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Research Article

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Prevalence and Factors Affecting Utilization of Postpartum Family Planning Service Utilization Among Postpartum Women in Gimbi Town, Western Ethiopia

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Abstract

Introduction: Family planning service is one of the important interventions to save mother and the children in human life. Among family planning methods, postpartum family planning service has a great contribution to decrease a child and maternal death.

Methods: A cross-sectional study design was conducted at Gimbi Town, Western Ethiopia in June, 2019. Multistage sampling method was used to select 597 study participants. Data was collected with Structured pretested questioner. Data entered with Epi data 3.1 software, and exported to SPSS software version 21 for analysis. A Descriptive statistical method like frequency distribution were used to present the study population parameters. To analyze factors associated with the dependent variables a Bivariate Logistic regression model was applied.

The confounding factors were controlled by using Multivariable logistic regression model. To determine the significant association with the of family planning utilization, Adjusted Odds Ratio with the ninety-five confidence interval (AOR)95% (CI) was computed.

Result: Our study revealed that the prevalence of family planning use among postpartum mothers was **6**8.5% (95%CI: 64.7-72.2). Mothers with four and above Antenatal care(ANC) visit were 8 times more likely to utilize FP service compared to those who attend ANC service only one time (AOR=8.0; 95% CI: 1.3 - 29.8). Mothers who were delivered in hospital were 5 times more likely to utilized FP compared to those who gave birth at home (AOR=5.0; 95% CI: 1.3 - 16.7).

Conclusion: This study revealed that utilization of postpartum family planning in Gimbi Town is high. Household income, number of ANC visit, Place of delivery and perceived attitude of service provider significantly associated with postpartum family planning utilization. Promoting ANC follow up, institutional delivery and improving the information provision during the ANC follow up, delivery and postnatal care is important.

Keywords: Postpartum Family Planning; ANC Visit; Mothers and Gimbi

Abbreviations

ANC: Antenatal Care; AOR: Adjusted Odds Ratio; ETB: Ethiopian Birr; FGAE: Family Guidance Association of Ethiopia; FP: Family Planning; KM: Kilometer; NGO: Non-governmental Organization; PPFP: Postpartum Family Planning; WHO: World Health Organization.

Introduction

Rapid population growth has become the major threat facing today. Now the population of the globe reached 7.349 billion as reported on 2015 [1]. In areas where fertility is high I, there is also increased number of maternal, child and newborn death. Maternal Mortality is still the major world problems doe to child bearing is one of the most leading Maternal health problems mainly causes of illness, disability and death of mothers. The magnitude of maternal mortality in 2013 was 289,000 [2]. This high burden of maternal death around 62 percent of them were from Sub-Saharan Africa [3,4]. Annual maternal mortality rates in the developed countries such as the United Kingdom and United States of America are estimated at 8 and 16 per 100,000 live births respectively. In some African countries such as South Africa, maternal mortality rate is estimated at 237 per 100,000 live births, while in the Sub Sahara African countries the rates are over 400 per 100,000 live births [5]. In Ethiopia, maternal mortality rate estimates 350 death per100.000 live births [6]. Family planning is a health service given for reproductive women and men which capacitate them to have a desired number children and protect them from unwanted pregnancy. Many reproductive age women, around 68,000 women per year die due to unsafe abortion which make maternal mortality among the leading cause of maternal death [7]. In Africa, Unsafe abortion is one of the top cause of maternal death and morbidity which accounts around 14% of maternal mortality [8]. According to the World Health organization (WHO) estimate, more than five and half million women suffer from Unsafe abortion, from this magnitude around 36,000 mothers die from procedure, and others die due to chronic illness and disability related to it. Reproductive age women should take a time gap at least two years between consecutive delivery by family planning methods [9,10]. Now days the advantages of family planning service recognized though out the world. This improve socio economic status, economic, and health conditions of the mothers. This benefit has been contributing individually for the newborn baby as well as for the mother by preventing them from health problems like disabilities, death and short term and long term illness [11]. In addition to this the mother and the new born health conditions can be determined by the ability of the mother to be health while pregnant, capable on delivery which attained by birth spacing [10]. Over all more than 50% of maternal death in developing country can be addressed in advancing in knowledge and practice to use family planning services [12]. universal access to family planning service needs allocating the scarce resource primarily for addressing maternal and newborn health care [13]. Generally, the aims of family planning or postpartum family has two main objectives. These are to have the desired number of children we like and to save the mother and the new born by having birth space recommended [14]. There are different kinds of family planning method available this day which safe the woman as compared to risks of frequent pregnancies and problems related with child birth [15].

The postpartum period is a time in which a pregnant mothers take rest time and prepare for the next pregnancy if contraception intervention is not given. In this time Postpartum family planning service (PPFP) is a kind of interventions to restrain from unplanned pregnancy. PPFP is among family planning service provided immediately after delivery to prevent unplanned and closely spaced pregnancies through the first one year of childbirth. Many women after delivery never recognize themselves as they are at risks of pregnancy, and those who are sexually active after delivery desires to become not pregnant but they do not use family planning services. There are many unmet need for family planning among this women's, and providing access to contraception will during postpartum time will be a chance to prevent un planned and closely spaced pregnancies. Birth spacing's less than two years has an increased risk among pregnant women. As data reported from Egypt, around 15% of breastfeeding women, who were not using Postpartum contraception, became pregnant prior to resuming of their menses [16]. Almost all mothers 0-12 months after delivery, 54% are sexually active within the first six months of delivery, and 13% resume their menses within this period. Among mothers 12–23 months after delivery, around 93% are exercise sexual activity and 52% have menses reappearance [9]. As reported from analysis of Demographic and Health survey of 27 countries, 65% of 0-12 moth's postpartum women desire to avoid pregnancies for the next one year, but they did not use any method of family planning. The rationale behind family planning is to give adequate time for the next pregnancies to have the desired number of children, health mother and health neonate. Despite giving a time between consecutive pregnancies, preventing risk related to unwanted pregnancies PPFP helps the mothers to protect from risks of maternal and neonatal death. Due to the pregnancies within six month day of delivery a postpartum mother has been suffered with a 7.5

times risks of abortion, a 3.3 times increase in miscarriage and 1.5 times increase in risks of still birth [17]. Some women has a chance to have discussion on postpartum family planning during prenatal period, delivery, and postnatal time. The family planning service provision has high contribution in decreasing the risks of maternal and infant mortality and morbidity besides to voluntarily reduction of termination of pregnancies [18]. Besides to this risks of pregnancies many women do not recognize they faced many challenges, disabilities, mortalities during postpartum time [19,20]. As a result, family planning use during this time is low, this result in resulting to unplanned pregnancies [21]. Now days around 80 million unplanned pregnancies throughout the world due to low family planning use during postpartum time [22].

As studies showed that in Ethiopia, Contraceptive acceptance rate become increase from 29 to 33.7 between 2011 and 2014 [23]. As reported in Ethiopia, 74% of women who gave births within the past two years due to lack family planning service use, and this result in 57% birth space less than 36 months [6]. A closed birth interval would endanger the lives of the mother, the newborn, and the (previously delivered child).

There has been a limited study that describe about why low utilization and determinate factors in relation to postpartum family planning in west Ethiopia, especially at Gimbi town. Therefore, this study aims at determining those factors that deter use of FP by this group of women. Therefore, these study contributed to fill these gaps thus the results of this study would help as an important input for any possible intervention aimed at improving the PPFP service utilization.

Methods and Materials

Study area and period

Gimbi Town is found in Oromia regional state, west Wollega Zone, located 441KM from the nation capital, Addis Ababa. According to the 2018 population projection estimate, there are 44,974 people living in the town, out of the total population 22,352 are males and 22,622 are female. The existing health institutions in this town are two hospitals (One non-governmental organization (NGO), and one governmental), one health center, five medium clinics (private), one family guidance association of Ethiopia (FGAE) clinic, six drug stores (private), one minor clinic (private), one higher clinic (Private), one Red Cross drug store and one police clinic. The study period was from June-01 to July-30, 2019.

Study design: this study design was a cross sectional study conducted at community. The source populations were all mothers within extended postpartum period (within one year after delivery) in Gimbi town. The required sample size for collecting quantitative data was estimated using a single population proportion formula for a finite population taking the proportion (p) as 48%, 95% CI, 5% marginal error and 10% non-response rate. The calculated sample size was 410. Due to multistage sampling technique, we employed design effect which accounted to reduce the possible appearance of inter-cluster disparity. With this regard, we took design effect 1.5 rather than 2 because of resource and time; finally, a sample size was 597.

Inclusion criteria

- The study targeted mothers who were within 6weeks to 1 year after delivery and those who were willing to participate.

Exclusion criteria

- Those seriously sick.

Sampling technique

Multistage sampling technique was undertaken. In the process of getting to the individual study unit, two Kebeles (the lowest level of administration in Ethiopia) were selected randomly from four Kebeles. To get mothers who gave birth within six weeks to one year we conducted house to house visit. Then, proportional allocation of sample size was distributed to the designated kebeles. Finally, mothers that gave birth within 6weeks to 12 months were selected by systematic random sampling. The first house was selected randomly and taking sample every 2th household. If more than one participants were found we applied a lottery methods to screen which mother to be participated in the study.

Variables of study

Dependent variables

- Postpartum family planning service utilization.

Independent variables

- Socio-demographic factors: Age, marital status, educational status and religion.
- Socio-economic factors: Household income, employment
- Cultural factors: Discussion with partner on number children, husband support
- Health service related factors: Cost of transport, perceived staff attitude, fear of side effect, ANC visit and place of delivery.
- Fertility related factors: Not having sex, history of abortion, wants another child, infrequent sex.

Data collection procedures (Instrument, personnel, data quality control)

Data collection instrument

Data was collected using structured questionnaires which was prepared in English first and translated to Afan Oromo (regional language) to elicit information from respondents and finally it was translated back to English by one Afan Oromo and one English language teachers.

Data collection methods

- Data collection technique was by applying face-to-face interview with a structured questioner.

Data quality control

Data were collected by eight college completed students who have an experience of data collection and familiar with Afan Oromo (regional language) after taking a 2 days training on the objectives of the study and data collection producers. One supervisor and the principal investigator were closely followed the day to day data collection process and ensured completeness and consistency of the collected questionnaires. Data collected was properly cleaned before it was analyzed. To check the validity of a structured questioner a pre-test was conducted on 5% of the sample size out of selected Kebele in Gimbi Town. The data obtained by pre-test was not used for the actual analysis and correction like skipping made on questionnaire.

Data analysis

In this study, analyzed data were described by using statistical methods like frequencies, and percentages. Results was summarized and presented by text, tables, and charts. The association between dependent and independent variables ware analyzed by using bivariate analysis regression model and associations with p-value <0.05 were statistically significant. Those independent variables that showed significant associations by bivariate analysis and variables with p value of <0.25 was taken to multivariate logistic analysis and the data was analyzed to identify independent predictors by controlling confounding variables. The strength of association were analyzed with odds ratio and 95% confidence interval [CI].

Operational definition

- **Postpartum family planning utilization**: Is defined as those respondents who are using postpartum family Planning.
- **Perceived Good attitude:** When service providers are able to ex plane the available method of FP and respecting choice of respondents.
- **Perceived Bad attitude:** When a service providers are not able to ex plane the available methods of FP and do not respect choice of respondents.

Results

Socio-demographic characteristics

About 597 mothers were participated in the study with a response rate of 100%. The mean or average age of the study participants were 26.8 ± 4.467 SD years, with lowest age of 17 and a maximum of 40 years. Most of the study participant's age were in the age group of 20-24 years (28.1%) and 25-29 (41.4%). Of the interviewed respondents, 532 (89.1%) were married. Majority of respondents 527 (88.3%) were Oromo ethnicity. Of the interviewed respondents 222 (37.2%) were Orthodox Christians and 193 (32.3%) protestant. One hundred seventy-five (29.3%) of the respondents had monthly income of ≤ 500 Ethiopian Birr (ETB) while majority of the respondents 221 (37%) have monthly income between 500-1500 ETB. Only 9 (15.9%) of respondents earned more than 2500 ETB per month (Table 1).

Variables	Frequency(number)	Percent (%)
Maternal age(years)		
15-19	24	4.0
20-24	168	28.1
25-29	247	41.4
30-34	127	21.3
35-40	31	5.2
Marital status		
Single	24	4.0
Married	532	89.1
Divorced	25	4.2
Widowed	16	2.7
Ethnic group		
Oromo	527	88.3
Amhara	51	8.5
Gurage	18	3.0
Tigre	1	0.2
Religion		
Orthodox	222	37.2
Protestant	193	32.3
Muslim	99	16.6

Adventist	83	13.9
Educational status of mother		
Illiterate	159	26.6
Primary school (1-8)	206	34.5
Secondary school (9-12)	159	26.6
Diploma	62	10.4
Degree and above	11	1.8
Husband's education		
No education	50	8.3
Primary school (1-8)	178	29.8
Secondary school (9-12)	184	30.8
Diploma	99	16.6
Degree and above	29	4.9
Occupational status		
Farmer	3	0.5
Merchant	167	28.0
civil servant	143	24.0
Student	43	7.2
Daily laborer	134	22.4
Private employee	82	13.7
House wife	25	4.2
Monthly income		
<500	175	29.3
5001-1500	221	37.0
15001-2500	106	17.8
>2500	95	15.9

Table 1: Socio-demographic factors of mothers in postpartum period, in Gimbi Town, Ethiopia, 2019 (n = 597).

Extended postpartum family planning service utilization

Around 409 (68.5%) were currently using postpartum family planning, among those 201 (49.1%) were using injection while 106 (25.9%) were using implant followed by pills 46 (17.7%) (Figure 1).

Out of 409 mothers who used family planning, 98 (23.8%) started at 6week, 3months, 152(36.9%) 6weeks to 3month, 138(33.5%) 3month- 6months, 24(5.8%) 6month-one year (Figure 2).

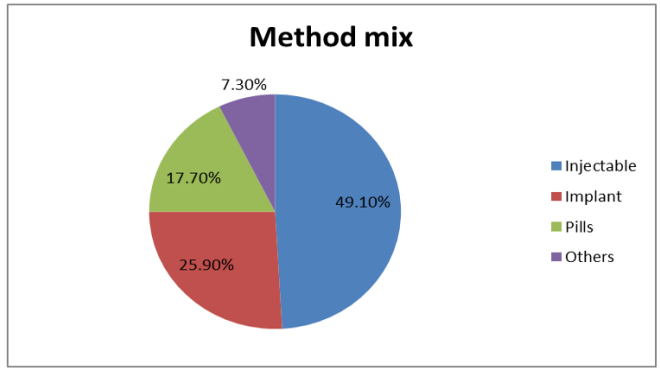

Figure 1: Method mix of extended postpartum women in Gimbi Twon, Ethiopia, 2019.

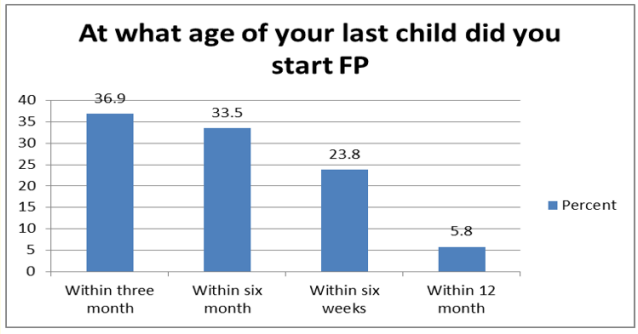

Figure 2: Postpartum family panning service utilization by time in Gimbi Town, Ethiopia, 2019.

Regarding those mothers none currently using FP during their postpartum period reason were as follows: 50 (8.4%) I want to become pregnant, 35 (5.9%) fear of side effect and 27 (4.5%) wait menstruation return, 25 (4.2%) infrequent sex and 20 (3.4%) not having sex (Figure 3).

Factors affecting family planning utilization in bivariate

According to the result presented in table 2, those married women were 34.4 times more likely to use family planning service relative to single postpartum women (COR=34.4; 95% CI: 8.0-

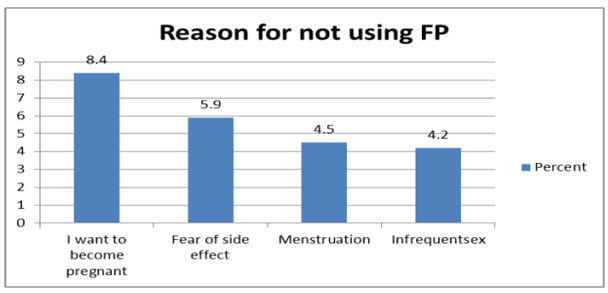

Figure 3: Reasons given by the mothers for not using Family Planning in Gimbi Town, Ethiopia, 2019.

148.1). As to educational status women who completed diploma were 12.7 times more likely to use family planning compared to those who had no education (COR=12.7; 95% CI: 4.3-37.2). Those women who reported greater than 2500 EBR monthly household income were 8 times more likely to use FP compared to those who gained less than 500 EBR (COR=8.0; 95% CI: 3.8-15.0) (Table 2).

Mothers with 4 and above ANC visit were 10 times more likely to use FP related to those who have one ANC visit (COR=10.0; 95% CI: 2.7-34.6). Besides, mothers those delivered in health facility were more likely to utilized FP service than mothers delivered at home (Table 3).

Variables	Categories	Postpartum FP utilization			
		Yes N (%)	No (%)	COR (95%CI)	P-value
Age of mother(in years)	15-19	13(54.2)	11(45.8)	1.00	0.13
	20-24	108(64.3)	60(35.7)	1.5(0.6-3.6)	0.34
	25-29	174(70.4)	73(29.6)	2(0.9-4.7)	.10
	30-34	95(74.8)	32(25.2)	2.5(1.0-6.2)	0.44
	35-40	19(61.3)	12(38.7)	1.3(0.5-4.0)	0.6
Religion	Orthodox	160(72.1)	62(27.9)	1.00	0.00
	Protestant	138(71.5)	55(28.5)	0.97(0.63-1.5)	0.89
	Islam	44(44.4)	55(55.6)	0.3(.2-.50)	0.00
	Adventist	67(80.7)	16(19.3)	1.6(.09-3.0)	0.13
Marital status	Single	2(8.3)	22(91.7)	1.00	0.00
	Married	403(75.8)	129(24.2)	34.4(7.8-148)	0.00
	Divorced	4(9.8)	37(90.2)	2(.35-2.7)	0.42
Educational status of mother	Illiterate	79(49.7)	80(50.3)	1.00	1.00
	Primary school	144(69.9)	62(30.1)	3.7(1.2-9.9)	0.11
	Secondary school	127(79.9)	32(20.1)	6.2(2.2-17.4)	0.00
	Diploma and above	59(80.8)	14(19.2)	9.4(2.8-30.1)	0.00
Monthly income	<500	92(52.6)	83(47.4)	1.00	0.00
	501-1500	140(63.3)	81(36.7)	1.2(0.8-1.8)	0.31
	1501-2500	90(84.9)	16(15.1)	6(3.4-10.8)	0.00
	>2500	87(91.6)	8(8.4)	8(3.8-15)	0.00
Any abortion	Yes	35(50.7)	34(49.3)	1.00	0.00
	No	374(70.8)	154(29.2)	2.4(1.4-3.9)	0.001

Table 2: Socio-demographic related factors relationship with postpartum family planning utilization in Bivariate logistic regression, Western Ethiopia, 2019 (n = 597).

Variable	Categories	Postpartum FP utilization			
		Yes N (%)	No N (%)	COR (95%CI)	P-value
Number of ANC visit	One	46(68.7)	21(31.3)	1.00	0.00
	Two	94(85.5)	16(14.5)	2(1.3-5.6)	0.009
	Three	184(88.0)	25(12)	3(1.7-6.5)	0.00
	Four and above	64(95.5)	3(4.5)	10(2.7-34.6)	0.00
Place of delivery	Home	56(33.3)	112(66.7)	1.00	0.00
	Health center	214(79.6)	55(20.4)	8(5.0-12.0)	0.00
	Hospital	139(86.9)	21(13.1)	13(8.0-23.2)	0.00
Husband support	Yes	362(88.7)	46(11.3)	29.4(18.1-47.8)	0.00
	No	127(78.9)	34(21.1)	1.00	1.00
How much birr do pay for transport	1-5	165(58.1)	119(41.9)	1.00	0.00
	6-10	164(75.9)	52(24.1)	2.3(1.5-3.4)	0.00
	11-15	44(89.8)	5(10.2)	6.3(2.4-16.5)	0.00
	>15	36(75)	12(25)	2.5(1.1-4.3)	0.29
Perceived attitude of service provider	Good	365(66.9)	31(33.1)	1.00	0.00
	Bad	27(50.9)	26(49.1)	0.1(0.05-0.2)	0.00
	I don't know	17(11.5)	131(88.5)	0.01(0.01-0.2)	0.00
Postpartum duration	6weeks to 3month	73(77.7)	21(22.3)	1.00	0.00
	3month- 6month	84(75)	28(25)	0.9(0.5-1.6)	0.7
	6month- 9month	120(71.4)	48(28.6)	0.7(0.4-1.3)	0.3
	9- 12month	132(59.2)	91(40.8)	0.4(0.2-0.7)	0.002

Table 3: Factors affecting Family Planning service utilization in Bivariate logistic regression, Western Ethiopia, 2019 (n = 597).

Factors affecting family planning utilization in multivariable logistic regression

In this study it was found that there is statistically significant association between Monthly household income, number of ANC visit, place of delivery and attitude of service provider with postpartum family planning service utilization. Women who earn >2500 EBR were 5 times more likely to utilized FP compared with those earn <500 EBR (AOR=5.0; 95% CI: 1.1-20.4). Mothers with four and above ANC visit were 8 times more likely to utilize FP service compared to those who attend ANC service only one time (AOR=8.0; 95% CI: 1.3 - 29.8). As the frequency of ANC contact increases mothers are more likely use FP service, this means as number of ANC visit increases, mothers gain more awareness about the FP services. This study revealed that place of delivery has an important predictor in the utilization of FP services. Mothers who were delivered in hospital were 5 times more likely to utilized FP compared to those who gave birth at home (AOR=5 95% CI: 1.3 - 16.7). The other important predictor observed in this study was perceived attitude of service providers. Mothers who were perceive their provider's attitude was bad were 90% less likely to utilized FP related to those who were perceive their provider's attitude was good (AOR=0.1; 95% CI: 0.04- 0.3) (Table 4).

Variables	Utilization of postpartum FP		COR (95% CI)	AOR (95% CI)
	Yes N(%)	No N(%)		
Monthly income (in Birr)				
<500	92 (52.6)	83 (47.4)	1.00	1.00
501-1500	140 (63.3)	81 (36.7)	1.2(0.8-1.8)	0.4(0.1-1.2)
1501-2500	90 (84.9)	16 (15.1)	6(3.4-10.8)	1.4(0.4-5.1)
>2500	87 (91.6)	8 (8.4)	8(3.8-15.0)	5(1.1-20.4)*
Number of ANC visit				
One time	46(68.7)	21(31.3)	1.00	1.00
Two times	94(85.5)	16(14.5)	2(1.3-5.6)	3(1.1-10.7)*
Three times	18488)	25(12)	3(1.7-6.5)	4(1.5-12.2)*
Four and above	64(95.5)	3(4.5)	10(2.7-34.6)	8(1.3-29.8)*
Place of delivery				
Home	56(33.3)	112(66.7)	1.00	1.00
Health center	214(79.6)	55(20.4)	8(5-12)	3(1.5-8.0)*
Hospital	139(86.9)	21(13.1)	13(8-23.2)	5(1.3-16.7)*
Perceived attitude of service provider				
Good	365(92.2)	31(7.8)	1.00	1.00
Bad	27(50.9)	26(49.1)	0.1(0.05-0.2)	0.1(0.04-0.3)*
I don't know	17(11.5)	131(88.5)	0.01(0.01-0.02)	0.02(0.004-0.04)*

Table 4: Factors affecting Family Planning service utilization in Multivariable logistic regression Western Ethiopia, 2019 (n = 597).

Discussion

This community based cross-sectional study was conducted in an attempt to determine the prevalence and factors affecting postpartum family planning service utilization among women who gave birth 6weeks -1year in Gimbi Town, Western Ethiopia.

We found that 409 (68.5%) respondents were postpartum family planning users. This finding is similar with prevalence reported from urban Senegal which was 69% [24]. This finding is higher than the prevalence reported from Debre Tabor town, North West Ethiopia was (63%), Gonder Town, Ethiopia (48.4%), Debre Berhan town, Ethiopia (41.6%), Tahtay koraro, Ethiopia (29%), Uganda (28%) and Bareilly (13.8%) [25-30]. The finding is lower than the prevalence reported from Pakistan (82%) and Kenya (77%) [31,32]. This discrepancy might be due to the difference in expanded health service provision, increased awareness of family planning, initiation and scaling up of health extension workers and vast investments focus on maternal health by the government, socio-demographic and difference of study population.

Our study revealed that the following factors has contributed high influence on utilization contraception. Household income, number of ANC visit, place of delivery and perceived staff attitude. Economy is among key predictors of Contraceptive method utilization. Mothers who earn >2500 (AOR=5 95% CI: 1.1-20.4) are more likely to utilized FP compared to those who earn <500EBR.

Our study is in line with the study in Maryland, shows that, the wealthiest family, usually use more likely to use family postpartum planning service than women from poorer family. Postpartum contraceptive use was higher among those belonging to middle socioeconomic class and nuclear families [33,34].

This finding suggests that as the frequency of ANC contact increases mothers are more likely use FP service, this means as number of ANC visit increases, mothers gain more awareness about the FP services. This study also is similar with the study conducted in Bolivia, India, Kenya, and Madagascar, which illustrates a high relationship between numbers of Antenatal cares visits and postpartum family planning utilization [33]. Besides, place of delivery is significantly associated with utilization of FP service in this study. Place of delivery mostly delivery at Health facilities were used he postpartum period than women who deliver at home. The study in Ethiopia, Malawi, and Nigeria, shows there were statistically significant associations between institutional delivery and the use of postpartum family planning across all three countries which is similar with our study [6,33,35]. Study in Uganda, Mexico, Burkina Faso, Nigeria shows that education is one predictor of FP service utilization [33,35-37]. In our study maternal education has no any significant association with utilization of postpartum family planning service. The difference might be due to school expansion, time of the study, study population residence.

Strength of the study

- Data collectors had exposure before this time and they were well experienced.

Limitation

- The cross-sectional which reveals the snapshot nature of data. It is difficult to ascertain the association between PPFP and the predictor variables since they were measured at one point in time.

Conclusion

Results of this study shown that most of the respondents were among the users of postpartum contraceptive methods. Injectable is the most common used method followed by implant. The identified determinants which influence the utilization of PPFP identified were household income, number of ANC, place of delivery and attitude of service provider. The dominant reason for none use of family planning was being non-menstruated since last birth, followed by fear of side effects, infrequent sex and having no sex respectively.

Recommendation

We recommend that health care providers should providing clear information about PPFP during their possible contacts in antenatal care, postnatal care, and immunization and child health services. Besides, Health extension workers should work hard to improve the awareness and the right times to start PPFP. Moreover, Health professional's attitude should be changed towards a friendly approach or greeting the mothers, explaining all types of FP method and respecting mother's choice in the health facility during providing the service.

Authors' Information

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Ethical Approval and Consent to Participate

Ethics approval and consent to participate Ethical clearance was obtained from institutional ethical review board of Jimma University before the actual data collection process was started and brought to the administrative bodies of Gimbi town to get permission for the stud. Brief explanation of the study objective was given for participants and the process of data collection was started after the willingness of the participant was asked, and then verbal informed consent was obtained from the study participants. Any information gathered from the study unit were confidential, in the process, analysis and paper writing. No name was taken while data collection instead code was given, and the participants has full if they want to withdrew from the study at any time.

Consent for Publication

"Not applicable".

Availability of Data and Material

The finding of this study is generated from the data collected and analyzed based on stated methods and materials. All the origi-

nal data of this findings are found available from the corresponding author on rational request.

Competing Interests

The authors have declared that no competing interests exist.

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Authors' Contributions

LB participated in the design of the study, performed the data collection and the statistical analysis and served as the leader author of the manuscript. All authors read and approved the final manuscript. AH, TT, WM, and ZK supervised the study, ensured quality of the data; they assisted in the analysis and interpretation of the data. All authors read and approved the manuscript.

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Bibliography

1. World population today. "Current World Population" (2015).
2. World population Review. "World Population Data Sheet" (2015).
3. Ethiopia Demographics health survey (2014).
4. United Nations. Report of the Secretary-General on the Indicators for Monitoring the Millennium Development Goals, New York (2008).
5. Kwst, BE., *et al*. "Maternal mortality in Addis Ababa, Studies in family planning". PubMed 17 (1996): 288-301.
6. Central Statistics Authority. Ethiopia Demographic Health Survey (2011).
7. Lisa B Haddad and Nawal M Nour. "Unsafe Abortion: Unnecessary Maternal Mortality". *Reviews in Obstetrics and Gynecology* 2.2 (2009).
8. World Health Organization, Unsafe Abortion: Global and Regional Estimates of the Incidence of Unsafe Abortion and Associated Mortality in 2003, fifth ed., Geneva (2007).
9. World Health Organization. "Family planning" (2011).
10. World Health Organization. Health Center for Communication Programs Knowledge for Health Project family planning a global handbook for providers (2011).
11. Fraser D., *et al*. "Myles text- book for midwives: -African edition. Churchill Living- stone, Edinburgh, 2006". *African Journal of Midwifery and Women's Health* 5 (2006): 67-72.
12. Winikoff B. "Assessing the Role of Family Planning in Reducing Maternal Mortality". *Studies in Family Planning* 18.3 (1987): 128-143.
13. Susheela Singh., *et al*. "Adding it up: the costs and benefits of investing in family planning and maternal and newborn health" (2009).
14. Dabral S and Malik SL. "KAP of Family Planning". 16 (2004): 231-237.
15. Baveja R., *et al*. "Evaluating contraceptive choice through the method-mix approach". An Indian Council of Medical Research (ICMR) task force study 61(2000):113-119.
16. Shaaban OM and Glasierr A. "Pregnancy during breastfeeding in rural Egypt". 77.5 (2008): 350-354.
17. DaVanzo Hale., *et al*. "Effects of Inter Pregnancy Interval and Outcome of the Preceding Pregnancy on Pregnancy Outcomes in Matlab, Bangladesh". *An International Journal of Obstetrics and Gynecology* 114 (2007): 1079-1087
18. Sami Neelofar., *et al*. "Counseling women for postpartum family planning: Experiences from Karachi, Pakistan".
19. USAID/ACCESS-FP. "Family Planning Needs during the Extended Postpartum Period in Malawi" (2009).
20. Ministry of Health (MOH) and Intra Health Preserve Education Family Planning Reference Guide, Lilongwe (2010).
21. WHO and USAID Africa's Health. Repositioning Family Planning: Guidelines for Advocacy Action (2010).
22. Ministry of Health National Sexual and Reproductive Health and Rights (SRHR) Policy (2009).
23. Performance, monitoring and accountability Ethiopia (2014).
24. Ilene S Speizer., *et al*. "Use of Postpartum Family Planning in Urban Senegal: The Role of Integrated Services" (2011).

25. Taye EB., *et al*. "Prevalence of post-partum modern family planning utilization and associated factors among postpartum mothers in Debre Tabor town, North West Ethiopia". *BMC Research Notes* (2018).

26. Demie TG., *et al*. "Postpartum Family Planning Utilization among Postpartum Women in Public Health Institutions of Debre Berhan Town, Ethiopia". *Journal of Women's Health Care* (2018).

27. Gurja Embafrash. "Assessment of magnitude and factors associated with unmet need for family planning among married women of reproductive age who are in extended postpartum in Tahtay Koraro Woreda, Tigray regional state, Ethiopia" (2014).

28. Gaffield ME., *et al*. "Release Programming Strategies for Postpartum Family Planning". *Global Health, Science and Practice* (2014).

29. Nigussie AT., *et al*. "Postpartum Family Planning Utilization and Associated Factors among Women who Gave Birth in the Past 12 Months, Kebribeyah Town, Somali Region, Eastern Ethiopia, 2016". *Journal of Women's Health Care* (2016).

30. Priyanka Mahawar., *et al*. "Contraceptive knowledge, attitude and practices in mothers of infant". *National Journal of Community Medicine* 2.1 (2011).

31. Syed Esam Mahmood., *et al*. Department of Community Medicine, Rohilkhand Medical College and Hospital.

32. Gathari Ndirangu., *et al*. "Using Young Mothers' Clubs to Improve Knowledge of Postpartum Hemorrhage and Family Planning in Informal Settlements in Nairobi, Kenya".

33. Winfrey William and Kshitiz Rakesh. "Use of Family Planning in the Postpartum Period". DHS Comparative Report No. 36. Rockville, Maryland, USA: ICF International (2014).

34. Syed Esam Mahmood., *et al*. "Postpartum contraceptive use in rural Bareilly". *Indian Journal of Community Healt*h 23 (2011).

35. Sennen Hounton., *et al*. "Patterns and trends of postpartum family planning in Ethiopia, Malawi, and Nigeria:-Evidence of missed Opportunities for integration". *Global Health Action* (2015).

36. Gideon Rutaremwa., *et al*. "Predictors of modern contraceptive use during the postpartum period among women in Uganda". *BMC Public Health* 15 (2014).

37. Daniele. "Postpartum Family Planning in Burkina Faso". STEP UP Research Report, London, 2014. London School of Hygiene and Tropical Medicine (2014).