

# Male involvement in family planning use and its determinants in Ethiopia. A systematic review and meta-analysis protocol

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## Systematic Review

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# Abstract

**Background:** The need to include males that required joint spousal decision is critical in achieving key reproductive health indicators. The low involvement of males in family planning use is one of the contributing factors for low contraceptive use in Ethiopia. Moreover, there are inconsistent findings on the prevalence and determinates of males involvement in family planning use. Thus, this systematic review and meta-analysis aimed to determine the pooled prevalence of men's involvement in family planning use and its determinants in Ethiopia.

**Methods:** The Preferred Reporting Items for Systematic Reviews and Meta-Analyses guideline will be used to develop the protocol. Online databases PubMed, CINAHL, Google Scholar, and grey literature will be searched to retrieve available articles. The quality of the studies will be assessed using Joanna Briggs Institute checklist. Chi-squared test and I-squared statistic will be used to examine heterogeneity among studies. Sources of heterogeneity will be investigated using subgroup analyses and meta-regression. Publication bias will be examined by observation using funnel plots and statistically by Begg's and Egger's tests. A random-effect model will be used to estimate the pooled prevalence and its determinants.

**Discussion:** The role of the male in family planning and participation in contraceptive use improves women's uptake and continuity of family planning use. Though there are studies on male involvement in family planning use, there are no synthesis research findings on the overall pooled prevalence of male involvement in family planning use and its determinants in Ethiopia. Therefore, the finding from this systematic review and meta-analysis will help the national health sector transformational plane to emphasize the overall pooled prevalence and its determinants that drive low male involvement in family planning use.

## Introduction

"Male involvement in family planning refers to all organizational activities aimed at men as a discrete group which has the objective of increasing the acceptability and prevalence of the family-planning (FP) practice of either sex" [1]. Family planning is an effort by a couple to limit or space the number of children they have by using contraceptive methods [2]. Family planning use reduces unwanted pregnancy, induced abortion and promote birth spacing. Moreover, it also helps to reduce neonatal, infant, child, and maternal mortality [2, 3].

The need to include men that required joint spousal decisions is critical in achieving reproductive health key indicators [4-10]. However, male roles in couple's fertility decision-making have given less emphasis. There was a paradigm shift in male involvement and concerns from increasing contraceptive use and attaining demographic goals to gender equality and achieving various reproductive duties since the 1994

International Conference on Population and Development (ICPD) and the 1995 UN World Conference on Women [1, 11].

Globally, contraceptives methods use varied from 69% southeast Asia to 11% in Africa [12]. A Qualitative review in Sub-Saharan African countries showed low involvement of men in family planning use [13]. To achieve sustainable development Goals (SDGs), the participation of men in reproductive health issues is crucial. Moreover, regulating fertility to the level of substitution is essential to increase economic development [14]. Family planning use can avert 32% and 10% of maternal and child mortality respectively [15, 16].

Studies showed that factors that contributed to low family planning coverage include the desire to have more children, lack of knowledge, lack of husband education, and negative perception towards family planning use, sex preference, religious prohibition, and low involvement of men [9, 13, 17, 18].

In Ethiopia, the decision on household-related issues, including fertility, mainly belongs to the husband. The low involvement of men in family planning use is one of the contributing factors for low contraceptive use and high unmet need. Studies done in different regions of Ethiopia showed the role of men in family planning use, and male participation in contraceptive use improves women's uptake of family planning services [2, 4, 19-21]. The contraceptive use was low 41.4%, and high unmet need for family planning 22% and contributes to a high total fertility rate (TFR) 4.6, maternal mortality 412 per 100,000 live birth, neonatal 30, infant 43, and under-five mortality rate per 1000 live birth [2, 22].

Though the Ethiopian government set a target for a contraception prevalence rate of 55% by 2020 to achieve SDGs [23] and develop National Guideline for Family Planning Services [24], low emphasis has given to the role of men's involvement. Moreover, there is a lack of nationally representative data on men's involvement in family planning use [2, 22]. Several studies had conducted in different parts of the country on male involvement in reproductive health and utilization of family planning [4, 6, 25-27]. However, there are inconsistent findings on prevalence and its determinants [16-21, 25]. Therefore, this systematic review and meta-analysis aimed to determine the pooled prevalence of male involvement in family planning use and its determinants in Ethiopia.

## **Research question**

- What is the pooled prevalence of male involvement in family planning use in Ethiopia?
- What are the determinants of male involvement in family planning use in Ethiopia?

## Objectives

- To determine the pooled prevalence of male involvement in family planning use in Ethiopia
- To identify determinants of male involvement in family planning use in Ethiopia

## Methods

### Study Protocol and Reporting

A systematic review and Meta-analysis protocol will be prepared using the Preferred Reporting Items for Systematic review and Meta-analyses (PRISMA) guideline [28]. PRISMA-P 2015 checklist will be used to report the review findings [29] (*Additional file 1*).

### Eligibility criteria

All observational studies including cross-sectional, case-control, and cohort and grey literature in Ethiopia will be included. Case reports, case series, conference reports, and expert opinions will be excluded from the review. Studies that only investigate the qualitative approach of male involvement in family planning use will be excluded. If studies that address both quantitative and qualitative finding, we will only consider the quantitative findings result. Studies published in the English language alone will be included. There will not be a restriction on the date of publication.

### PECO search guide

**Population:** Women of reproductive age (15–49years)

**Exposure:** Determinates of male involvement in family planning use. Determinates are exposures that increase or decrease the likelihood of males involvement in family planning use among reproductive-age women in Ethiopia. The determinates can be marital status, the number of children, discussion with partner, knowledge on contraceptive use, ever used family planning methods, participation in community networks, etc.

**Comparison:** The reported reference group for each determinate in each study: marital status versus single, available children or not, good knowledge versus poor knowledge on contraceptives use, discussion of partners on family planning use or not, etc.

**Outcome:** We will include studies that determine the prevalence of male involvement in family planning use and its determinants in Ethiopia. The response of each item will be scored as “Yes” or “No” questions, “1” for yes answers, and “0” for no from women’s responses whether male partners involves in family planning use either in giving advice, coordination, decreasing opposition, support in needs, and given rights.

## **Searching strategy and study selection**

Online databases including PubMed, Google Scholar, CINAHL, and grey literature will be used to search articles. In addition, cross-references searching of the included study will be done to include related studies. Removal of duplication, irrelevant studies, and inclusion of eligible studies and report results will be designed by the PRISMA chart (*Additional file 2*). The two authors (EW and SB) will independently screen the studies. Studies that mentioned the objective of male involvement in family planning use with full text will be further evaluated to eligibility by (EW and SB). The articles will be retrieved and exported to Endnote version 8 reference manager software to collect and organize search outcomes [30].

The search Medical Subject Heading (Mesh) terms will be done by using the authors’ keywords of the published articles related to the objective of the review, and PMID of sample index manuscripts on male involvement in family planning use will be identified. The PMID of the manuscript will be taken from PUMED, and Yale MeSH analyzer will be searched on Mesh analyzer on google. Then, search strategies will be developed using different Boolean operators (OR, AND). The terms or keywords are (Husbands’ involvement OR male involvement OR Men involvement OR Decision Making OR Communication OR family Relations OR Practice OR Intention OR Health Knowledge OR Attitudes OR Contraceptive OR Contraception methods OR Family Planning OR Family Planning methods OR Contraception Behavior OR Family Planning Services OR long-acting contraceptive OR permanent contraceptive OR Health Services Accessibility OR organization & administration.) AND (Marriage OR Sex OR Education OR gender identity OR Age Factors OR Socioeconomic Factors OR Educational Status OR associated factors OR predictors OR determinates) AND (Humans OR Adult OR Adult Aged OR Female OR middle-aged OR Adolescent OR Young Adult OR male OR men OR Spouses) AND (Ethiopia OR Rural OR urban OR Sub-Saharan Africa OR low-income country OR Developing country) (*Additional file 3*).

## **Quality assessments**

Assessment of articles using their title, abstract, and full review of the manuscripts will be done before the inclusion of articles in the final meta-analysis. The qualities of each article will be assessed by using the Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument (JBI-MASARI) [31]. Particular attention will be given to clear statement of the objective, inclusion criteria, study subjects, and setting, standard criteria used for measurement of the condition, exposure

measurement in a validly and reliably strategies to deal with confounding, outcomes measurement, and appropriate statistical analysis sampling (*Additional reference 4*). Studies 50% and above of the quality scale will be considered and included in the final systematic review and meta-analysis. Studies that will not be eligible based on the full-text assessment will be excluded. The quality of the full articles will be assessed by two authors (EW and SB). Any disagreement among reviewers will be resolved by the third author (ZH).

## **Data extraction and management**

Data extraction template will be constructed on Microsoft Excel (2016) for full-text eligible articles. Piloting of the data extraction will be carried out before the beginning of the authentic data extraction by all authors. All necessary data will be extracted using the pre piloted excel data extraction tool. The tool will contain information including author name, the year of publication, study area, study design, sample size, prevalence or proportion, odds ratio, lower confidence interval, upper confidences interval, log transformation and standard error of logarithm of prevalence, odds ratio, lower confidence interval, and upper confidences interval will be calculated. The two authors (EW and SB) will independently extract the data. Any discrepancies will be discussed with a third author (ZH) to reach an agreement. Authors will contact the authors of the studies in case of missing data or incomplete reports.

## **Data synthesis and analysis**

The extracted data will be imported to STATA version 14 for analysis. The data will be presented using narrative synthesis of included studies and results will be presented using tables and figures. Square root transformation of data will be done using the Freeman Tuckey variant of the arcsine to avoid variance variability [32].

The pooled prevalence estimate of male involvement in family planning use in Ethiopia will be done using a random-effect model [33]. Forest plots will be used to present the pooled prevalence and its determinates of male involvement in family planning use at a statistical significance level of a p-value of less than 0.05 [34]. Heterogeneity across studies will be assessed using Cochran's Q [35] and I<sup>2</sup> statistics [36]. I<sup>2</sup> values of 25%, 50%, and 75% representative of low, moderate, and considerable heterogeneity respectively. Subgroup analysis and Meta-regression will be done to identify the sources of heterogeneity. Moreover, the sensitivity analysis will be done to investigate the effect size estimates of a single study. Publication bias will be checked using visual inspection on the funnel plot [34]. An asymmetry of the funnel plot indicates publication bias. Moreover, Eggers and Begg's tests [37] will be

conducted to check the potential publication bias and a p-value of  $< 0.05$  will be used to declare the statistical significance of publication bias.

## **Discussion**

This systematic review and meta-analysis protocol aim to synthesize the pooled prevalence of male involvement in family planning use and its determinants in Ethiopia. After the 1994 International Conference on Population and Development (ICPD) and the 1995 UN World Conference on Women, attention to male involvement has improved special efforts to emphasize men's joint responsibility and promote their active participation in reproductive health serves [1, 11].

Studies showed family planning has many benefits, including reducing maternal, child, and infant mortality. Protect unplanned pregnancy and improve sustainable socio-economic development. Family planning could avert up to 42% of maternal mortality [38]. Despite these benefits, contraceptive use is still low, and the unmet need for family planning is high in developing countries, including Ethiopia [4, 7, 9, 10]

Studies in developing countries examined the role of men in family planning and male participation in contraceptive use improves women's uptake of family planning methods, increasing spousal coordination, support the success of family planning programs, and provide rights to their partners in reproductive health services [9, 13, 17, 18].

Currently, there are no synthesis research findings on the pooled prevalence of male involvement in family planning and its determinants in Ethiopia. Therefore, this synthesis will help the development of appropriate strategies that will have an impact on male involvement in family planning use.

This study protocol may have the following limitation. Heterogeneity may exist between studies due to differences in study designs, settings, sample size, target group, and publication biases. Only articles published in the English language will be considered. Moreover, only observational studies design will be included, and interventional trials and quasi-experimental studies will be excluded.

## **Declarations**

### **Conflict of interest**

Authors don't have any conflict of interest

## Author contribution

EW conceived, designed, and drafted the systematic review and meta-analysis protocol manuscript. EW, SB, and ZH 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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