**Eastern Ethiopia** 

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currently married men in rural

## Abstract

Introduction/Objectives: Male involvement in family planning refers to all organizational actions focused on men as a distinct group to increase the acceptability and uptake of family planning among either sex. Despite the growing evidence of male involvement in increasing family planning uptake among couples, a little success has been achieved in Ethiopia, especially in rural areas. Hence, this study aimed to assess male involvement in family planning and its associated factors among currently married men in selected rural areas of Eastern Ethiopia.

Methods: A community-based cross-sectional survey was conducted among 577 randomly selected currently married men, using a simple random sampling method in randomly selected rural districts of Eastern Ethiopia. Data were collected using a pretested interviewer-administered questionnaire. The collected data were entered into a computer using Epi-Data Version 3.1. The analysis was performed using the Statistical Package for the social sciences software version 21. Logistic regression analysis was used to analyze the association between the dependent and independent variables. Finally, adjusted odds ratio with 95% confidence intervals at P-value < 0.05 was considered to be significantly associated with the outcome variable.

Results: Out of 577, a total of, 555 married men were included in the study, resulting in a response rate of 96.2%. The magnitude of male involvement in family planning use was 59.3% (95% confidence interval: 47.1, 68. 2). Ever use of family planning by a spouse (adjusted odds ratio: 2.37; 95% confidence interval: 1.59, 3.52), ever discussion of spouse on sexual and reproductive health/family planning issues (adjusted odds ratio: 2.05; 95% confidence interval: 1.40, 3.02), and the husband's approval of family planning (adjusted odds ratio: 2.45; 95% confidence interval: 1.34, 4.96) were significantly associated with higher odds of male involvement in family planning use than their counterparts.

Conclusion: The number of men involved in the family planning was low. Ever use of family planning methods by a spouse, ever discussion of spouse on sexual and reproductive health/family planning issues, and husband approval on family planning use were found to be important predictors of male involvement in family planning use. To improve modern family planning uptake among men and women, it is imperative to include men in family planning programs, such as family planning messaging, sensitizations, and services.

## **Keywords**

Family planning, male involvement, currently married, Eastern Ethiopia

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## Introduction

Male involvement in family planning (FP) refers to all organizational actions focused on men as a distinct group to increase the acceptability and uptake of FP among either sex. It encompasses men being involved either in decision making, approving it, or supporting their spouse to use FP.<sup>1</sup> FP, which is the conscious effort by an individual or couple to limit or space the number of children they have through the use of contraceptive methods has many benefits including economic development, maternal and child health improvement, educational advances, and women's empowerment through career aspirations with control over their fertility desires.<sup>2-5</sup> The Sustainable Development Goal (SDG) 3 considers reproductive, maternal and child health as priority agenda, which will not be attained without FP. Involving men in FP is one of a crucial public policy intervention to achieve national and SDGs.6,7

Women face many obstacles, including lack of access to information and healthcare services, opposition from their husbands, communities, and misperceptions about side effects. Oppositions to FP from their husbands or noninvolvement of men in FP are the major reasons for the women not to use contraception despite their desire to do so.<sup>8,9</sup> In traditional societies, family limitation and negotiation over sexual matters may not be considered respectable subjects, and it is not uncommon for husbands and wives to avoid the discussion of contraception or sexual matters.<sup>10</sup>

Advancement has been seen since the 1994 International Conference on Population Development (ICPD) involving men in FP services worldwide. Interest in men's involvement in reproductive health has increased among countries. Special efforts were made to focus on men's shared accountability to promote their active involvement in sexual and reproductive health (SRH) issues including decision making in FP.<sup>4,5</sup>

Despite the growing evidence of involving men in reproductive health decision making, fertility rates, and unmet need for FP remain high in many sub-Saharan African countries.<sup>8,9</sup>

Evidence suggested that involving men in FP improves spousal communication, increase acceptance, and continuation of FP methods through pathways of increased knowledge or decreased male opposition.<sup>8,11–13</sup>

The matters of FP have not been left only for women. Husband is the most important decision maker in developing countries predicting future women's fertility desires to limit or space birth. Apart from the role of decision makers in the family, their actions in terms of abuse or neglect have a direct impact on the health of their partners and children.<sup>14–16</sup>

The Ethiopian Federal Minister of Health also emphasized on men engagement in FP as a strategy to improve contraceptive rate.<sup>17</sup> Although Ethiopia has adopted the approach in line with the agenda of ICPD in 1994, a little success has been achieved in engaging men in fertility issues, especially in rural areas. Despite contraceptive utilization increase internationally, Ethiopia's current contraceptive prevalence rate (CPR) remains 36% and 22% of currently married women have an unmet need for FP services.<sup>2</sup>

In countries like Ethiopia, where the majority of the population are living in rural, with high women illiteracy rate, limited reproductive negotiation, and dominated by the patriarchal system using an innovative approach of communication strategies to increase FP utilization is very crucial. Understanding the role of male involvement in FP could contribute to efforts aimed at increasing the uptake of FP in the region. Therefore, this study aimed to assess the level of husband's involvement in FP use among currently married men in selected rural areas of Eastern Ethiopia.

## **Materials and methods**

## Study area and period

East Hararghe is one of the zones of the Oromia regional state, located in the Eastern part of Ethiopia, 526 km from Addis Ababa. This zone has a total population of 2,723,850, of whom 1,383,198 are men and 1,340,652 women; East Hararge has a population density of 151.87. While 216,943 or 8.27% are urban inhabitants, a further 30,215 or 1.11% are pastoralists. Approximately, a total of 580,735 households were residents of this zone which results in an average of 4.69 persons to a household, and 560,223 housing units.<sup>13</sup> The study was conducted in January 1–30, 2020.

## Study design and population

A community-based cross-sectional study was conducted among currently married men living in selected kebeles (a small administrative unit in Ethiopia) in the rural parts of the Eastern Hararghe Zone. All currently married men living in selected kebeles and available during the data collection period were included in the study, while men with mental and serious health problems, those who reported infertility, and those who were not available at home during the data collection period after three visits were excluded from the study.

# Sample size determination and sampling procedure

The sample size was calculated using single population proportion formula with the assumption of proportion (*p*) for male involvement in FP to be 65.5% (i.e. p=0.655) from previous study,<sup>8</sup> 95% confidence interval (CI) with 5% tolerable error and design effect of 1.5 and a 10% nonresponse rate, which gave the final sample size of 577 participants.

Multi-stage sampling techniques were used in this study. Among the woredas (an administrative division of Ethiopia) in the study area, three were selected using lottery methods. Then one kebele from each woreda was selected by simple random sampling. Proportional allocation for each kebele was used to provide an equal chance. All eligible households in each selected kebele were selected using systematic random sampling. From the eligible households, study participants (currently married men) were selected using simple random sampling.

## Data collection procedure and quality control

Data were collected using a structured and intervieweradministered questionnaire adapted from a national study and modified to the study setting after the pretest, which consisted of men's sociodemographic information, knowledge about contraception, reproductive history, contraceptive use, fertility desire, couple's communication, and decision making on FP.<sup>1,2,18,19</sup> Three health extension workers and two supervisors have participated in data collection.

Data were collected by the local language version of the tool and every participant was interviewed in a private area where they were comfortable answering the question freely. To control the data quality, supervisors and data collectors were trained for 2 days. The tools were pretested on 5% (29 participants) of the total sample size and modifications were made to our setup based on the pretest results. The collected data were checked daily and double data entries were performed.

## Study variables

Independent/explanatory variables. Socio-demographic characteristics: age, average monthly income, educational status, occupation, and number of children.

**SRH-related characteristics:** knowledge about contraception, contraceptive use and fertility desire, and SRH communication.

**Dependent variable:** Male involvement in FP use.

**Operational definitions.** Knowledge of modern contraceptive methods: The man was considered as knowledgeable if he knew at least one type of modern contraceptive methods.<sup>20</sup>

**SRH discussion:** Men who discussed at least two SRH issues (about FP methods option, sexual intercourse, STI/HIV/AIDS prevention, their future fertility plan, prevention of unwanted pregnancy, menstrual cycle, use of contraception etc.) with their spouse in the last 12 months.

**Partner approval:** if the male partners support/encourage their spouses to use FP methods.

Male involvement in FP: defined as men being involved in decision making, approving or supporting their spouse to use FP assessed by "Yes /No" question if they were involved either in decision making, approving it or supporting their spouse to use FP.<sup>1</sup>

### Statistical analysis

The collected data were entered into a computer using the Epi-Data Version 3.1. Data analysis was performed using

the Statistical Package for the social sciences (SPSS) software version 21. Frequencies of variables were generated; and tabulation and percentages were used to illustrate the study findings. Bivariate and multivariate logistic regression analyses were used to analyze the association between the dependent and independent variables. The outcome variable (male involvement in FP use) was coded as a yes/no response and each explanatory variable was tested for association in bivariate analyses. Covariates with a P-value < 0.25were retained and entered into the multivariable logistic regression analysis using a forward selection and backward elimination approach. Hosmer and Lemeshow's goodnessof-fit test was used to assess whether the necessary assumptions were fulfilled. Adjusted odds ratio (AOR) with 95% confidence intervals using a P-value < 0.05 was considered as statistically significant association with the outcome variable.

### Ethical considerations

Ethical approval was obtained from the Haramaya University College of health and medical sciences institutional health research ethics review committee. Formal letters were written to all concerned authorities and permission was secured at all levels. Informed, voluntary, written, and signed consent was obtained from each respondent after explaining the purpose and procedure of the study. All the basic principles of human research ethics (respect for persons, beneficence, voluntary participation, confidentiality, and justice) were respected. The study was conducted in accordance with the principle of the Declaration of Helsinki.

## Results

### Sociodemographic characteristics of respondents

Out of 577, a total of 555 married men participated in the study which gave a response rate of 96.2%. The mean age of participants was 26.6 ( $\pm$ standard deviation=4.62). A total of, 459 (82.7%) participants were from the Oromo ethnic group. A total of, 471 (84.9%) were Muslim. Concerning educational status 307 (55.3%) participants had no formal education (Table 1).

## Knowledge toward modern contraceptive methods

Most of the study participants 521 (93.9%) had heard about modern FP methods. Regarding the knowledge of study participants toward modern FP methods, 507 (91.4%) knew at least one type of modern FP method. The most popular method was the injection 491 (94.2%), implants 447 (85.8%), pills 367 (70.4%), intra uterine contraceptive device (IUCD) 79 (15.2%), condom 24 (4.6%), and permanent FP methods 4 (0.8%), respectively.

Variables	Frequency (N)	Percentages (%)
Age		
20–34	339	61.1
35–49	192	34.6
50+	24	4.3
Ethnicity		
Oromo	459	82.7
Amhara	51	9.2
Harari	25	4.5
Others <sup>*</sup>	20	3.6
Religion		
Muslim	471	84.9
Orthodox	51	9.2
Protestant	21	3.8
Others**	12	2.1
Education background		
No formal education	307	55.3
Primary school	195	35.1
Secondary school	34	6.1
10+	19	3.4
Occupation		
Farmer	537	96.8
Others	18	3.2
Average monthly income		
<25 USD	242	43.6
25–49.975 USD	207	37.3
50–74.975 USD	83	15.0
75–99.975 USD	23	4.1
Number of children		
0	13	2.3
1–2	157	28.3
3-4	236	42.5
5 and above	149	26.8

**Table 1.** Demographic characteristics of currently married men in the study area (n=555), 2020.

**Table 2.** Communication, involvement in decision making and approval of FP use among currently married men (n = 555), 2020.

Variables	Frequency (N)	Percentage (%)
A desire for more children		
Yes	258	46.5
No	297	53.5
The male partner involved in the	e FP use	
Yes	329	59.3
No	226	40.7
Discussion on SRH/ FP		
Yes	288	51.9
No	267	48.I
Men attitude toward FP method	s use	
Supportive/approve	312	56.2
Not supportive/disapprove	243	43.8
A decision on contraceptive use	(291)	
Joint decision	202	69.4
Mainly spouse decision	70	24.1
Mainly the men decision	14	4.8
Others <sup>*</sup>	5	1.7

FP: family planning; SRH: sexual and reproductive health.

\*Others: relatives, friends, health care providers.

## Male involvement in FP

Three hundred and twenty-nine (59.3% (95% CI: 47.1, 68. 2)) of the participants were involved in the FP use. Concerning decision-making of FP method use, 202 (69.4%) replied that they made decisions jointly while only 70 (24.1%) replied that spouses made decisions by themselves alone (Table 2).

## Factors associated with male involvement in FP use

A binary logistic regression analysis of some independent variables with the dependent variable was performed. Men whose spouses ever used FP methods were 2.37 times more likely (AOR=2.37 95%, CI: 1.59, 3.52) to be involved in FP use than those men whose spouses had never used FP methods.

Men who discussed about SRH/FP with their spouse were 2 times more likely (AOR=2.053, 95% CI: 1.40, 3.02) to be involved in FP use than those who did not discussed with their spouse. Men who approved/supported FP use were 2.5 times more likely (AOR=2.45, 95% CI: 1.34, 4.96) to be involved in FP use than men who did not approve (Tables 3 and 4).

## Discussion

This study assessed men's involvement in FP use and its associated factors in selected rural areas of Eastern Hararge, Eastern Ethiopia. The study showed that 59.3% of men were involved in FP use. This finding is in line with finding from Cameroon (57.2%).<sup>21</sup> However, it is higher than that of Afar,

USD: United States Dollar; ETB-Ethiopian Birr.

\*Others: Guraghe, Tigre, Somali; \*\*others: Catholic, Adventists, Pagans;

\*\*others: Laborers, merchants, and gov't employees.

## Contraceptive use among study participants

The study findings showed that 243 (43.8%) of the study participants' spouses ever used modern contraceptive methods. The current utilization of modern contraceptive methods among spouses was 102 (18.4%). Concerning the types of modern contraceptive methods, 50 (49%) used injectable, 45 (44.1%) implants, 5 (4.9%) pills, and 2 (2%) used IUCD. However, none of the participants reported the use of condoms or permanent methods. More than two-fifths (43.7%) of the spouses used contraceptive methods for spacing birth while 27% used contraceptive method to limit birth. The remaining participants used it for health benefits or treatment. Reason for not using FP among spouse were, inconvenience for use, want to have a child, husband disapproval, fear of side effect, and some others.

Variables	Male involvem	ent in FP use	Odds ratio (95% confidence interval)	
	Yes	No	COR (95% CI)	P-value
Age				
20-49	197	220	1.791(0. 97, 2.679)	0.33
≥50	46	92	I Í	
Average monthly income				
<75 USD	40	32	1.724(1.00, 2.839)	0.28
≥75 USD	203	280	I	
Number of children				
0-4	114	205	I	
5 and above	129	107	2.168(0.537, 3.057)	0.85
FP methods information				
Yes	318	203	2.15(0.59, 7.80)	0.66
No	11	23	I ,	
Ever use of modern FP me	thod			
No	131	112	I	0.001*
Yes	198	114	1.46 (1.06, 2.09)	
SRH/FP discussion				
Yes	186	102	1.55 (1.13, 2.22)	0.001*
No	146	124	1	
Partner approval				
Yes	197	115	1.44 (1.55, 4.50)	0.000*
No	132	111	I ,	
FP knowledge				
Yes	311	196	2.645 (1.435, 4.872)	<b>0.02</b> <sup>*</sup>
No	18	30	Ì	

**Table 3.** Bi-variable analysis of factors associated with male involvement in modern FP use (n = 555), 2020.

FP: family planning; CI: confidence interval; USD: United States dollar; SRH: sexual and reproductive health. \*significant at P < 0.25 in bi-variable analysis.

Table 4. Mul	ltivariate analysis of	factors associated	with male involveme	ent in modern FP	use (n = 555), 2020.
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Variables	Male involvem	nent in FP use	Odds ratio (95% confidence interval)		P-value
	Yes	No	COR (95% CI)	AOR (95% CI)	
FP methods info	ormation				
Yes	318	203	3.28 (1.56, 6.86)	2.15 (0.59, 7.80)	
No	11	23	Ì	Ì	
Ever use of mo	dern FP method				
No	131	112	I	I	
Yes	198	114	1.46 (1.06, 2.09)	2.37(1.59,3.52)**	< 0.001**
discussion on S	RH/FP		, , , , , , , , , , , , , , , , , , ,		
Yes	186	102	1.55 (1.13, 2.22)	2.05 (1.40, 3.02)**	< 0.001**
No	146	124	Ì	Ì	
Partner approva	al				
Yes	197	115	1.44 (1.55, 4.50)	2.45 (1.34, 4.96)**	0.000**
No	132	111	I Í	I Í	
Knowledge of r	nodern FP methods				
Knowledgeable					
Yes	311	196	2.645(1.435,4.872)	1.989(0.671,5.893)	
No	18	30	l , , , ,	I	

FP: family planning; CI: confidence interval; AOR: adjusted odd ratio; SRH: sexual and reproductive health.

\*\*significant at P < 0.05 in multivariate analysis.

Ethiopia (42.2%),<sup>1</sup> and Kenya (46.24%).<sup>22</sup> This might be due to increased awareness and knowledge of the community about contraception with an increase in time, increased access to FP services, or increased involvement of NGOs, private, and religious organizations in the advocacy and provision of FP services. This is evidenced with some studies in Ethiopia that suggest awareness of FP in the general population are increasing substantially from time-to-time.<sup>1,18–20,23</sup>

The study finding is lower than other study findings from Agaro,<sup>18</sup> Ethiopia which showed that (70.3%) of couples approve the use of FP. This discrepancy might be due to differences in the study setting and the sociocultural difference between these communities. In our study area, there were higher number of Muslim religion followers as indicated in sociodemographic distribution on (Table 1), which commonly prohibits modern FP use, than other religions. This is evidenced by other studies conducted in different context that revealed the prevailing social and cultural practices of gender role, norms, and religion as the deep root of maternal health problems including male involvement in FP.<sup>19,24</sup>

The study showed that men whose spouse ever used FP methods were about 2.37 times more likely (AOR=2.34 95%, CI: 1.59, 3.52) to be involved in FP use than those men whose spouse had never used FP methods. This can be due to the fact that ever users of modern FP methods were more familiar with the benefits of modern FP methods. Hence, they are more likely to use/continue the methods than their counterparts. This finding is in line with other study findings from Afar and Debremarkos, Ethiopia.<sup>1,19</sup>

This study revealed that men who discussed on SRH/FP with their spouse were 2 times more likely (AOR=2.05, 95% CI: 1.40, 3.02) to be involved in FP use than those men who did not discuss with their spouse.

This finding is in agreement with finding from Agaro town, south-west Ethiopia.<sup>18</sup> This may be because joint decisions for FP are based on spousal communication implying that when couples communicate effectively they are more likely to jointly agree on what type of contraceptive method to use, how many children to have, and the space between their offspring. This study is supported by various studies demonstrated that women who discuss FP issues with their husbands are more likely to have their partner's approval on FP and are more likely to use a modern method of contraception.<sup>17,19,25</sup>

This study also showed that men who approved/supported FP use were about 2.5 times more likely (AOR=2.45, 95% CI: 1.34, 4.96) to be involved in FP services utilization than men who did not approve. This is in line with other studies conducted in Ethiopia and Ghana.<sup>19,25,26</sup> This might be because women who have their partner's approval on FP use are more likely to use a FP method without any fear of opposition.

Finally, the findings of this study might suffer from social desirability bias because it is based on men's perceived role; their role may be inflated. Since the interview included only men it was also difficult to know if the women covertly use

FP without their partner approval. With this limitation, the research can be interpreted and used in the local context and will serve as a component for planning a program.

## Conclusion

The number of men involved in the FP was low. Ever use of FP methods by a spouse, a couple's discussion on SRH/FP, and husband approval of FP use were found to be significant factors of male involvement in the FP use. To improve modern FP uptake among men and women, it is imperative to include men in all FP programs, including men in FP messaging, sensitizations, and services.

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### **Author contributions**

TM, MD, YS, and YD conceived the study and involved in the study design, reviewed the article, analysis, report writing, and drafted the manuscript. All authors have read and approved the final manuscript.

### Availability of data and materials

All related data are presented fully within the article.

### **Declaration of conflicting interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Ethical approval

Ethical approval for this study was obtained from Institute of Health Research and Ethical Review Committee of Haramaya University College of Medical and Health Sciences with the reference number IHRERC/116/2018.

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#### Informed consent

Written informed consent was obtained from study participants after explaining the purpose and procedure of the study. Formal letters were written to all concerned authorities and permission was secured at all levels. Informed, voluntary, written, and signed consent was obtained from each respondent after explaining the purpose and procedure of the study. All the basic principles of human research ethics (respect of persons, beneficence, voluntary participation, confidentiality, and justice) were respected.

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### Supplemental material

Supplemental material for this article is available online.

### References

- Chekole MK, Kahsay ZH, Medhanyie AA, et al. Husbands' involvement in family planning use and its associated factors in pastoralist communities of Afar, Ethiopia. *Reprod Health* 2019; 16: 33.
- Central Statistical Agency (CSA) and International Classification of Functioning, Disability and Health (ICF). *Ethiopia demographic and health survey 2016: key indicators report*. Addis Ababa: CSA; Rockville, MD: ICF, 2016.
- Bongaarts J, Cleland J, Townsend JW, et al. Family planning programs for the 21st century: rationale and design. New York: Population Council, 2012.
- Cates W Jr and Maggwa B. Family planning since ICPD how far have we progressed? *Contraception* 2014; 90(6 suppl.): S14–S21.
- United Nations. Programme of action. In: Proceedings of the international conference on population and development, Cairo, Egypt, 5–13 September 1994 (20th anniversary edition 2014). New York: United Nations.
- United Nations. The sustainable development goals report 2016. NewYork: United Nations, 2016.
- Dockalova B, Lau K, Barclay H, et al. Sustainable development goals and family planning 2020. London: International Planned Parenthood Federation (IPPF), 2016.
- Adelekan A, Omoregie P and Edoni E. Male involvement in family planning: challenges and way forward. *Int J Populat Res* 2014; 2014: 416457.
- Kabagenyi A, Jennings L, Reid A, et al. Barriers to male involvement in contraceptive uptake and reproductive health services: a qualitative study of men and women's perceptions in two rural districts in Uganda. *Reprod Health* 2014; 11(1): 21.
- Adamou B, Iskarpatyoti BS, Agala CBO, et al. *Male engagement in family planning: gaps in monitoring and evaluation*. Chapel Hill, NC: MEASURE Evaluation, 2017.
- Shattuck D, Kerner B, Gilles K, et al. Encouraging contraceptive uptake by motivating men to communicate about family planning: the Malawi Male Motivator Project. *Am J Public Health* 2008; 101(6): 1089–1095.
- 12. Raj A, Ghule M, Ritter J, et al. Cluster randomized controlled trial evaluation of a gender equity and family planning

intervention for married men and couples in rural India. *PLoS One* 2016; 11(5): e0153190.

- Sharma S, Kc B and Khatri A. Factors influencing male participation in reproductive health: a qualitative study. J Multidiscip Healthc 2018; 11: 601–608.
- Nmadu AG, Joshua IA, Omole VN, et al. Male involvement in family planning in Northern Nigeria: a review of literature. *J Med Trop* 2019; 21: 6–9.
- Ministry of Health. Costed implementation plan for family planning in Ethiopia, draft for 2015/16–2020, January 2016, http:// www.healthpolicyplus.com/ns/pubs/2021-2030\_Ethiopia CIPNov.pdf
- Central Statistical Agency (CSA). *Ethiopian housing and population census report in population and housing census*. Addis Ababa: CSA, 2007.
- Abraham W, Adamu A and Deresse D. The involvement men an application of transtheoretical model in family planning in Wolayeta Soddo town south Ethiopia. *Asian J Med Sci* 2010; 2(2): 44–50.
- Girum T, Shegaze M and Tariku Y. The role of currently married men in family planning and its associated factors in Agaro town, South West Ethiopia. *Ann Med Health Sci Res* 2017; 7: 119–124.
- 19. Kassa M, Abajobir AA and Gedefaw M. Level of male involvement and associated factors in family planning services utilization among married men in Debremarkos town, Northwest Ethiopia. *BMC Int Health Hum R* 2014; 14: 33.
- Belda SS, Haile MT, Melku AT, et al. Modern contraceptive utilization and associated factors among married pastoralist women in Bale eco-region, Bale Zone, South East Ethiopia. *BMC Health Serv Res* 2017; 17: 194.
- Egbe TO, Ketchen SA, Egbe E-N, et al. Risk factors and barriers to male involvement in the choice of family planning methods in the Buea Health District, South West Region, Cameroon: a cross-sectional study in a Semi-Urban area. *Women Health Open J* 2016; 1(3): 82–90.
- Butto D and Mburu S. Factors associated with male involvement in family planning in West Pokot County, Kenya. Univers J Publ Health 2015; 3(4): 160–168.
- 23. Berhane Y and Zakus D. Community awareness and practice of family planning in an urban community in Addis Ababa, Ethiopia. *Ethiop J Health Dev* 2017; 9(3): 134–143.
- 24. Lowe M. Social and cultural barriers to husbands' involvement in maternal health in rural Gambia. *Pan Afr Med J* 2017; 27: 255.
- 25. Mohammed A, Woldeyohannes D, Feleke A, et al. Determinants of modern contraceptive utilization among married women of reproductive age group in North Shoa Zone, Amhara Region, Ethiopia. *Reprod Health* 2014; 11: 13.
- Eliason S, Awoonor-Williams JK, Eliason C, et al. Determinants of modern family planning use among women of reproductive age in the Nkwanta district of Ghana: a case– control study. *Reprod Health* 2014; 11: 65.