women's decisions in family planning use and identify its determinants in Ethiopia. Improving women's autonomy on decision-making on reproductive health services has a substantial advantage, including fertility regulation, reduction of child mortality, and improve child feeding practices [5, 6, 9, 24, 36–38].

Low contraceptive use leads to a lack of children proper care from households member [13]. Worldwide, about six million children died before reaching their first year birthday, and about 35 women died every hour due to birth-related complications [39–41]. In developing countries, particularly sub-Saharan Africa countries, contraceptive utilization was low [12, 13]. Contraceptives use was low in Ethiopia, and there was a higher unmet need for family planning, total fertility rate, neonatal, infant, and maternal mortality [10, 11].

The finding from this systematic review and meta-analysis will help to identify the pooled prevalence and its determinants of women's decisions in family planning use. Therefore, it is mandatory to synthesize studies finding to inform policymakers for appropriate intervention to improve women's decisions in family planning use. This review protocol may have limitations, including heterogeneity due to differences in study designs, sample size, and publication biases. Articles published only in the English

language will be included. Only observational studies design will be included and interventional and quasi-interventional studies will be excluded from the review.

Abbreviations

FP: Family-planning; JBI-MAStARI: Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument; PRISMA: Preferred Reporting Items for Systematic review and Meta-analyses; TFR: Total fertility rate

Declarations

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Author contribution

EW conceived, designed, and drafted the systematic review and meta-analysis protocol manuscript. EW, SB, and MA extensively reviewed and incorporated inputs in the protocol manuscript development. Each author read and approved the final version of the protocol.

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Availability of data and materials

Additional files were submitted as supplementary materials together with the systematic review and meta-analysis protocol.

Ethics approval and consent to participate

N/A

Consent for publication

Not applicable.

Conflict of interest

Authors declare no conflict of interest

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