

ORIGINAL RESEARCH ARTICLE

Knowledge and practice of modern contraceptive methods among married agro-pastoral women in Jigjiga District of Somali Regional State, Ethiopia

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Abstract

Modern contraception has played a significant role in reducing maternal and child mortality. The study was aimed at assessing the knowledge and practice of modern contraception among agro-pastoral women in the Jigjiga district of the Somali regional state. The study employed a cross-sectional quantitative research design. A total of 383 agro-pastoral women between the ages of 15 and 49 years who were married were randomly taken from 11 kebeles (the smallest administrative unit). The data were collected through a structured and pre-tested questionnaire via the face-to-face interview technique by trained enumerators. Frequency and percentage were used to analyze the collected data. The study found that 21.1% of agro-pastoral women respondents were aware of modern contraception methods. Despite this fact, the prevalence of modern contraception at the time of data collection was 4.7%. Injectables and pills were the modern contraception used by most of the respondent women. The result of the study shows the low level of modern contraception utilization which calls for strong measures to let the agro-pastoral women use various methods. Therefore, it is important to have an awareness creation campaign to motivate women to use modern contraception and improve the family planning service provision in the region. (*Afr J Reprod Health* 2022; 26[12s]: 180-187).

Keywords: Agro-pastoral women; modern contraception; Jigjiga district; prevalence, Somali Regional State

Résumé

La contraception moderne a joué un rôle important dans la réduction de la mortalité maternelle et infantile. L'étude visait à évaluer les connaissances et la pratique de la contraception moderne chez les femmes agro-pastorales du district de Jigjiga de l'État régional somalien. L'étude a utilisé une conception de recherche quantitative transversale. Au total, 383 femmes agro-pastorales âgées de 15 à 49 ans mariées ont été tirées au sort dans 11 kebeles (la plus petite unité administrative). Les données ont été recueillies au moyen d'un questionnaire structuré et pré-testé via la technique d'entretien en face à face par des enquêteurs formés. La fréquence et le pourcentage ont été utilisés pour analyser les données recueillies. L'étude a révélé que 21,1% des femmes agro-pastorales interrogées connaissaient les méthodes modernes de contraception. Malgré ce fait, la prévalence de la contraception moderne au moment de la collecte des données était de 4,7 %. Les injectables et les pilules étaient la contraception moderne utilisée par la plupart des femmes interrogées. Le résultat de l'étude montre le faible niveau d'utilisation de la contraception moderne qui appelle des mesures fortes pour laisser les femmes agro-pastorales utiliser diverses méthodes. Par conséquent, il est important d'avoir une campagne de sensibilisation pour motiver les femmes à utiliser la contraception moderne et améliorer la prestation de services de planification familiale dans la région. (*Afr J Reprod Health* 2022; 26[12s]: 180-187).

Mots-clés: Femmes agro-pastorales; contraception moderne; district de Jigjiga ; prévalence, Somali Regional State

Introduction

The benefits of contraception have been emphasized by many scholars as it serves multidimensional purposes^{1,2}. A reduction in maternal and infant mortality happens mainly because of effective contraception³. Modern contraception protects women from exposure to

premature deaths as a result of poor birth spacing and resultant pregnancy complications⁴. Contraceptives avert about 10 % of child deaths in countries where high fertility prevails⁵. Modern contraception safeguards women in the reproductive age from induced abortion⁶. The use of modern contraception prevents about 307 million unintended pregnancies annually among all women

of reproductive age in developing regions⁷. Although the global maternal mortality ratio declined by 44% from 1990 to 2015, 385 maternal deaths still occur for every 100,000 live births⁸.

Meeting citizens' needs for modern contraception is one of the priority agendas in Ethiopia. The contraceptive prevalence has shown progress since it has been introduced and has increased from 6% in 2000 to 35% in 2016⁹. In 2019, among married women, 41% of them were using modern methods of family planning¹⁰. The improvement in contraception use is manifested in the decline in maternal deaths in the country; the maternal mortality ratio decreased from 1250 per 100,000 live births in 1990 to 385 per 100,000 live births in 2015, owing to the use of modern contraception⁸. Despite this, 11,000 maternal deaths were reported in 2015¹¹.

Knowledge and use of modern contraception methods are important factors to improve the contraception prevalence. As studies reveal, women who know various methods of contraction inclined to use them in order to space or limit births. In Ethiopia, the knowledge and practice of using modern contraception vary from region to region. Thus, this study aims to assess the knowledge and prevalence of modern contraception among reproductive age agro-pastoral women in the Jigjiga district of Fafan zone, Somali Regional State, Ethiopia.

Operational definitions

Knowledge: being aware of modern contraception or of having information about it.

Practice: the use/prevalence of modern contraceptive methods.

Method

Study setting

The study was conducted in the Jigjiga District of Fafan Zone, a Somali Regional State where a large number of agro-pastoralists live. The Somali Regional State of Ethiopia is the second largest region with an estimated area of 350,000 square kilometres¹². It is one of the four major pastoral and agro-pastoral areas in the country¹². It has 11 administrative zones. In 2014, a projection was

made based on the 2007 Central Statistics Authority (Ethiopia) census that the total population in Somali was 5,307,000¹³. Agro-pastoralism comprises about 25% of the total rural population of the region¹⁴. Eleven kebeles (the smallest administrative unit in Ethiopia) of the district were selected randomly.

Study design, participants and sampling

Research design

The study employed a cross-sectional quantitative research design.

Population

The universal population of the study was all reproductive-aged agro-pastoral women in Ethiopia. The agro-pastoral women are among the marginalized section of the population in the country where use of modern contraceptive methods is very low due to an unavailability and inaccessibility of family planning services. Moreover, the gender inequality prevalent in the area and the various cultural/religious factors prevented them not to seek such services. The target population was reproductive-aged agro-pastoral women living in the North Jigjiga district of Somali regional State, and those eligible to participate in the study. Within the target population, the accessible population who participated in the study were recruited using the following criteria.

Inclusion criteria:

- All agro-pastoral women between the ages of 15 and 49.
- Agro-pastoral women who were married or in a union.

Exclusion criteria:

- Women who were not agro-pastoralists.
- Women who were not interested in participating.
- Women who were unable to respond because of health challenges.
- Women who considered themselves as infecund.
- Women not living with their husbands.

- Widowed, divorced, or separated women.

Sample and sampling technique

A multistage sampling procedure was used to select respondents. The probability sampling technique was used in all the stages. Probability sampling refers to the sampling procedure whereby all sampling units have a non-zero probability of being selected¹⁵. Firstly, among the Fafan Zone of Somali Regional State, Jigjiga District was randomly selected. Secondly, 11 *kebeles* (the smallest administrative unit) from the district were selected using simple random sampling technique. Thirdly, proportional to the size of the population of each selected *kebele*, the study participants were drawn randomly. When no woman fulfilled the inclusion criteria in the selected household, the household next to it was recruited to participate.

Sample size calculation

A formula that is proposed by Cochran (as cited in Rahi¹⁶) was used to calculate the sample size.

$$n = \frac{(z/2)^2 p(1-p)}{e^2}, \text{ where}$$

n = sample size

Z = Z values (1.96 for 95% confidence interval)

P = Prevalence from previous studies = 0.13

e = is the acceptable sampling error

After considering the design effect of 2, and a 10% non-response, a total of 383 respondents were selected.

Study instrument and data collection

Data collection

The data were collected through a structured and pre-tested questionnaire via the face-to-face interview technique by trained enumerators. The questionnaire was prepared by reviewing different literature sources on the study phenomenon, including demographic health surveys. The questionnaire was prepared in English and translated to the local language, *Somali*, and then back to English by two different individuals who were qualified in both languages and the research

topic. Ten diploma holder nurses/health officers who were fluent in speaking *Somali*, supervised by two nurses/health officers, and the investigator as the primary researcher, were involved in data collection after being trained on confidential matters and the process of data collection.

Data analysis

Each completed questionnaire was checked for completeness before manual data entry. The data were then coded and entered into the Statistical Package for the Social Sciences (SPSS) version 24 software. The data clean-up was done manually to check the accuracy and consistency before analysis. Frequency and percentage were analyzed to report the findings of the study.

Results and discussion

Characteristics of respondents

A total of 383 respondents participated in the study. In terms of age, the majority of the respondents 29.2% (n=112) were between the ages of 25 to 29. Most of the respondents 87.5% (n=335) were illiterate. About 87% (n=333) of them were housewives and 51.2% (n= 196) of the women had 3 to 6 children, majority of the respondents (91.1%) got married before the age of 20 (i.e 15-19) as shown in Table1.

Knowledge about modern contraception methods

The study found that 21.1% (n=81) of respondents were aware of at least one modern contraceptive method. Of all the respondents, 78.9% (n=302) had not heard anything about modern contraception. The proportion of women in the study who knew about modern contraception was very low compared to other areas in Ethiopia and other developing countries. Studies also reflect that 82.6% of female respondents in the rural Dembia District of northwest Ethiopia had heard about modern contraceptive methods¹⁷ and 84% of women in the rural area of Nigeria were aware of modern family planning methods¹⁸. In rural

Table 1: Characteristics of respondents

	Frequency	Percent
Age		
15-19	35	9.1
20-24	88	23.0
25-29	112	29.2
30-34	88	23.0
35-39	27	7.0
40-44	20	5.2
45-49	13	3.4
Educational level		
Illiterate	335	87.5
Write and read only	29	7.6
Primary school (1-8) and Above	19	5.0
Occupation		
Government employee	5	1.3
Private employee	7	1.8
Merchant	14	3.7
House wife	333	86.9
Student	13	3.4
Daily labourer	11	2.9
Number of children		
None	25	6.5
1-2	78	20.4
3-4	100	26.1
5-6	96	25.1
7-8	53	13.8
9 and above	31	8.1
Age at marriage		
15-19	349	91.1
20-24	31	8.1
25-29	3	.8

Madhya Pradesh, 85.2% of female participants were aware of modern methods of contraception¹⁹.

The women who were aware of modern contraception methods were asked to indicate the type of method they knew. Figure 1 shows the proportion of respondents who knew about the various contraceptive methods in the study area.

Injectable contraception was the modern contraceptive method known to 14.1% (n=54) of the respondents. Pills, implants and emergency contraception stood in 2nd (12%; n=46), 3rd (6.8%; n=26) and 4th (5.2%; n=20) positions, respectively. It is also noted that the injectables and the pill are the most known modern contraception in Ethiopia⁹.

Prevalence of modern contraception

Modern contraceptive methods are recommended as they are effective in preventing unintended

pregnancy^{6,7}. According to the FP 2020 progress report, from July 2016 to July 2017, 84 million unintended pregnancies were prevented worldwide because of modern contraception⁷. Despite this fact, the prevalence of modern contraception in the study areas was very low. Only 4.7% (n=18) of the agro-pastoral women were using modern contraception, of which 4.4% (n=17) and 0.3% (n=1) were using such modern contraception to space and limit births, respectively. The prevalence of modern contraception in the study area was very small compared to the national average (35%) during the time of the study, but a bit higher than the prevalence of the Somali region (1.5%).

The researchers compared the global average of the prevalence of modern contraceptive methods in general, and in other regions of the country in particular, and found that the number of women who were using modern contraception was very low in the study area. In 2017, 58% of married or in-union women of reproductive age used modern contraception worldwide²⁰. As to a study conducted in Yaoundé (Cameroon), the prevalence of modern contraception use was 58.9%²¹. The modern contraceptive prevalence among rural women in Anambra State (Nigeria) was 29.7%²².

Studies show that the proportion of women who were using modern contraception in the various parts of the country was by far greater than that of the study area. The prevalence of modern contraception was 66.2% in Farta District, South Gondar Zone²³, 46.9% in North Shoa Zone²⁴, and 31.7% in rural Dembia District¹⁷. Moreover, 48.2% of women were using modern contraception in Wolayita Zone, Southern Nations, Nationalities and People's Region, Ethiopia²⁵.

Types of modern contraception used

The injectables and the pill (2.6%; n=10 and 2.1%; n=8, respectively) were the modern contraceptive methods of choice used by agro-pastoral women in this study. Thus, the injectables were found to be the preferred modern contraception among the agro-pastoral women in the study area. Among the users, injectables and pills constituted 55.6% (n=10) and 44.4% (n=8), respectively. This could be because of the fact that their exposure to these contraception methods was better than the other methods of contraception.

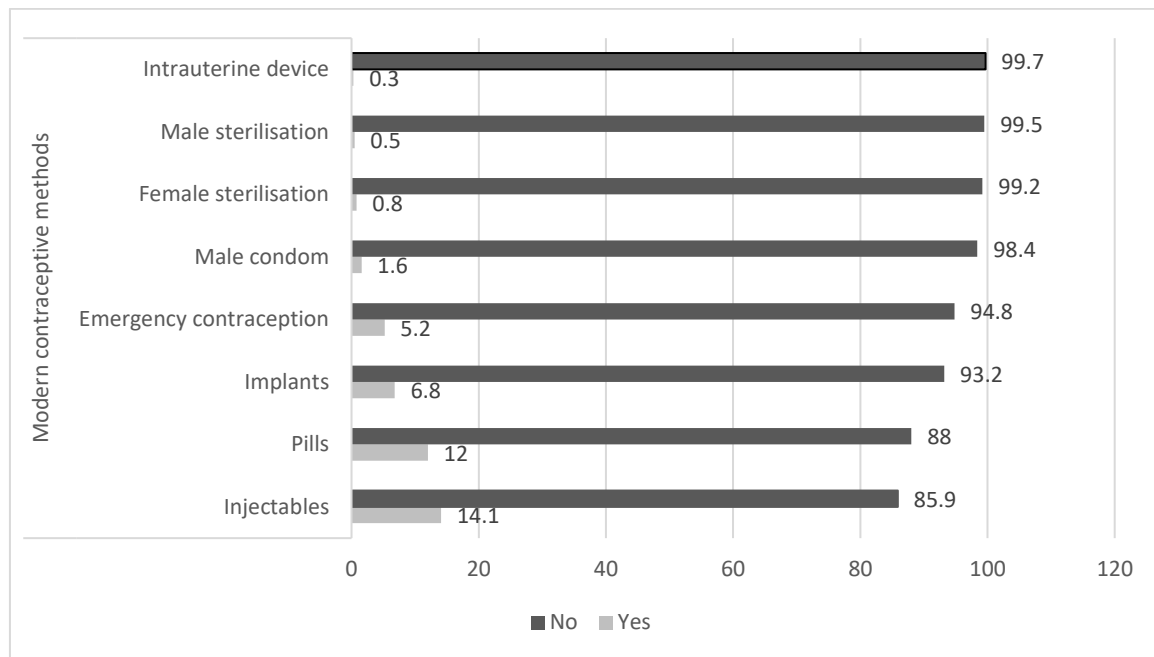


Figure 1: Knowledge of respondents about types of contraception methods

Table 2: Cross-tabulation: knowledge and use of modern contraception

Knowledge of modern contraception	Use of modern contraception	
	Yes (%)	No (%)
	18 (22.2%)	63 (77.8%)

It has also been documented that injectables were the dominant modern contraception used by women in most parts of Ethiopia. A study conducted in North Shoa Zone (Ethiopia) found that most women (62.9%) were using injectables, followed by Intrauterine devices (IUDs) (16.8%) and pills (14%)²⁴. Injectables were also the most preferred method of contraception among women in Southern Nations, Nationalities and People's Region, Ethiopia²⁶. Further, the injectable was the modern contraceptive method of choice among 30.2% the women of Saesie-Tsaeda Emba and Ofla Districts (Tigray Region) and 10.1% of them opted for the implant²⁷. In addition, the injectable was found to be a dominant modern method of contraception used by women in Rwanda²⁸.

However, modern contraception preferred by most women in other countries is different from that of women in Ethiopia. The male condom (8%) was the most preferred method of contraception

followed by injectables (3%) and the pill (2%) in Cameroon²⁹ whereas most women (32.1%) in Pakistan used IUDs, and 15.8% and 7.9% were using injectables and oral pills, respectively³⁰. In Sudan, the most common modern contraceptive method among women was oral contraceptive pills (75.5%)³¹ as compared with other methods such as condoms (1.5%) and skin patches (1.0%) which were found to be of less preference in that country. Female sterilisation (30%), condoms (20.5%), and pills (9%) were modern contraceptive methods preferred by women in the Garhwal region (India)³².

Knowledge of modern contraception and its use

Though being aware of modern contraception is a prerequisite to utilising the methods, the study revealed that those who knew about it did not necessarily use it. Table 2 shows the relationship between respondents' knowledge of modern contraception and their use thereof.

The study showed that though 21.1% (n=81) of agro-pastoral women knew about the modern contraceptive methods, they were not in a position to use these methods, for various reasons.

Of the 81 who were aware of modern contraception, only 22.2% (n=18) were using them. The remaining 77.8% (n=63) of the women did not use any modern contraception though they were aware of the methods. This finding is in line with that of the research conducted in Kashmir Valley and Ghana, which indicated that although women were aware of modern contraceptive methods, few were using these methods^{33,6}. This shows that knowledge of contraception is not the only condition that facilitates the use thereof.

Conclusion and recommendation

The contribution of modern contraception in terms of reducing maternal mortality has been documented in many studies. The study revealed that the majority (95.3%) of agro-pastoral women in the study area were not using modern contraception. The knowledge the women had about modern contraception was also very limited. It was also observed that even knowing the various methods of contraception was not only the precondition for the women to use as a number of women who were aware of the methods were not using them. Therefore, it can be generally concluded that the knowledge about modern contraception and its prevalence among agro-pastoral women in the study area was very low. This in turn made them vulnerable to various problems associated with maternal and child mortality and morbidity. Therefore, it is recommended that awareness creation regarding the significance of modern contraception in preventing maternal and child death has to be taken to account.

Ethical considerations

The research protocol was approved by the Research Ethics Committee of Department of Health Studies, University of South Africa. Moreover, a letter of permission to conduct the study was obtained from the Somali regional health bureau. Permission was also sought from the administrators of the Fafan Zone health bureau, the Jigjiga District health bureau and centres/kebeles of Jigjiga District.

Due to the sensitive nature of the study topic, the privacy of the participants was assured by arranging places in their own homes where they

expressed their feelings and shared their experiences in regard to the topic of the study. Confidentiality is concerned with handling data in which the identity of the research participants who had given information is not exposed to others, other than agreed in the informed consent. Accordingly, confidentiality was maintained by keeping the collected data in a safe place and not sharing it with anyone other than the researchers.

For those participants whose age were below 18, assent form was prepared so that they were given sufficient information about the study to decide to participate.

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Conflict of interest

None declared.

Contribution of authors

Dereje Kifle Moges designed the study, led the data collection, analyzed the data and drafted of the manuscript. RM Mmusi-Phetoe reviewed the proposal and the paper. Both authors read and approved the final manuscript.

References

1. Chola L, McGee S, Tugendhaft A, Buchmann E and Hofman K. Scaling up family planning to reduce maternal and child mortality: the potential costs and benefits of modern contraceptive use in South Africa. *PLoS ONE* 2015; 10(6):1-16.
2. Okigbo C, Speizer I, Domino M and Curtis S. A Multilevel logit estimation of factors associated with modern contraception in urban Nigeria. *World Medical and Health Policy* 2017; 9(1):65-86.
3. Ahmed S, Li Q, Liu L and Tsui AO. Maternal deaths averted by contraceptive use: an analysis of 172 countries. *Lancet* 2012; 380 (111-125).
4. Ministry of Health (MoH) [Ethiopia] & United Nations. MDG acceleration compact: accelerated action plan for reducing maternal mortality; 2014. From: <http://www.et.undp.org/content/dam/ethiopia/docs/Ethiopia%20MAF%202014.pdf> (accessed 20 January 2018).

5. Tegegne TK, Chojenta C, Forder PM, Getachew T, Smith R and Loxton D. Spatial variations and associated factors of modern contraceptive use in Ethiopia: a spatial and multilevel analysis. *BMJ open* 2020; 10 (e037532):1-11.
6. Beson P, Appiah R and Adomah-Afari A. Modern contraceptive use among reproductive-aged women in Ghana: prevalence, predictors, and policy implications. *BMC Women's Health* 2018; 18(157):1-8.
7. Darroch EJ, Audam S, Biddlecom A, Kopplin G, Riley T, Singh S and Sully E. Adding it up: investing in contraception and maternal and newborn health. New York: Guttmacher Institute; 2017.
- From: <https://www.guttmacher.org/fact-sheet/adding-it-up-contraception-mnh-2017> (accessed on 28 January 2018).
8. United Nations International Children's Emergency Fund (UNICEF). UNICEF data: monitoring the situation of children and women; 2018.
9. Central Statistical Agency (CSA) [Ethiopia] and ICF. Ethiopia Demographic and Health Survey 2016. Addis Ababa, Ethiopia, and Rockville, Maryland, USA: CSA and ICF; 2017.
10. Ethiopian Public Health Institute (EPHI) [Ethiopia] and ICF. Ethiopia Mini Demographic and Health Survey 2019: Key Indicators. Rockville, Maryland, USA: EPHI and ICF; 2019.
11. World Health Organization (WHO). Trends in maternal mortality: 1990 to 2015 Estimates by WHO, UNICEF, UNFPA. Switzerland: World Bank Group and the United Nations Population Division; 2015.
12. Jonason C and Solomon S. Literacy boost Somali region, Ethiopia endline report. Save the Children; 2014.
- From: https://resourcecentre.savethechildren.net/sites/default/files/documents/literacy_boost_ethiopia_somali_region_endline_report_april_2014.pdf (accessed 10 January 2018).
13. United Nations International Children's Emergency Fund (UNICEF). Briefing note; 2016.
- From: https://www.unicef.org/ethiopia/ECO_Somali_Regional_Briefing_Note_-_2016.pdf (accessed 03 June 2017).
14. Brocklesby MA. Social assessment of the water supply and sanitation; 2013. From: <https://www.cmpethiopia.org/content/download/665/3434/file/OWNP%20-%20Social%20Assesment%20Final%20Nov%2028%202013.pdf> (accessed 9 September 2018).
15. Bacon-Shone J. Introduction to quantitative research methods. Hong Kong: University of Hong Kong; 2015.
16. Rahi S. Research design and methods: a systematic review of research paradigms, sampling issues and instruments development. *International Journal of Economics and Management Sciences* 2017; 6(2):1-5.
17. Debebe S, Limenih MA and Biadgo B. Modern contraceptive methods utilization and associated factors among reproductive aged women in rural Dembia District, northwest Ethiopia: Community based cross-sectional study. *International Journal of Reproductive BioMedicine* 2017; 15(6):367-374.
18. Okafor IP, Balogun MR, Sekoni AO and Dolapo DC. Modern family planning practices, male involvement and unmet fertility needs among rural and urban Nigerian women: findings from a mixed method study in the Southwest Region. *Social Medicine* 2019; 12(3):14-29.
19. Sahasrabuddhe A, Kori S, Arora, VK and Bute J. A study to assess unmet need for family planning and contraceptive choices among married women of reproductive age in rural Madhya Pradesh. *International Journal of Community Medicine and Public Health* 2018; 5 (11):4725-4730.
20. United Nations (UN). World family planning 2017 – highlights. Department of Economic and Social Affairs, Population Division; 2017.
- From: https://www.un.org/en/development/desa/population/publications/pdf/family/WFP2017_Highlights.pdf (accessed 01 January 2019).
21. Njotang PN, Yakum MN, Ajong AB, Essi MJ, Akoh EW, Mesumbe NE, Ako S and Mbu R. Determinants of modern contraceptive practice in Yaoundé-Cameroon: a community based cross sectional study. *BMC Research Notes* 2017; 10(219):1-6.
22. Iloghalu I, Ibeh C, Modebe I, Ezeama N, Azuiki E and Obi K. Predictors of unmet need for contraception among urban and rural women in Anambra State Nigeria: a mixed method survey. *International Journal of Tropical Disease and Health* 2018; 29(4):1-20.
23. Kassa TB, Degu G and Birhanu Z. Assessment of modern contraceptive practice and associated factors among currently married women age 15-49 years in Farta District, South Gondar Zone, North West Ethiopia. *Science Journal of Public Health* 2014; 2(6):507-512.
24. Mohammed A, Woldeyohannes D, Feleke A and Megabiaw B. Determinants of modern contraceptive utilization among married women of reproductive age group in North Shoa Zone, Amhara Region, Ethiopia. *Reproductive Health* 2014; 11(13):1-7.
25. Gebremeskel F, Getahun D, Kanko T, Tilahun A, Endrias B, Alamirew B, Gemedi F and Desalegne M. Prevalence of modern contraceptive utilization and associated factors among women of reproductive age group at Boditi town, Wolayita Zone, SNNPR, Ethiopia. *American Journal of Nursing Science* 2017; 6(6):447-453.
26. Endriyas M, Eshete A, Mekonnen E, Misganaw T, Shiferaw M and Ayele S. Contraceptive utilization and associated factors among women of reproductive age group in Southern Nations Nationalities and Peoples' Region, Ethiopia: cross sectional survey, mixed-methods. *Contraception and Reproductive Medicine* 2017; 2(10):1-9.
27. Gebre-Egziabher D, Medhanyie AA, Alemayehu M and Tesfay FH.. Prevalence and predictors of implanon utilization among women of reproductive age group

- in Tigray Region, Northern Ethiopia. *Reproductive Health* 2017;14(62):1-9.
28. Brunie A, Tolley EF, Ngabo F, Wesson J and Chen M. Getting to 70%: barriers to modern contraceptive use for women in Rwanda. *International Journal of Gynecology and Obstetrics* 2013; 123:e11-e15.
29. Kelodjoue S. Trends and determinants of unmet need for family planning in Cameroon: the role of sociocultural context. *Sociology Study* 2015; 5(1):39-52.
30. Noreen K, Khan KA, Khan N, Khan SA and Khalid N. Contraceptive prevalence rate, unmet need for family planning and its associated factors among women of reproductive age group. *Pakistan Journal of Public Health* 2018; 8(2):63-69.
31. Abdalla AA and Ahmmed EH. Evaluate use and barriers to accessing family planning services among reproductive-age women in the White Nile, rural districts. *Sudan. Health Science Journal* 2017; 11(6):1-5.
32. Dixit R and Bandhani A. Contraceptive knowledge, practices among women in Garhwal region. *International Journal of Community Medicine and Public Health* 2019;6(2):793-796.
33. Ashraf SS, Rahi S, Maqbool, S and Bhat BA. Study on contraceptive awareness among female population in Kashmir Valley (J&K State). *Innovative Research in Applied Science and Technology* 2018; 4(12):1-5.