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Uptakes and associated factors of postpartum family planning in southern Ethiopia: A cross-sectional study

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ABSTRACT

Background: Post-partum family planning aims to prevent unintended pregnancy within the first year postpartum. Closely spaced pregnancy within the first year of post-partum (PP) is associated with higher risk of preterm birth, low birth weight or small for gestational age. However, the perceived uptakes of postpartum contraceptives is very low. The intention of this study was determine uptakes and associated factors of postpartum family planning in southern Ethiopia.

Materials and Methods: The study was conducted in Hawassa city administration which is the capital of SNNPR. Community based cross-sectional study was employed women who gave birth in the last 12 months before survey. Data was collected using structured questionnaire proceeding informed verbal consent. Logistic regression model was used to identify associations between variables and findings were presented by tables and figures.

Result: The prevalence of current post-partum contraceptive use was 85.1%. After adjusting for covariates; the odds of using postpartum contraceptive were 1.31 times, 12.13 times, 5.17 times, 10.77 time and 4.69 times higher among women with, knowledge about advantages and side effects of contraceptives, partner support for contraceptive use, previously contraceptive use and not returned period respectively with (P <0. 05).

Conclusion: uptakes of postpartum contraceptives in Hawassa city administration was promising. Detailed counseling about postpartum contraceptive use, could assist equipping women with knowledge of family planning methods; empowering them to be decisive in the health and positivity of male partners are very crucial to promote postpartum use of contraceptives.

1. Introduction

Family planning (FP) is an essential component of health care that assist prevents maternal and child health complications including premature mortality, and it has been identified as a critical element of reproductive health because it has been the most successful development interventions for the past 50 years.[1] Family planning services therefore, were highlighted as one of the important strategies for reducing high risk pregnancies that often occurred too early, too late, and too frequent and also as a way to improve child health. It is unique in its range of potential benefits, encompassing economic development, maternal and child health, educational advances, and women's empowerment since closely spaced pregnancies within the first-year postpartum are associated with higher risks of preterm births, as well as infants who are low birth weight or small for gestational age.[2,3] Therefore, post-partum family planning (PPFP) is defined as the prevention of unintended and closely spaced pregnancies

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through at least first 12 months following childbirth, which could add advantage of giving the women sufficient time to recover from the physical stress of pregnancy and for lactation. Hence, healthy timing and spacing of pregnancies provides a positive effect on maternal health and new-born outcomes.[4] It also aims to prevent unintended pregnancy and closely spaced pregnancies after childbirth and approved that PP FP saves lives.[3,5,6] PPFP is often ignored and a number of biases and misconceptions had limited its availability and acceptability.[7] However, the timing of the return of fertility after childbirth is variable and unpredictable. Women can get pregnant before the return of menstruation. Therefore awareness creation is critical to determine the number of children to have, time of use after postpartum because the woman should be able to have informed choices that are free from coercion, discrimination, or violence.[8,9]

Sub-Saharan Africa has one of the highest fertility rates in the world, which is further promoted by the low utilization of postpartum contraceptive methods.[10] Yet, many communities claim to use traditional family planning methods that preexists the introduction of modern contraceptives, implying that contraception is a culturally acceptable norms.[2,3,8,10–12] The overall trend of contraceptive prevalence is promising in Ethiopia.[13,14] Despite of Rapid change with a renewed investment in family planning programs that highly promoted PPFP[2,10] in Ethiopia, different studies showed that the prevalence of PPFP was varying from10.3% in northern Ethiopia to 80.3% in Addis Ababa to[15–21] associated with sociocultural, demographic, residence, economic, quality of health care and dominancy of partner discrepancies.[10,15,17] Additionally, researchers showed that marital status, prenatal visits, place of delivery, length of time after delivery, postnatal visits, family planning counseling during antenatal care (ANC) and postnatal care (PNC), resumption of menses after birth, discussion of family planning with male partner and previous modern contraceptive use were the key predictors of postpartum modern contraceptive use.[8,12,17,22–25] In relation to the mentioned reasons the utilization of PPFP is very low in the study area,[21] despite of Counselling and providing FP services is an essential component of the postnatal care package in Ethiopia. Therefore, this study intended to assess the uptakes and associated factors of postpartum family planning in southern Ethiopia that could help policy makers create an approach to avert the problem and increase the CPR as high as possible through promotion of postpartum need of family planning.

2. Materials and Methods

The community based cross-sectional study was conducted among post-partum women who gave birth within 12 months before survey in Hawassa city administration, which is the capital city of the SNNPR. In 2018, population of the city administration is estimated to be 376,539 with 65% of urban population, of which 23.3% are women of productive age group. The city administration has 8 sub cities and 32 kebeles (21 urban and 11 rural kebeles). There are 7 hospitals (3 government and 4 private Hops), 11 health centers, 17 health posts, 4 NGO and 34 private clinics under city administration. A total of 402 women who gave birth in the past 12 months before survey were identified using single population proportion formula considering prevalence of postpartum family planning use within 12 months after giving birth to be 80.3% in urban (Addis Ababa) setting[20] and design effect of 1.5at 95% CI and 5% level of precision, and 10% of non-response rate. Women who unable to communicate due to mental problem, and serious health as well as those who did not consent to participate, were excluded from the study.

Sampling was conducted in two stages. For the first stage six kebeles were selected by simple random sampling and total sample size was proportionally allocated based on the number postpartum women in the last 12 months. In the second stage, we selected eligible participants by systematic random sampling technique based on list of postpartum mothers registered at health post level in each selected kebeles.

2.1. Data collection and quality management

Data was gathered by using structured and pretested questionnaire. The questionnaires were first prepared in English and then translated into local national language (Amharic) and back translated into English to assure consistency by language expert and pretest was conducted among 20 postpartum women in non-sample kebeles. Supervisors and data collectors were trained for one day before data collection. The data collection was supervised daily by two supervisors. The filled questionnaires were checked daily for the completeness and consistency of data by the supervisors and principal investigators. Data collectors approached and interviewed the selected respondents after informed verbal consent was obtained. The women, who were not available in the first visit, were revisited for two more times. If they were not accessible, the women in the next household were interviewed in place of those women who were not found.

2.2. Data processing and analysis

Data was entered, cleaned and analyzed by using SPSS Version 20 (IBM Corporation, Armonk, NY, USA). Descriptive statistics was used to describe the socio-demographic and other study variables. Categorical variables are described using actual numbers and percentages while continuous variables has described by means, standard deviations, medians, and ranges. Binary logistic regression analysis with odds ratio with

their 95% confidence interval was used to assess the degree of association between dependent and independent variables and used to test significance of the association p-value less than 0.25 of independent variables with the outcome variables were selected as a candidate variables for multivariable analysis to form the model. Multivariable analysis model using adjusted odd ratio (AOR) was applied to identify the important determinant factors of postpartum family planning utilization. Level of significance below 0.05 was considers to determine the association

2.3. Ethical considerations

Ethical clearance approval has obtained from the Hawassa Health science collage Ethical Review Committee and official letter was written to each study areas. Verbal consent has also obtained from each individual respondent before data collection after thorough explanation of the purpose, benefit, risk and confidentiality of the study and as participation was on voluntary basis that they can withdraw at any time if they are not comfortable about the questionnaire. The information obtained has kept confidential.

3. Result

3.1. Socio demographic factors of study participants

A total of 402 post-partum women were interviewed with response rate of 100%. As presented in Table 1, the age of study participants ranged from 19 to 42 years with a mean age(SD) of 30(±9.4). Nearly thirty-eight percent (37.6%) were ranges from 31-35 years old. Among all participants, 167(41.5%) were of Protestant, while Muslims 34(8.5%), and only 8(2.0%) corresponded to others. Almost all (92.5%) of the respondents were married. Sidama compromises predominant ethnic group with 176 (43.8%) of all study participants, more than one third (37.1%) of respondents educated Diploma and above whereas the major occupational status of respondents were employed 147(36.6%) and only, 186 (46.3%), were earning monthly income between 501-1000birr ($13.2-26.3) (Table 1).

3.2. Reproductive histories and related factors characteristic of study participants

As presented in Table 2, almost half (50.2%) had been pregnant for three and more, while only 14.7% were primigravida. On other hand, 46.8% gave birth for four and above times; primipara were 17.9%. Most of study participants (84%) attended ANC for three and more times. However, only 1.7% of them did not follow ANC at all. Sixty one (18.5%) of study participants gave birth for the next baby within one year, and 47% of them attended their labor in health center. Surprisingly, none of them gave birth at home. However, more than one tenth (12.2%) attended private clinics for their labor and delivery. Around sixty three percent (62.9%) of the study participants attended postnatal care. More than half (53.2%) of respondents decided to have more than three children and only 17.2% desired to have only one child in their life.

3.3. Knowledge, previous use contraceptives and Source of information for contraceptive methods

All of the study participants were informed about contraceptives, but 331 (82.3%) of study respondents had awareness about family planning. Nearly one third (29.4%) of participants responded that as they were informed from more than one sources of information. Whereas almost three-quarter (73.1%) of study participants were informed from health care providers; 177(44%) heard from mass media, while only 6.5% learnt in the school. Among the respondents. Almost all (95.8%) and 141 (36.6%) of study respondents had informed the advantage of contraceptives and it can prevent unwanted pregnancy and respectively. The predominantly known type of contraceptive methods was injectable 239(59.5%). The majority (84.9%) respondents were notified about the side effects of contraceptives with a great complaint of irregularity of period (64.9%). However, the popular (89.8%) of study participants used contraceptives before. Injectable (39.6%) and pills (36.6%) account more three quarter of all contraceptives methods (Table 3).

3.4. Current use of contraceptives

Most (85.1%) of study participants use contraceptives currently. The majority (57%) of study respondents use injectable; one third (32.3%) use reversible long acting contraceptives; while only 0.6% use permanent family planning method. Concerning, the time of starting, 12.6% started immediately after delivery but more than half (54.7%) started it at 45 days of postnatal visit. Almost all (97.7%) of respondents use their method of choice; while 302(88.4%) were supported by their male partners.

3.5. Reasons for not using contraceptives

More than half (51%) of study participants refused use of post-partum contraceptive because of need of more offspring, followed by partner refusal (36.7%), three quarter of all study participants not used contraceptive due to lack awareness (Figure 1).

3.6. Factors associated with post-partum contraceptive use of study participants

As indicated inTable 5, bivariate and multivariate binary logistic regression was done to assess factors associated with PPFP. Knowing about advantages and its side effects, previous use of contraceptive, partner support and delay in

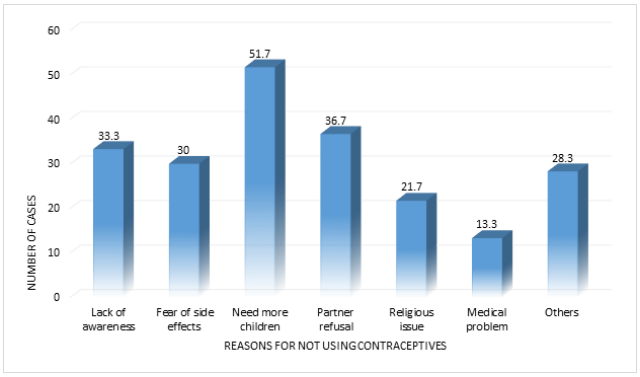

Fig. 1: Reasons for not using contraceptives of study participants (60)*

returning of period have statistical significance with current use of post-partum contraceptives. Women who know advantages and side effects of contraceptives were 1.31 and 12.13 times more likely to use post-partum contraceptives than their counterparts (AOR, 1.31, 95%CI 1.146-6.975;12.13, 95%CI 4.508-15.635) respectively. Similarly, women whose partner support contraceptive use were 5.17 times more likely to use post-partum contraceptives (AOR, 5.17; 95% CI 1.95-13.70) and those who used contraceptive previously were 10.77 time more likely to use contraceptives during their post-partum period than those did not use it at all. In addition, women had not seen their period were 4.69 times more likely used contraceptive during their post-partum periods (AOR, 4.69; 95%CI 1.04-21.19 with (P <0. 05).

4. Discussion

This study identified that age of study participants ranged from 19 to 42 years with a mean age(SD) of 30(±9.4) that is in line with the result of conducted in northwest Ethiopia and Debre Tabor (28.3 ± 6.4-29.96±6.7).[11,15,22,25,26] This indicates that most of Ethiopia women use postpartum contraceptives within average year of 28-30. However, most of our study participants were multigravida and multi-para. Antenatal care assist women to have counselling and choose a contraceptive options to use during postpartum.[8] In this study, the majority (98.3%) of study participants attended ANC. This is consistent with finding of studies carried out in central zone of Tigray,[19] Durame,[17] in urban Ghana[23]; in rural Bangladesh,[27] in Axum-Tigray.[28] Findings another studies conducted in Northwest Ethiopia: Debat and Gondar[15,22] are found to be very low in relation to our finding. The probable reasons for variation of the results could be the difference of socio-economic status among study population, study design and duration of studies.

Studies approved that short birth interval is high in Ethiopia.[21] In this study, the significant number (57.9%) of participants gave birth for the second baby within two years which corresponds to similar study conducted in Bale zone (57.3%),[29] and in Adaba (51.7%),[30] despite it is very high compared to findings of studies conducted in Durame(30.9%),[17] central Tigray (15.5%),[19] Axum town (25.2%),[28] and Gondar, only 22%.[22] The difference of findings could be due to variation in sample size, study design and duration of study. This study found that 62.9% of the study participants attended postnatal care which is constant with studies of rural Tigiray 50%[28] and 63.5%[21] but higher than studies in Debat (5.7%),[15] Axum (43.7%),[28] Gondar town (26.3%)[22] and it is much lower than result of study in Ghana (99.7%).[23] The probable reason for the difference of findings could socio-cultural variation of different communities, set up of studies and source of data.

In our study, surprisingly, none of them gave birth at home and only 12.2% attended private clinics for their labor and delivery. In contrast, home delivery was the most frequent culture (81.1%.) in Debat,[15] and very few

Table 1: Sociodemographic characteristic study participants (N=402)

Variables	Frequency	Percent (%)
Age category		
≤ 25	83	20.6
26-30	128	31.8
31-35	151	37.6
36+	40	10
Marital status		
Unmarried/single	15	3.7
Married	372	92.5
Divorced	10	2.5
Widowed	5	1.2
Educational status		
No formal education	61	15.2
1st level	97	24.1
2nd level	96	23.9
Diploma and above	149	37.1
Educational status of partner (N=372)		
No formal education	20	0.5
1st level	41	10.2
2nd level	92	22.9
Diploma and above	219	54.5
Occupation		
Student	26	6.5
Merchant	107	26.6
Farmer	1	.2
House wife	116	28.9
Employed	147	36.6
Others	5	1.2
Monthly income		
<1500	16	4.0
1500-2000	187	46.5
2001-2500	167	41.5
>2500	32	8.0

Table 2: Reproductive histories and related factors characteristic of study participants, (N=402)

Variables	Category	Frequency	Percent (%)
Number of pregnancy	One	59	14.7
	Two	130	32.3
	Three	142	35.3
	>Four	72	17.9
Number of parity	One	72	17.9
	Two	142	35.3
	Three	129	32.1
	>Four	59	14.7
Attended ANC	Yes	395	98.3
	No	7	1.7
Number of ANC visits (N=395)	1st visit	23	5.8
	2nd visit	40	10.1
	3rd visit	112	28.3
	4rth visit	220	55.7
Birth interval between the last 2 deliveries (N=330)	one year	61	18.5
	two years	130	39.4
	>three years	43	10.7
Place of last child delivered	Health center	189	47.0
	Hospital	164	40.8
	Private	49	12.2
After delivery you had got PNC services	Yes	253	62.9
	No	149	37.1
Decided number of additional children	One	69	17.2
	Two	37	9.2
	Three	82	20.4
	More than three	212	53.2

of women gave in different studies: in Durame, 3.4%,[17] Ghana, 1.6%,[23] Gondar, 7.5%,[22] and central Tigray, 14.8%[19] were gave birth at their home.

This study shows that more than half (53.2%) of respondents decided to have more than three children which is lower than study of Malawi in which 69.5% mother desired to have up to 8 children in their life.[30] This is perhaps, inclusion criteria of studies. Even though, the actual number of decided children was not specified, 72.8%, and 61.3% of the respondent in studies of Durame and Adaba had a plan to have children in the future respectively.[17,31] Whereas, 8.4% of the respondent were undecided about their future child birth.[17] Surprisingly, 61%,[7] and 32.2%,[31] of the mothers wanted to have children as God allows but 38.7% of the participants do not want more child at all.[30] However, this study identified that only 17.2% desired to have only one child in their life, one third of women expressing no intention of having additional children in their life.[32] The possible reasons could be autonomy of women, enough number of live children, and also positive view of partners.

However, the popular (89.8%) of study participants ever used contraceptives before which agree with study of Kolfe Keraniyo in Addis Ababa (88.6%),[20] many studies were found to be very low.[11,15–18,23] Injectable contraceptive method overweighs (39.6%) followed by pills (36.6%). The same was true in studies conducted elsewhere, even though there was variation in birth control pill and male condom.[15,22,33] Socio-cultural values, and availability contraceptive methods at the time of service, source of information, knowledge about advantage and side effects of contraceptives determine the selection of methods. However, postpartum period is a critical time to address high unmet family planning need and to reduce the risks of closely spaced pregnancies.[5] The contraceptive utilization rate varies in different studies. Current contraceptives use of this study is 85.1% that is in line with that of Kolfe kereneo-Addis Ababa, Awe zone, Cameroon, and Kenyan studies.[20,26,32,34] The overall postpartum contraceptive prevalence of different studies were found to be lower than the current study.[11,12,15,18,19,22,23,25,29,30,33,35] Study designs, study populations, determined sample size could be associated probable explanations of disparity of findings.

Since informed decision is determinant for acceptance contraceptives, Women should be given the opportunity to make an informed choice about their contraceptive method and even the number children need to have.[8,9,36] Because, informed choices of women after clear discussion increases the continuation of chosen contraceptive method.[2,6] In many cases, objections from their partners could inhibit them to use contraception despite their desire to do so.[2] However, this study shown that almost all (97.7%) of

Table 3: Knowledge and previous use of contraceptives and Source of information for contraceptive methods

Variables	Category	Frequency	Percent (%)
Informed about contraception	Yes	331	82.3
	No	71	17.7
Source of information*	Radio	33	8.2
	Television	140	34.8
	Health professionals	294	73.1
	HEWs	93	23.1
	Friends	105	26.1
	School	26	6.5
The most known method of contraceptive*	Condom	80	19.9
	Pills	134	33.3
	Injectable	239	59.5
	Implants	141	35.1
	IUCD	85	21.1
	Tubal ligation	38	9.5
	Vasectomy	1	0.2
Knows the advantages of contraceptives	Yes	385	95.8
	No	17	4.2
Known advantages of contraceptives (N=385)*	Prevent unintended pregnancy	141	36.6
	For spacing	184	47.8
	For limiting	90	23.4
	For both	99	25.7
	Others	12	3.1
Knows about side effects of contraceptives	Yes	339	84.3
	No	63	15.7
Mostly known side effects of contraceptives (N=339)*	Nausea and vomiting	120	35.4
	Headache	157	46.3
	Weight gain	163	48.1
	Weight loss	29	8.5
	Irregularity of periods	220	64.9
	Others	117	34.5
Ever used contraceptives	Yes	361	89.8
	No	41	10.2
Which methods used most*	Condom	15	4.2
	Pills	132	36.6
	Injectable	143	39.6
	Implants	56	15.5
	IUCD	15	4.2

*One participant could answer more than questions

respondents use their method of choice; in coordination with similar study conducted in elsewhere.[19,28] Besides, involvement of partner was found fundamental issue. In this study, 88.4% participants were supported by their male partners which is indicative for partner's approval of contraception.[12,15,16,23,34] This implies that male involvement has an important role on the use of modern contraceptives.

The need for postpartum contraceptive uptakes depends on different socio-demographic, contraceptive related information, desired number of fertility and clear discussion and arriving at consensus on its use. This study identified that among women who refused to use contraceptives, 51% because of need of more offspring, different studies supported this finding;[12,26] followed by partner refusal (36.7%), which in congress to many studies,[12,18,29,31,37,38] three quarter of all study participants not used contraceptive due to lack awareness, similar studies supported the finding,[31] previous experience of method-related side effects,[25,26,29,31,35,37,38] and religious beliefs.[12,26,29]

Knowledge about advantages and its side effects, previous use of contraceptive, partner support and delay in returning of period have statistical significance with current use of post-partum contraceptives. In this study, women who know side effects of contraceptives were 12 times more likely than to use post-partum contraceptives than their counterparts. This agrees with studies conducted in different areas.[7,26,34] Similarly, women who were supported

Table 4: Current use of contraceptives among study participants

Variables	Category	Frequency	Percent (%)
Current use of contraceptives	Yes	342	85.1
	No	60	14.9
Contraceptive methods in use (N=342)	Condom	5	1.5
	Pills	28	8.2
	Injectable	195	57.0
	Implants	85	24.9
	IUCD	27	7.9
	Tubal ligation	2	0.6
When did you start to use the method (N=342)	Immediately after birth	43	12.6
	At 45 days	187	54.7
	After 45 days	112	32.7
It is you choice of method	Yes	334	97.7
	No	8	2.3
Your partner supported you	Yes	302	88.3
	No	40	11.7

Table 5: Factors associated with PPFP users in the postpartum period in Hawassa city administration, Southern Ethiopia, 2018

Variables	Category	Contraceptive use		COR(95%CI)	AOR(95%CI)
		Yes #(%)	No # (%)		
Birth interval from previous child	One year	49	12	1	1
	Two years	120	9	0.31 [0.12-0.77]	1.626(0.395-6.686)
	Three years	90	7	0.32 [0.12-0.86]	3.205(0.627-6.381)
	> three years	32	11	1.40 [0.55-3.56]	0.92(0.157-5.388)
	Child is first	51	21	1.68 [0.75-3.78]	0.879(0.220-3.501)
Desired number of children	One	43	26	1	1
	Two	30	7	0.38 [0.15-1.00]	1.3(0.289-5.830)
	Three	73	9	0.20 [0.09-0.47]	0.98(0.235-4.084)
	> three	196	18	0.15 [0.08-0.30]	1.48(0.431-5.107)
Know advantage of contraceptives	No	9	8		1
	Yes	333	52	5.69 [2.10-15.41]*	1.311(1.14-6.97)*
Know side effects of contraceptives	No	27	35	1	
	Yes	315	25	16.33 [8.56-31.18]	12.13(4.51-15.63)**
Partner supports contraception	No	21	19	1	
	Yes	321	41	7.08 [3.52-14.27]	5.17(1.95-.13.70)**
previous use of contraceptives	No	25	35	1	1
	yes	339	3	15.20(5.45-18.56)	10.775(8.418-21.389)**
menses returned at	45 days	110	9	1	1
	2 months	81	14	2.11 [0.87-5.12]	0.219(0.042-1.14)
	3 months	64	8	1.53 [0.56-4.16]	0.317(0.052-1.94)
	> 3 months	40	9	2.75 [1.02-7.42]	0.183(0.035-0.95)
	Not yet	47	20	5.20 [2.20-12.26]	4.69 [1.04-21.19]*

*Statistically significant associations;** Very strong Significant, 0.0001

by their partner were 5 times more likely to use post-partum contraceptives.[7,11,12,16,26,30,34] This could be due to most married women, might face serious objections to contraceptives if their partners are not approving despite their desire to space or limit the number births. Those who previously used contraceptives were 10 time more likely to use contraceptives during postpartum period than those did not use it at all. This finding is consistent to studies from different dimensions.[17,20,25,27,30] In addition, women who had not seen their period were 4.69 times more likely used contraceptive during their post-partum periods.[18,20,22,30] this could be previous experience to identified contraceptive method they used before and most of postpartum contraception carried out before 45 days of postnatal period.

5. Conclusion

Postpartum women in southern Ethiopia use contraceptives effectively during their puerperal period. Especially, those who are familiar with advantages and side effects of contraceptive methods utilize postpartum contraceptive more effectively than their counterparts. Partner support is very informant for promotion of postpartum contraceptive use. Thus, equipping women with knowledge of family planning methods; authorizing them to be decisive in the health and positivity of male partners are very crucial to promote postpartum use of contraceptives.

6. List of Acronyms & Abbreviations

AOR: Adjusted Odds Ratio, ANC: Antenatal Care, COR: Crude Odds Ratio, FP: Family Planning, HC: Health Center, HIPFP: High Impact Practices in Family Planning; IUCD: Intrauterine Contraceptive Device, PNC: Postnatal Care, PPFP: Postpartum Family Planning, PPW: Postpartum Women, SNNPR: Southern Nations Nationalities and Peoples' Region, SPSS: Statistical Package for the Social Sciences, WHO: World Health organization.

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None.

8. Conflict of Interest

None.

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References

1. Weinreb A. Family Planning Programs for the 21st Century: Rationale and Design; 2013.
2. Bongaarts J, Townsend JW, Bertrand JT, and MDG. Family Planning Programs For The 21st Century: Rationale and Design. New York: Population council 2012.
3. WHO. Programming strategies for Postpartum Family Planning. In: Research RHa, editor. Geneva, Switzerland: World health orgainzation ; 2013.
4. Tefera M, Fikru C, Tesfaye DJ. Utilization of Immediate Post-Partum Intra Uterine Contraceptive Device and Associated Factors: A Facility based Cross Sectional Study among Mothers Delivered at Public Health Facilities of Sidama Zone, South Ethiopia. *J Pregnancy Child Health*. 2017;4(326):1–8.
5. Gaffield MEE, Temmerman SEM. It's about time: WHO and partners release programming strategies for postpartum family planning. *Glob Health: Sci Pract*. 2014;2(1):4–9.
6. Smith R, Ashford L, Gribble J, Clifton D. Family Planning Saves Lives. 4th ed. Washington, DC; 2009.
7. Ankomah JAA, Oladosu M. Myths, misinformation, and communication about family planning and contraceptive use in Nigeria. *J Contracept*. 2011;2011(2):95–105.
8. Rcooa G. Gynaecologists RCoOa. Best practice in postpartum family planning. London Royal College of Obstetricians and Gynaecologists; 2015.
9. UNPFA. By choice not by chance; The State of World Population 2012. 2012 Contract No.: 7.16.
10. Hounton WWS, Barros AJD, Askew I. Patterns and trends of postpartum family planning in Ethiopia, Malawi, and Nigeria: evidence of missed opportunities for integration. *Glob Health Action*. 2015;8(29738):1–10.
11. Mohammed DWA, Feleke A, Megabiaw B, Megabiaw B. Determinants of modern contraceptive utilization among married women of reproductive age group in North Shoa Zone. *Reprod Health*. 2014;11:1–7.
12. Wuni C, Dassah ET. Determinants of contraceptive use and future contraceptive intentions of women attending child welfare clinics in urban Ghana. *BMC Public Health*. 2018;18(79):1–8.
13. Health FMo. Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ICF International. Addis Ababa, Ethiopia: Central Statistical Agency, 2012.
14. Health FMo. Ethiopia Mini Demographic and Health Survey 2019, Key Indicators. Addis Ababa, Ethiopia: Ethiopian Public Health Institute, 2019.
15. Mengesha ZB, Worku AG, Feleke S. Contraceptive adoption in the extended postpartum period is low in Northwest Ethiopia. *BMC Pregnancy Childbirth*. 2015;15:1–6.
16. Belay MBL. Factors affecting long-term and permanent contraceptive uptake among immediate post-partum mothers at Saint Paul's Hospital millennium medical college, Addis Ababa, Ethiopia: A cross-sectional study. *Ethiop J Health Sci*. 2018;10(2):31–41.
17. Tamrie YE, Hanna EG, Argaw MD. Determinants of Long Acting Reversible Contraception Method Use among Mothers in Extended Postpartum Period, Durame Town, Southern Ethiopia: A Cross Sectional Community Based Survey. 2015;7(10):1315–26. doi:10.4236/health.2015.710146.
18. Demie T, Huluka TK, Workineh D, Libanos HG. Postpartum Family Planning Utilization among Postpartum Women in Public Health Institutions of Debre Berhan Town, Ethiopia. *J Women's Health Care*. 2018;7(2):1–9.
19. Abraha TH, Gebrezgiabher BB, Aregawi BG, Belay DS, Tikue LT, Welay GM. Predictors of postpartum contraceptive use in rural Tigray region, northern Ethiopia: a multilevel analysis. *BMC Public Health*. 2018;18(1017):1–10.
20. Gebremedhin AY, Kebede Y, Gelagay AA, Habitu YA. Family planning use and its associated factors among women in the extended postpartum period in Addis Ababa, Ethiopia. *Contracept Reprod Med*. 2018;3(1). doi:10.1186/s40834-017-0054-5.
21. Zimmerman LA, Yi Y, Yihdego M, Abrha S, Shiferaw S, Ahmed S. Effect of integrating maternal health services and family planning services on postpartum family planning behavior in Ethiopia: results from a longitudinal survey. *BMC Public Health*. 2019;19(1448). doi:10.1186/s12889-019-7703-3.
22. Abera Y, Mengesha ZB, Tessema GA. Postpartum contraceptive use in Gondar town, Northwest Ethiopia: a community based cross-sectional study. *BMC Women's Health*. 2015;15(19):1–8.
23. Coomson JI, Manu A. Determinants of modern contraceptive use among postpartum women in two health facilities in urban Ghana: a cross-sectional study. *Contracept Reprod Med*. 2019;4:17. doi:10.1186/s40834-019-0098-9.
24. Gebremedhin AY, Kebede Y, Gelagay AA, Habitu YA. Family planning use and its associated factors among women in the extended postpartum period in Addis Ababa, Ethiopia. *Contracept Reprod Med*. 2018;3:1.

25. Taye EB, Mekonen DG, Debele TZ. Prevalence of post partum modern family planning utilization and associated factors among postpartum mothers in Debre Tabor town. *BMC Res Notes*. 2019;12(430):1–7.
26. Genet E, Abeje G, Ejigu T. Determinants of unmet need for family planning among currently married women in Dangila town administration, Awi Zone, Amhara regional state; a cross sectional study. *Reprod Health*. 2015;12:42. doi:10.1186/s12978-015-0038-3.
27. Baqui A, Ahmed S, Begum N, Khanam R, Mohan D. Impact of integrating a postpartum family planning program into a community-based maternal and newborn health program on birth spacing and preterm birth in rural Bangladesh. *J Glob Health*. 2018;8(2):020406. doi:10.7189/jogh.08.020406.
28. Huluf T, Hsbagmw A. Intentions on contraception use and its associated factors among postpartum women in Aksum town, Tigray region, northern Ethiopia: a community-based cross- sectional study. *Reprod Health*. 2018;15(1):188. doi:10.1186/s12978-018-0632-2.
29. Gonie A, Wudneh A, Nigatu D, Dendir Z. Determinants of family planning use among married women in bale eco-region, Southeast Ethiopia: a community based study. *BMC Womens Health*. 2018;18(1):50. doi:10.1186/s12905-018-0539-7.
30. Bwazi C, Maluwa A, Chimwaza A, Pindani M. Utilization of Postpartum Family Planning Services between Six and Twelve Months of Delivery at Ntchisi District Hospital, Malawi. *Health*. 2014;6(14):1724–37. doi:10.4236/health.2014.614205.
31. Fekadu HKA, Yesuf EA, Hussien G, Tafa M. Prevalence and Determinant Factors of Long Acting Contraceptive Utilization among Married Women of Reproductive Age in Adaba Town, West Arsi Zone, Oromia, Ethiopia. *J Women's Health Care*. 2017;6(1):1–11.
32. Jalang'o FTR, Barasa SO, Njoroge P. Determinants of contraceptive use among postpartum women in a county hospital in rural Kenya. *BMC Public Health*. 2017;17(604):1–8.
33. Navodani KT, Fonseka P, Goonewardena CS. Postpartum family planning: missed opportunities across the continuum of care. *Ceylon Med J*. 2017;63:87–91.
34. Ajong AB, Njotang PN, Yakum MN, Essi MJ, Essiben F, Eko FE, et al. Determinants of unmet need for family planning among women in Urban Cameroon: a cross sectional survey in the Biyem-Assi Health District, Yaoundé. *BMC Womens Health*. 2016;16(4):1–8.
35. Alemayehu GA, Fekadu A, Yitayal M, Kebede Y, Abebe SM, Ayele T, et al. Prevalence and determinants of contraceptive utilization among married women at Dabat Health and Demographic Surveillance System site, northwest Ethiopia. *BMC Womens Health*. 2018;18(1):118.
36. Samuel S, Tolossa T, Alemayehu A. Expanding contraceptive choice in Ethiopia: a comparative analysis of method mixes in post-abortion contraception versus routine family planning. *Gates Open Res*. 2019;3(1518):1–11.
37. Joseph K, Wulifan SB, Jahn A, Allegri MD. A scoping review on determinants of unmet need for family planning among women of reproductive age in low and middle income countries. *BMC Women's Health*. 2016;16(2):1–15.
38. Nalwadda G, M F, Byamugisha J, Faxelid E. Persistent high fertility in Uganda: young people recount obstacles and enabling factors to use of contraceptives. *BMC Public Health*. 2010;10(530):1–13.

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