

# Utilization of Family Planning Methods and Associated Factors Among Reproductive-Age Women with Disability in Arba Minch Town, Southern Ethiopia

This article was published in the following Dove Press journal:  
*Open Access Journal of Contraception*

Yibeltal Mesfin Yesgat<sup>1</sup>  
Feleke Gebremeskel<sup>2</sup>  
Wubshet Estifanos<sup>3</sup>  
Yordanos Gizachew<sup>3</sup>  
Seid Jemal<sup>1</sup>  
Natnael Atnafu<sup>4</sup>  
Keyredin Nuriye<sup>1</sup>

<sup>1</sup>Department of Midwifery, College of Medicine and Health Sciences, Wolkite University, Wolkite, Ethiopia;

<sup>2</sup>Department of Public Health, College of Medicine and Health Sciences, Arba Minch University, Arba Minch, Ethiopia;

<sup>3</sup>Department of Nursing, College of Medicine and Health Sciences, ArbaMinch University, ArbaMinch, Ethiopia;

<sup>4</sup>Department of Midwifery, College of Medicine and Health Sciences, Wolaita Sodo University, Wolyita Sodo, Ethiopia

**Introduction:** Globally in 2019, there were 1.9 billion reproductive-age women. Around 922 million of them were using either modern or traditional methods of family planning. Women with disabilities comprise 10% of worldwide women and three-quarters of them reside in low- and middle-income countries.

**Objective:** The purpose of this study was designed to assess the magnitude and associated factors for family planning methods use among reproductive-age women with disabilities in Arba Minch town, southern Ethiopia.

**Patients and Methods:** A community-based cross-sectional study was conducted among 418 reproductive-age women with disabilities. Data were collected with eight women who had completed grade 12 and two of them were proficient in sign language. The data were entered into Epi-info™ version-7 software and exported into SPSS version 20 for analysis. A statistically significant variable in the final model was declared by adjusted odds ratio (AOR), 95% confidence interval (CI) and p-value <0.05.

**Results:** The magnitude of family planning utilization among reproductive-age women with disabilities was 33.7%. Factors significantly associated with family planning use were being employed (AOR: 2.2, CI: 1.77–4.15), having positive attitudes (AOR: 2.3, 95% CI: 1.21–3.87) and marital status (AOR: 3.9, 95% CI: 2.31–6.63).

**Conclusion:** The magnitude of family planning use among reproductive women with disabilities was low. Attitude, marital status, and being employed were significantly associated factors with family planning use. Therefore, the governmental and non-governmental organizations should work to change their attitude and creating job opportunities.

**Keywords:** family planning utilization, reproductive age, disability

## Introduction

World Health Organization (WHO) defined disability in many ways but generally refers to any casualty that prevents an individual from living their normal life. It includes people who are blind, deaf or have a physical handicap, intellectual impairments, or disabilities related to mental health.<sup>1</sup>

Globally, around one-eighth of the population lives with a disability of this majority (80%) reside in developing countries. Africa and Ethiopia have 60 and 7.7 million people with disabilities (PWDs) respectively.<sup>2,3</sup>

Correspondence: Yibeltal Mesfin Yesgat  
Email hazardkuku@gmail.com

The United Nations General Assembly Convention article 25 stated that Persons with Disabilities have equal rights to sexual reproductive health (SRH) with nondisabled. This is important to achieve a sustainable development goal and create a truly inclusive society. Nevertheless, the full figure of SRH issues for PWDs is not yet clearly write, there are largely unmet.<sup>4</sup>

Family planning is a golden part of SRH service that allows individuals to achieve desired birth spacing and family size and help to improved health outcomes for infants, children, women, and families. The service includes contraceptive, sexual and reproductive disease treatment, basic infertility care, pregnancy testing, and pelvic examinations.<sup>5</sup> Due to myth assumptions, PWDs are not sexually active neglected for FP service. Nevertheless, they have greater needs for SRH education and care than persons without disabilities due to their increased vulnerability to abuse.<sup>6</sup>

Globally in 2019, there were 1.9 billion reproductive-age women. Around 922 million of them were using either modern or traditional methods of family planning. Women with disabilities comprise 10% of worldwide women and three-quarters of them live in low- and middle-income countries.<sup>7</sup> African 42% of reproductive-age women use any form of contraceptive. Not surprisingly, 22% of Africa women had unmet needs of family planning the majority shared by Sub-Saharan Africa which is highest in the world.<sup>8</sup>

The 2016 Ethiopia demographic health survey (EDHS) did not report contraceptive use of disabilities women alone. About 41% of married and 58% of unmarried sexually active women use any form of family planning methods.<sup>9</sup>

A finding from northwest Ethiopia among PWDs showed that 18% of reproductive-age women with disabilities ever and 13.1% of them currently used modern contraceptives.<sup>10</sup> Finding from Addis Ababa, Ethiopia also indicated that 44.5% of reproductive-age disabled women were used modern contraceptives.<sup>11</sup> A similar study which was conducted in northern Ethiopia showed that 25.1% and 20% of WWDs had ever and currently used modern contraceptive methods, respectively.<sup>12</sup>

Many factors are contributing to the need for family planning for disabled reproductive-age women with disabilities.<sup>13</sup> Fear or experience of having side effects, limited access to contraception and lack of information are contributing factors to disabled women's low utilization of family planning methods.<sup>14</sup> Limited knowledge and negative

attitude of contraceptive methods also found to have a significant effect on the utilization of family planning methods.<sup>15</sup>

Socio-demographic factors including women's age, marital status, level of educational and the residence of living affect contraceptive use.<sup>16-19</sup> The study conducted in Gondar and Dembia district revealed that impairment type, occupation, cultural or religious opposition, and age at marriage were associated with family planning method use.<sup>10,15,20</sup>

Physical barriers to access health facilities, long and difficult journeys to clinics, accessibility of family planning messaging materials, stigma and discrimination were disparately affecting women with disabilities for family planning methods use.<sup>6,21</sup>

Furthermore, a reproductive health-related factor associated with contraceptive use includes the ideal number of children, previous child loss and parity.<sup>22-24</sup> The study done in Finot Selam and Bahirdar town revealed that interpersonal factors such as partner discussion, and partner support were also influenced utilization of family planning methods.<sup>12,25</sup>

Finally, in Ethiopia, there were many studies done to assess the magnitude of family planning methods utilization and associated factors among reproductive-age women for non-disabled women. Nevertheless, fewer studies were done on reproductive-age women with disabilities. Specifically, research conducted for WWDs was institutions based, supported by the association and miss some important factors like attitude. Therefore, this study aimed to assess community-level family planning methods use and factor associated with women with disabilities in southern Ethiopia.

## Patients and Methods

### Study Design, Period and Setting

The community-based cross-sectional study design was conducted from March to 15, April 2019 in Arba Minch town, southern Ethiopia. The town found is located at 505km distance south of Addis Ababa (the capital city of Ethiopia) and 275km southwest of Hawassa (capital town of the regional state). The town was the residence of 74,879 people of this 638 of women living with disabilities, according to the 2007 national census. Also, the 2018 health and demographic survey (HDS) of Arba Minch town social and labor affairs office were reported 1561 persons with disabilities live in the town from these 462 women were at reproductive age.

## Eligibility Criteria

All reproductive-age women with disabilities were included except those who have dual disabilities (ie Cannot see and hear) and seriously ill during the data collection time.

## Sample Size Determination

Four hundred and eighteen reproductive-age women with the disability were included in the study and estimated by single population proportion formula with the assumption of a proportion of family planning utilization = 44.4%, 95% confidence interval, the margin of error 5%, and 10% non-responses rate.

## Sampling Procedure

The Arba Minch town HDS database maintained by labor and social affairs office used as a sampling frame to identify a list of the reproductive-age women with disabilities. Out of the 462 reproductive-age women with disabilities identified from the HDS database, 418 of them selected by lottery methods and included in the study.

Two hundred ninety-three physically disabled, sixty-five visually impaired, forty-eight hearing impaired and twelve cognitive or Learning Disabilities were included in the study population.

## Data Collection Tool

A structured, interviewer administrative questionnaire was employed in the study. The content of the questioner was adopted from Ethiopia Demographic and Health Survey. The data collection tool was first prepared in English and then translated into the local language (Amharic) then back to English by the translator for consistency. The questionnaire had socio-demographic characteristics, knowledge, attitude, reproductive health-related factors, and client-related factor components.

## Data Collection Procedures

Data collected with eight women who had completed grades twelve and two of them proficient in sign language. For women with hearing impairment (deaf) two females proficient in sign language were collected the data. Since the data collection methods were an interviewer administered questioners their visual impairment did not affect the process. Women with disabilities that were a member of the local association interviewed when they came to their respective associations for a coffee ceremony. Students and employed women were interviewed at their workplaces and campus.

For those women enabled to address by the above way, street and home to home data collection were used with their specific address with the help of key informants.

## Data Processing and Analysis

The collected data were properly checked for completeness and consistency. The data were entered into Epi-info™ version-7 software and exported into SPSS version 20 for analysis.

All variables with P-value of less than 0.25 in the bivariate analysis were entered into the multivariate model. In the multivariate model, variables with P less than 0.5 unambiguously declared as significantly associated with utilization of family planning.

## Results

### Socio-Demographic Characteristics of the Respondents

A data of 398 reproductive-age women with disabilities were included in the analysis with a response rate of 95.2%. The mean age of the participants was 23.15 (SD ± 5.1) which ranges from 15 to 40 years. About 27.4% of women with disabilities were married. Most of the participants (72.4%) were protestant Christian. Concerning educational status, 24.1% of women have never enrolled in formal education. About 31.2% of participants were employed and about 26.9% of participants had no work to earn money. The Majority of the participants (71%) were physically disabled (Table 1).

### Reproductive Health Characteristics of the Study Population

Concerning, reproductive history, 60.6% of the study participants began sexual intercourse. About eighty-five participants gave birth of which 11.8% of women with disabilities were experienced child loss. About 63% of the women reported the desired to will have children after 2 years and 28.2% want within 2 years while the remaining 8.8% wish no more children (Table 2).

### Client Characteristics-Related Factors

The majority of respondents who had partners (71.7%) were discussed with their relatives and about 69.2% of participants approved by their partner for family planning method utilization. More than half of the participants (53%) were not media exposure and most of the participants (73%) think inclusive sexual and reproductive health services were not friendly.

**Table 1** Frequency Distribution of Reproductive-Age Women with Disability by Their Background Characteristics in Arba Minch Town, 2019

Variables	Number	Percent
Age		
15–19	107	26.9
20–24	159	39.9
25–29	81	20.4
>30	51	12.8
Women Education		
No education	96	24.1
Primary	113	28.4
Secondary	152	38.2
Higher education and above	37	9.3
Partner Education (N=159)		
No education	24	15.1
Primary	46	28.9
Secondary	35	22
Higher education and above	54	34
Ethnicity		
Gamo	320	80.4
Gofa	58	14.6
Others	20	5
Occupation		
Unemployed	107	26.9
Employed	124	31.2
Student	118	29.6
Others	49	12.3
Religion		
Protestant	288	72.5
Orthodox	99	24.9
Other	11	2.6
HH Income		
Low (<600)	76	19.1
Moderate (600–1000)	86	21.6
High (>1000)	236	59.3
Marital Status		
Currently married	109	27.4
Currently unmarried	239	72.6
Type of Disability		
Physical	282	70.9
Visual	62	15.6
Hearing	46	11.49
Others	8	2.01

## General Knowledge and Attitude About Family Planning

The knowledge about contraceptive methods was assessed by asking nine modern and two traditional family planning methods. About 79.9% of participants knew at least one

**Table 2** Distribution of Reproductive-Age Women with Disability by Reproductive Health-Related Characteristics, Arba Minch Town, 2019

Variables	Frequency (n)	Percent
Started Sex		
Yes	241	60.6
No	157	39.4
Have Ever Give Birth (n=241)		
Yes	85	35.3
No	156	64.7
Parity		
≤2	363	91.2
>2	35	8.8
Experienced Child Death (n=85)		
Yes	10	11.76
No	75	88.24
Desire to Have Children		
After 2 years	251	63
No	35	8.8
Within 2 years	112	28.2

method of family planning. Concerning the level of attitude towards family planning, more than half of the respondents (59%) displayed positive attitudes towards family planning use.

## The Proportion of Family Planning Methods Utilization

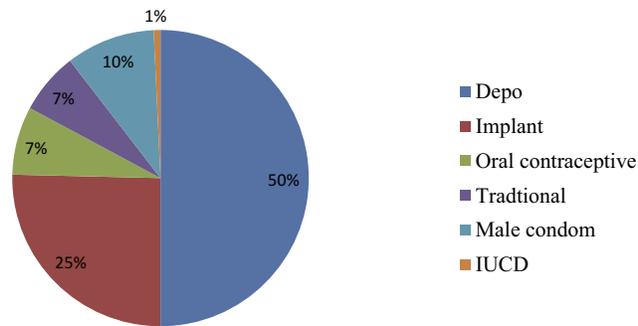
The finding of this study showed that about one-third of the respondents (33.7%: 95% CI: 29–38%) are currently using family planning methods. Injectable (50%) and implant contraceptives were the most frequently used (Figure 1). Among the reason mentioned by a participant for the difficulty of the service delivery point to access by women with disabilities being single, fertility-related issues and opposition were the principal reasons (Figure 2).

## Factors Affecting the Utilization of Family Planning Methods

In the bivariate analysis, a factor associated with family planning utilization included age of the women, marital status, education status of the women, exposure to mass media, women employment, income, attitude, parity, knowledge and thinking sexual and health service friendly.

The result from multivariate logistic regression Reproductive-age women with disabilities currently

## Type of contraceptive use



**Figure 1** Magnitude of family planning use by type of contraceptive among reproductive-age women with disability in Arba Minch town, 2019.

employed were 2.2 (AOR=2.2; CI: 1.77–4.15) times more likely to use family planning methods with not employed. In the same way, positive attitude participants were 2.4 (AOR=2.4; CI: 1.43–3.98) times more likely to use family planning methods than a counterpart. This finding also showed that married participants were almost four (AOR=3.95; CI: 2.33–6.70) times more likely to use family planning methods than unmarried (Table 3).

## Discussion

This community-based research aimed as the initial effort to show utilization of family planning methods and factors associated among reproductive-age women with disabilities in Arba Minch town. This study finding showed that the proportion of family planning methods utilization was 33.7%. Factor including employment status, marital status, and attitude towards family planning was significantly associated.

The utilization of family planning methods among women with disabilities was 33.7%, which is lower than the Ethiopia Demographic Health Survey 2019 finding (41%) and Arba Minch town (64.7%).<sup>9,22</sup> This difference could be the studies included both participants with and without

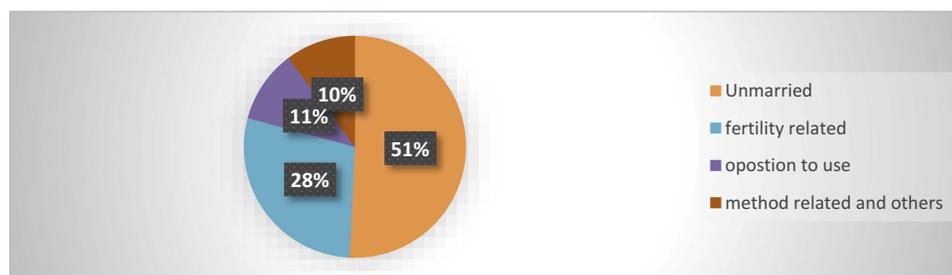
disabilities. It is clear women without disabilities had better access to information about contraceptives and services than women with disabilities. Similarly, finding from Addis Ababa City was higher than this finding.<sup>11</sup> The possible justification may be the large sample size and better inclusive sexual and reproductive health-care facilities in Addis Ababa.

In contrast, the proportion of family planning methods utilization of this study is higher than the studies undertaken in Bahirdar.<sup>12</sup> This may be due to improved inclusive sexual and reproductive health services for recent years. The finding from Gondar was considerably lower than this study.<sup>15</sup> Level of education and type of impairments were the possible reason since 78.1% of the participant was unable to read and write which also only focus on blind and deaf.

Among total study participants, 50% and 23% use injectable and implant, respectively. The Ethiopia 2016 demographic health stated the most used contraceptive was injectable (23%) and implant (8%). Also, several studies in the country as a whole prefer the two methods.<sup>9,25</sup> It is consistent with this finding.

In this study, women's employment status significantly influenced family planning methods utilization. Employed women with disabilities were 2.2 times more likely to use family planning methods than unemployed. This finding is consistent with the Shembela refugee camp and Nepal.<sup>16,19</sup> This is suggesting that female empowerment and engaged in different jobs have helped the women to decide their desire ideal family size and family planning methods to use.

The finding of this study showed the marital status of women with disabilities had significantly associated with family planning methods utilization. Married women were almost four times more likely to use family planning than unmarried. This study was supported by studies done in Dembia district and Oyo state, Nigeria.<sup>18,20</sup> This implies that masculine involvement and couple inspiration were vital for family planning methods to use.



**Figure 2** Reasons for not using family planning among reproductive-age women with disability in Arba Minch town, 2019.

**Table 3** Factors Associated with Family Planning, Utilization Among Women with Disability in Arba Minch Town, 2019

Variables	FP Use		OR (95% CI)	AOR (95% CI)	P value
	Yes	No			
Age of the women 15–19	21	86	1.00		
20–24	37	122	1.2 (0.68–2.27)		
24–29	46	35	5.4 (3.52–10.29)		
>30	30	21	5.8 (2.82–12.21)		
Marital Status					
Currently married	68	41	5.6 (3.48–9.07)	3.95 (2.33–6.70)	0.001
Currently unmarried	66	223	1.00		
Women Educ: no education	24	72	1.00		
Primary	38	75	1.52 (0.83–2.78)		
Secondary	52	100	1.56 (0.88–2.76)		
Higher	20	17	3.52 (1.59–7.81)		
Media Exposure					
Yes	84	127	1.8 (1.18–2.77)		
No	50	137	1.00		
Occupation Women:					
Unemployed	23	84	1.00	1.00	0.015
Employed	64	60	3.8 (2.18–6.96)	2.2 (1.77–4.15)	0.99
Student	24	94	0.9 (0.49–1.77)	0.8 (0.51–1.97)	0.71
Others	23	26	3.2 (1.56–6.67)	2 (0.92–4.55)	
HH Income					
Low (<600)	19	57	1.00		
Moderate (600–1000)	28	58	1.4 (0.71–2.88)		
High (>1000)	87	149	1.8 (0.92–3.14)		
Attitude					
Positive	101	135	2.9 (1.84–4.63)	2.4 (1.43–3.98)	0.001
Negative	33	129	1.00	1.00	
Parity					
>2	24	11	5 (2.31–10.60)		
≤2	110	253	1.00		
Knowledge					
Good	117	201	2.1 (1.21–3.86.5)		
Poor	17	63	1.00		
Thinking SRH Service Friendly					
Yes	39	73	1.1 (0.67–0.78)		
No	95	191	1.00		

The study also showed that disabled women who had a positive attitude 2.4 times more likely to use family planning methods compared to a negative attitude. This finding was supported by other studies done in SNNPR, Ghana and South Sudan.<sup>17,22</sup> This might be due to; having a positive attitude that was important for using the family planning methods.

Finally, this study possesses some strength because of the use of the most recent and representative nationwide survey tool. The study also has some limitations: since the data collection instrument addressed many questions concerning the use of contraceptives and sexual activity with an interviewer-administered questionnaire: visual and hearing impairment respondents may possibly do not precisely respond.

## Conclusions

The finding of this study showed that the usage of family planning among disable women found low. It is therefore enthusiastically recommended that family planning provision on the dimension of service quality and coverage promoted to achieve the 2020 goal set of Ethiopia as a country. Participants' marriage engagement, employment status, and having a positive attitude on the possible use of family planning service provision among the study participants affecting service provision positively. Family planning providers should mainly emphasize barriers of service provision that negatively affect the attitude of the respondents during the counseling session.

## Abbreviations

AOR, adjusted odds ratio; EDHS, Ethiopian demographic health survey; CI, confidence interval; COR, crude odds ratio; FMOH, federal ministry of health; SRH, sexual and reproductive health; PWD, the people with a disability; WWDs, women with disabilities; SNNPR, south nation, nationalities and people region.

## Data Sharing Statement

Full data sets and other materials about this study could obtain from the corresponding author upon reasonable request.

## Ethics and Consent Statements

Ethical clearance was obtained from an ethical clearance committee of Arba Minch University College of Medicine and Health Science. A permission letter was obtained from the Arba Minch town administration to conduct the study. Informed verbal and written consent was obtained from each respondent irrespective of age. Finally, parental informed consent was obtained from those aged less than 18 years.

## Acknowledgments

I would like to express my deepest appreciation Arba Minch University, College of Health Sciences, Department of Nursing for providing this opportunity. I am grateful to Arba Minch town labor and social affairs Administration and Arba Minch special need school staff for their great support. Finally, we would like to appreciate our data collectors, supervisors, questionnaire translators, and study participants; without them, the research would not be possible.

## Author Contributions

All authors contributed to data analysis, drafting or revising the article, gave final approval of the version to be published, and agree to be accountable for all of the work.

## Funding

This research work was funded by Arba Minch University research, community service, and industry linkage vice president office.

## Disclosure

The authors declare that they have no financial or non-financial conflicts of interest regarding this paper.

## References

- Kostanjsek N. Use of The International Classification of Functioning, Disability and Health (ICF) as a conceptual framework and common language for disability statistics and health information systems. Paper presented at: BMC public health; 2011.
- Bickenbach J. The world report on disability. *Disabil Soc.* 2011;26(5):655–658. doi:10.1080/09687599.2011.589198
- Population Eoot, Commission HC. *Summary and Statistical Report of the 2007 Population and Housing Census: Population Size by Age and Sex.* Federal Democratic Republic of Ethiopia, Population Census Commission; 2008.
- Groce N, Izutsu T, Reier S, Rinehart W, Temple B. *Promoting Sexual and Reproductive Health for Persons with Disabilities: WHO/UNFPA Guidance Note.* World Health Organization; 2009.
- Sharma D, Kafle R. An exploratory study on knowledge and practice regarding family planning and immunization among women attending MCH clinic. *Int J.* 2017;3(6):156.
- Ahumuza SE, Matovu JK, Ddamulira JB, Muhanguzi FK. Challenges in accessing sexual and reproductive health services by people with physical disabilities in Kampala, Uganda. *Reprod Health.* 2014;11(1):59. doi:10.1186/1742-4755-11-59
- Krahn GL. WHO world report on disability: a review. *Disabil Health J.* 2011;4(3):141–142. doi:10.1016/j.dhjo.2011.05.001
- Tsui AO, Brown W, Li Q. Contraceptive practice in sub-Saharan Africa. *Popul Dev Rev.* 2017;43(SupplSuppl 1):166. doi:10.1111/padr.12051
- Mini EDHS E. Demographic and health survey 2019: key indicators report. *The DHS Program ICF;* 2019.
- Beyene GA, Munea AM, Fekadu GA. Modern contraceptive use and associated factors among women with disabilities in Gondar City, Amhara Region, north west Ethiopia: a cross sectional study. *Afr J Reprod Health.* 2019;23(2):101–109. doi:10.29063/ajrh2019/v23i2.10
- Abera S. *The Assessment of Determinants of Family Planning Use and Unmet Need Among Women of Reproductive Age Group with Disabilities in Addis Ababa.* Addis Ababa University; 2016.
- Tessema AL, Bishaw MA, Bunare TS. Assessment of the magnitude and associated factors of unmet need for family planning among women of reproductive age group with disabilities in Bahir Dar City, Amhara Region, North West Ethiopia. *Open J Epidemiol.* 2015;5(01):51. doi:10.4236/ojepi.2015.51007
- Lee J-E, Kim H-R, Shin H-I. Accessibility of medical services for persons with disabilities: comparison with the general population in Korea. *Disabil Rehabil.* 2014;36(20):1728–1734. doi:10.3109/09638288.2013.867368

14. Ong J, Temple-Smith M, Wong WC, McNamee K, Fairley C. Contraception matters: indicators of poor usage of contraception in sexually active women attending family planning clinics in Victoria, Australia. *BMC Public Health*. 2012;12(1):1108. doi:10.1186/1471-2458-12-1108
15. Yimer AS, Modiba LM. Modern contraceptive methods knowledge and practice among blind and deaf women in Ethiopia. A cross-sectional survey. *BMC Womens Health*. 2019;19(1):151. doi:10.1186/s12905-019-0850-y
16. Seyife A, Fisseha G, Yebyo H, Gidey G, Gerensea H. Utilization of modern contraceptives and predictors among women in Shimelba refugee camp, Northern Ethiopia. *PLoS One*. 2019;14:3. doi:10.1371/journal.pone.0212262
17. Beson P, Appiah R, Adomah-Afari A. Modern contraceptive use among reproductive-aged women in Ghana: prevalence, predictors, and policy implications. *BMC Womens Health*. 2018;18(1):157. doi:10.1186/s12905-018-0649-2
18. Adeyemi AS, Olugbenga-Bello AI, Adeoye OA, Salawu MO, Aderinoye AA, Agbaje MA. Contraceptive prevalence and determinants among women of reproductive age group in Ogbomoso, Oyo State, Nigeria. *Open Access J Contracept*. 2016;7:33.
19. Sharma SK, Ghimire DR, Pratap N. Ethnic differentials of the impact of family planning program on contraceptive use in Nepal. *Demogr Res*. 2011;25:837–868. doi:10.4054/DemRes.2011.25.27
20. Debebe S, Limenih MA, Biadgo B. Modern contraceptive methods utilization and associated factors among reproductive aged women in rural Dembia District, northwest Ethiopia: community based cross-sectional study. *Int J Reprod Biomed*. 2017;15(6):367.
21. Habinshuti G, Wamocho FI, Njoroge M. *Sources of Information About Hiv and Aids Among Students with Disabilities in Institutions in Rwanda*. 2017.
22. Andualem Samuel A, Olle B, Dambe D, Nigatu M, Sorato MM. Assessment of modern contraceptive method utilization and associated factors among women of reproductive age group in Arba Minch Town, SNNPR, Ethiopia: community based cross-sectional study. *Open J Epidemiol*. 2017;15(6):367–374.
23. Wulifan JK, Brenner S, Jahn A, De Allegri M. A scoping review on determinants of unmet need for family planning among women of reproductive age in low and middle income countries. *BMC Womens Health*. 2015;16(1):2. doi:10.1186/s12905-015-0281-3
24. Sedgh G, Ashford LS, Hussain R. *Unmet Need for Contraception in Developing Countries: Examining Women's Reasons for Not Using a Method*. Vol. 2. New York: Guttmacher Institute; 2016:2015–2016.
25. Geremew AB, Gelagay AA. Modern contraceptive use and associated factors among married women in Finote Selam town Northwest Ethiopia: a community based cross-sectional study. *Womens Midlife Health*. 2018;4(1):13. doi:10.1186/s40695-018-0044-z

Open Access Journal of Contraception

Dovepress

**Publish your work in this journal**

Open Access Journal of Contraception is an international, peer-reviewed, open access, online journal, publishing original research, reports, reviews and commentaries on all areas of contraception. In addition to clinical research, demographics and health-related aspects, the journal welcomes new findings in animal and preclinical

studies relating to understanding the biological mechanisms and practical development of new contraceptive agents. The manuscript management system is completely online and includes a very quick and fair peer-review system. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <http://www.dovepress.com/open-access-journal-of-contraception-journal>