

Timely initiation of postpartum contraceptive and associated factors among women of extended postpartum period in Pawe district, northwest Ethiopia, 2019

Desalegn Nazi Jaleta (✉ desalegnnazi9@gmail.com)

Assosa University

Hedeja Yenus Yeshita

University of Gondar College of Medicine and Health Sciences

Koku Sisay Tamirat

University of Gondar College of Medicine and Health Sciences

Research article

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Abstract

Background: Postpartum family planning is an important intervention for reducing high risk fertility behavior and spacing birth intervals; which ultimately helpful for the health of mothers and their babies. Hence, this study aimed to determine the magnitude of timely initiation of postpartum contraceptive and associated factors among extended postpartum women in Pawe district, Northwest Ethiopia.

Methods: Community based cross-sectional study design was employed from February to March 2019 in Pawe district. A stratified multistage sampling technique was used to select a total of 820 women in the extended postpartum period. Data were collected using a pretested interviewer administered questionnaire. A bivariable and multivariable logistic regression model was fitted to identify determinants of timely initiation of postpartum contraceptive among extended postpartum women. Adjusted Odds ratio (AOR) with 95% CI was computed to assess the strength and presence of an association. Variable with less than 0.05 p-value considered as a significant determinant of contraceptive initiation.

Results: Out of the total participants about 37.2% [95% CI (34.0, 40.5)] initiated postpartum contraceptive. Time return of menses [AOR=18.32, 95% CI(11.66,28.80)], postnatal care [AOR=7.8, 95%bCI(3.98,15.44)], knowledge level regarding modern contraceptive methods [AOR=3.0, 95% CI(1.40,6.59)], time of resumption of sexual intercourse [AOR=2.1, 95% CI(1.327,3.21)], husband approval to use contraceptive [AOR=2.45,95%CI(1.42,4.22)], antenatal care [AOR=2.1,95% CI(1.13,3.76)], place of delivery at institution [AOR=2.0, 95% CI(1.22,3.39)], and got family planning counseling at delivery [AOR=2.34, 95% CI(1.22,4.49)] were factors associated with timely initiation of postpartum contraceptive.

Conclusion and recommendation: The magnitude of timely initiation of postpartum contraceptive was low. This suggests strengthening the integration of postpartum contraceptive use with other basic maternal health services and improving knowledge of women in practicing timely initiation of postpartum contraceptive before engagement to risk activities of unintended pregnancy is important.

Background

Globally, 9 out of 10 women want 2 years after getting a child to prevent pregnancy, but 14% of women do not use contraception (1). The absence of priority for birth spacing and less use of postpartum modern contraceptive, result in poor maternal and newborn health outcomes (2).

Postpartum family planning is used to prevent unintended and closely spaced pregnancies in the first 12 months after giving birth (3). Depending on women reproductive plan, comprehensive postpartum family planning (PPFP) service aimed at helping women to choose the contraceptive method they want to use, to begin that method, and to continue to use it for 2 years or longer (1). Consequently, contraceptive use by women during this period is low, resulting in unintended pregnancies and unwanted childbearing (4).

There are factors like a combination of shorter periods of exclusive breastfeeding, early return of menstruation and early resumption of sexual intercourse increase the risk of unintended pregnancy (5).

Women can be pregnant because of variability and unpredictability of time return of fertility after childbirth before the resumption of menstruation (1). The postpartum period offers multiple opportunities for health care providers to assist with family planning decision making, during the year following childbirth and women are more likely to engage with the health care system during antenatal care, delivery, postnatal care, and first-year infant immunizations (6). All women recommended and appointed to initiate postpartum contraceptive at or within the first 6 weeks of childbirth. The contacts between a health service provider and mothers after birth in the first 6 weeks are an opportunity to prevent unintended pregnancy and its consequence.

Methods

Study design and setting

A community based cross-sectional study was carried out from February to March 2019, in Pawe District. Pawe district is found in Metekel zone, Benishangul Gumuz regional state, Northwest Ethiopia. Administratively the district is structured into 2 urban and 19 rural kebeles (a total of 21 Kebeles), the smallest administration unit. Based on the 2011 district based census, a total of 76,006 people (37,552 females and 38,454 males) and 22,531 reproductive age group live in the Pawe District (projection). The district has one general hospital, 4 health centers, 15 health posts, and 3 private clinics. A mixed farming, crop and livestock production, is the major the livelihood of the population.

Population and Sample

The study population was all women in the extended postpartum period or those who gave live birth from 6 weeks of birth up to 12 months were included. The sample size was determined using both a single and double population proportion with the assumption of 95% confidence level, the margin of error of 4%, taking 31.7%(7) expected prevalence from the previous study in Ethiopia, design effect 1.5 and non-response rate of 10% was used. This makes the final calculated sample size became 858.

Data collection

A structured questionnaire first prepared in English and translated to the local language (Amharic) was used to collect data. The questionnaire was pretested among 43 women in the kebeles that are away from the study population. Data quality was maintained via training of the data collectors and supervisors, pretesting of data collection tools and close supervision by supervisors and principal investigators.

Data processing and management

After completing data collection, the data were cleaned, coded and entered into a computer using Epi-info window version 7.0. then exported to Statistical Package for Social Science (SPSS) Windows version 20 for further analysis. Descriptive statistics, such as frequencies and percentages were computed to describe the study population in relation to relevant variables. Respondents were scored for a set of attitude-related Likert Scale questions ranging from the lowest 18 points up to 50 the maximum, then the median was 37 taken as the cut of point and those who scored below median classified as unfavorable attitude. Bivariable logistic regression using the enter method was used to analyze the association between individually the independent variable to the dependent variable. Variables found to have an association with the dependent variable less than 0.2 p-values at bivariable logistic regression model were considered for multivariable logistic regression using enter method for controlling the possible effects of confounders and finally the variables which have significant association was identified on the bases of Odds Ratio (OR), with 95% CI and p-value <0.05. Finally, text, table, and graph were used to present the results.

Ethical consideration

Ethical clearance was obtained from the University of Gondar Ethical Review board and Communication with the different official administrators was made through formal letter obtained from the University of Gondar. Supporting letter was also obtained from Pawe district health office. Permission was secured from Pawe district of all Selected Kebeles. Written consent was obtained from the study participants after telling the objective of the study. All the study participants were informed about the purpose of the study. If they feel discomfort on the interview they were informed that they can stop at any time. They also told that the information obtained from them was treated with complete confidentiality.

Result

Socio-demographic characteristics

From a total of 858 estimated sample, 820 extended postpartum women were recruited and interviewed with the response rate of 95.6%. The women's mean \pm SD age was 28 ± 4.41 years, the majority of the study participants 555 (67.7%) were in the age group of 25–34 years. Most 797 (97.2%) were married and nearly two-thirds of (63.9%) had no formal education and seven hundred two (85.6%) were housewives. About 48.2% of participants were Orthodox Christians religion followers (Table 1).

Partner communication and decision

Regarding partner communication and discussion of the respondents, 591 (74.1%) of them have discussed with their husband on a number of the children they desired to have in the future. From those who have discussed with their husband, more than half (59.8%) of them decided together. From 73.1% of the respondents who have discussed with their husband on importance modern contraceptive utilization

about 72.2 % of them decided together. In terms of husband's approval on modern contraceptive utilization, 65.2% of the respondents reported that their husbands approved to utilize modern contraceptive methods.

Knowledge and attitude towards modern contraceptive methods

Nearly all participants (98.5 %) heard of modern contraceptive methods and 79.8 percent had good knowledge of the benefits of modern contraceptive use scored above or equal to 50%. (Table 2). Regarding attitudes of the respondents towards the benefits of contraceptive utilization more than half (51.1%) of them had an unfavorable attitude (Table 3).

Characteristics of the respondents related to maternal health service

Regarding the respondents' maternal health service utilization characteristics, about 651(79.4%)of them had the previous history of using modern contraceptive methods before last pregnancy and 76.8% of them have attended antenatal care during their last pregnancy. Five hundred ten (62.2%) gave their last birth at home. Concerning postnatal care service utilization, 70.2% of the respondents attended postnatal clinic after their last delivery (Table –4).

Reproductive history related factors of the respondents

In aspects of the respondents ' reproductive characteristics, about 39% of them were above 6 months postpartum period, 37.3% had a history of two to three pregnancies and 78.3% delivered their last child with two years and above after previous birth. From a total 694 (84.6%) women who had seen menses after their last delivery, 359 (43.8%) of them menses returned in the first 6 weeks and from 765(93.3%) women who had resumed sexual intercourse 45.4% of them started within the first 6 weeks of delivery.

The magnitude of timely initiation of postpartum contraceptive

This study revealed that the magnitude of timely initiated postpartum contraceptive was 37.2% with 95% CI (34,40.5). The remaining 62.8% extended postpartum women lately initiated postpartum contraceptive.

The majority of contraceptive users used Injectable (76.8%) followed by Implants (16.7%) in relation to the choice of contraceptive methods mix (Fig. 2).

Menses not returned, not resumed sexual intercourse, husband's disapproval, a far distance from the health facility, lack of preferred methods and others were the most common reasons for not initiating postpartum contraceptive timely (Fig.3).

Factors associated with timely initiation of postpartum contraceptive

From bivariable logistic regression analysis, educational level of wife, attending ANC, last pregnancy planned, place of delivery, got counseling at delivery, attending PNC, time return of menses, time of resumption of sexual intercourse, husband approval to use contraceptive, knowledge, and attitude towards benefits of using modern contraceptive methods were associated with timely initiation of postpartum contraceptive at p-value 0.2.

In multivariable logistic regression analysis: women who had returned their menses within the first six weeks after birth, the odds of timely initiation of postpartum contraceptive were 18.32 [AOR = 18.32, 95% CI: (11.66, 28.80)] times higher than women who had returned their menses after six weeks. Women who had postnatal care follow up after their last delivery, the odds of timely initiation of postpartum contraceptive were 7.84 times [AOR = 7.84, 95% CI:(3.98,15.44)] higher than those who have never attended postnatal care after last delivery. Likewise, women who have attended antenatal care, the odds of timely initiation of postpartum contraceptive were 2.06 times [AOR = 2.06, 95% CI (1.13,3.76) higher than counterparts. The odds of timely initiation of postpartum contraceptive in women who had good knowledge about a contraceptive were 3.04 times [AOR = 3.04, 95% CI(1.40, 6.59) higher than those who had poor knowledge. The odds of timely initiation of postpartum contraceptive in women who had husband approval to use contraceptive after delivery were 2.45 times [AOR = 2.45, 95% CI:(1.42,4.22)] higher as compared to their counterpart. The odds of timely initiation of postpartum contraceptive in women who have resumed sexual intercourse in the first six weeks were 2.06 times [AOR = 2.06, 95% CI (1.33,3.21) higher than counterparts. The odds of timely initiation of postpartum contraceptive in women who have delivered in the institution were 2.03 times [AOR = 2.03 95% CI:(1.22,3.39)] higher than those who have delivered home. The odds of timely initiation of postpartum contraceptive in women who have counseled at delivery about a postpartum contraceptive were 2.34 times[AOR = 2.34,95% CI (1.22,4.49) higher than the counterparts.(Table. 5)

Discussion

This study revealed that the magnitude of timely initiation of postpartum contraceptive among extended postpartum women was 37.2% [95% CI(34,40.5)]. This finding is consistent with the study conducted in Nigeria (38%) (8) and India (34.7%) (9)

However, this finding was higher than studies conducted in Aroressa District, Southern Ethiopia (31.7%) (7) and Togo (17.3%) (10). This difference might be due to improvement in maternal health service and

health seeking behavior, the difference in the study area as well as the socio-economic status and demographic characteristics of the study participants.

The most commonly used contraceptive methods in the current study were injectable (78.8%) and followed by Implant (16.7%). These differences in percent distribution by the method were in line with studies conducted in Ethiopia (7)(11). This would be ascribed to the preferences of customers for a particular method as well as the accessibility and availability of the methods selected.

The study also identified factors affecting the timely initiation of postpartum contraceptive. The finding showed that time return of menses after delivery was one of the predictors for initiation of postpartum contraceptive timely. Women who had resumed menses in the first six weeks after delivery associated with increased initiation postpartum contraceptive than those women who had delayed the return of menses beyond six weeks of delivery. This might be due to: the return of menses after delivery alarm women probability of getting pregnant and this favors the initiation of postpartum contraceptive. This finding appeared to be consistent with studies done in Debre Berhan Town(12), Addis Ababa (13) and Butajira Health and Demographic Surveillance Site(14), Ethiopia and central Africa (10).

Women who had maternal health services such as ANC and PNC follow up associated with increased initiation of postpartum contraceptive compared to those who had no follow up. This finding was consistent with studies conducted in Nigeria(15)and Aksum (11), Aroressa District (7), Kebribeyah Town(16), Ethiopia. Women who had frequent visits during ANC and PNC had more exposure to information and had awareness of birth spacing by using contraceptives after each birth may be an additional explanation.

Another factor found to encourage the initiation of postpartum contraceptive was husband approval to use a contraceptive. Women who had approved by their husband to use contraceptive after delivery were 2.45 times higher to initiate postpartum contraceptive timely than their counterparts. This is likely due to women who had their husband's approval to start postpartum contraception soon with confidence without fear. This relationship is consistent with findings reported by other studies in Ethiopia (17)

Place of delivery was significantly associated with timely initiation of postpartum contraceptive. The odds of timely initiation postpartum contraceptive in women who had delivered in a health institution were two times higher than women delivered in the home. The explanation for this finding is that the provision of facilities delivery remains significant opportunities to provide access to postpartum family planning messages and to give women different methods of contraception. This finding, therefore, highlights the need for inclusion of services within the public sector in order to take benefit of the delivery to boost the take-up of family planning during the critical postpartum period. This finding is supported by a study done in India (18).

Women who had counseled at delivery about a postpartum contraceptive, the odds of timely initiation postpartum contraceptive were 2.3 times higher than the counterparts. This may be because women who

are received postpartum contraceptive counseling during delivery might be highly motivated to use modern contraceptive methods. This relationship supported by a study done in Ethiopia (19).

Women who had resumed sexual intercourse during the first six weeks, the odds of timely initiation of postpartum contraceptive were 2.1 times higher than women resumed after six weeks. The possible explanation for this might be women who resumed sexual intercourse likely to initiate modern contraceptive timely consider the risk of pregnancy. This finding association supported by studies done in Ethiopia (11)(12).

Women who had adequate knowledge about a modern contraceptive, the odds of timely initiation of postpartum contraceptive were 3.04 times higher than women with poor knowledge. This might be women who have good knowledge of modern contraceptive, who timely practice contraceptive initiation owing to fear of unintended pregnancy. This finding consistent with the study done in Ethiopia (11)(20).

Finally, at the 95% significance level, other covariates like; Educational level of wife, Attitude of the respondent towards the benefit of using modern contraceptives and Last pregnancy planned were not significantly associated with timely initiation of postpartum contraceptive.

Limitation of the study

The limitation of this study did not address all health system-related factors that affect timely initiation of postpartum contraceptive. As well as recall bias regarding women who had lost appointment cards of family planning to check the date of start.

Conclusion

This study revealed that the magnitude of timely initiation of postpartum contraceptive was low. Time return of menses, postnatal care, knowledge level of respondent, time resumption of sexual intercourse, husband approval to use a contraceptive, antenatal care, place of delivery and counseled at delivery about postpartum contraceptive was an important predictor for timely initiation of postpartum contraceptive.

List Of Abbreviations

ANC: Antenatal Care, EDHS: Ethiopian Demographic and Health survey, EPFP: Extended Postpartum Family Planning, FP: Family Planning, HH: House Hold, IPH: Institute of Public Health, MNCH: Maternal Neonatal and Child Health, PNC: Postnatal Care, PFP: Postpartum Family Planning, IUCD: Intra Uterine Contraceptive Device, SDP: Sustainable Development Program, UOG: University of Gondar, WHO: World Health Organization.

Declaration

Ethics approval and consent to participate

Ethical clearance was obtained from the University of Gondar ethical review board and communication with the different official administrators was made through formal letter obtained from the University of Gondar. Supporting letter was also obtained from Pawe district health office. Permission was secured from Pawe district of all selected kebeles. Oral consent was obtained from the study participants after telling the objective of the study. All the study participants were informed about the purpose of the study. If they feel discomfort on the interview they were informed that they can stop at any time. They also told that the information obtained from them was treated with complete confidentiality. The data collection procedure was anonymous and their privacy was kept.

Consent for publication

Not applicable

Availability of data and material

Data is available from the corresponding author upon request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

HY, KTT participated to advise, visualization, validation the whole work and prepared the manuscript. DNJ took part in funding acquisition, data collection, supervision and software, and other resources. All authors read and approved the final manuscript.

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Tables

Table 1: Socio-demographic and economic characteristics of the respondents in Pawe District, Northwest Ethiopia, 2019.

Variables and categories (n=820)	Frequency	Percent
Age		
18-24	190	23.2
25-34	555	67.7
>/=35	75	9.1
Marital status		
Single	12	1.5
Married	797	97.2
Divorced	11	1.3
Religion		
Orthodox	395	48.2
Muslim	203	24.8
Protestant	222	27.0
Respondents' Educational level		
No formal education	524	63.9
Elementary school	125	15.2
Secondary school	98	12.0
Above secondary school	73	8.9
Educational status of husband (n=797)		
No formal education	441	55.3
Elementary school	65	8.2
Secondary school	143	17.9
Above secondary school	148	18.6
Occupation		
Housewife	702	85.6
Employer	50	6.1
Merchant	45	5.5
Student	13	1.6
Daily laborer	10	1.2
Residence		
Urban	159	19.4
Rural	661	80.6
Ethnicity		
Amhara	544	66.3
Kembata	131	16
Hadiya	69	8.4
Oromo	31	3.8
Tigray	15	1.8
Others**	30	3.7

Monthly income (ETB)		
< = 500	425	52.8
> 500	395	48.2

** = Shinasha and Agew

Table 2: Knowledge level of the respondents towards modern contraceptive in Pawe district Northwest Ethiopia, 2019.

Variables	frequency	percent	
know contraceptive used to prevent unwanted pregnancy	754	92	
know contraceptive used to space pregnancy	741	90.4	
know contraceptive used to limit pregnancy	734	89.5	
Know condoms used to prevent pregnancy	416	50.7	
Can you become pregnant while breastfeeding	614	74.9	
Can a woman start contraception before the menstruation begins	474	57.8	
Know the side effects of contraceptives	653	79.6	
Know about early initiation of modern contraceptive after delivery is important	522	63.7	
Know that fertility resumed after stopping the contraceptive	524	63.9	
	Adequate Knowledge	654	79.8
Knowledge level of respondents	Poor Knowledge	166	20.2

Table 3: Attitudes of the respondents towards modern contraceptives in Pawe district Northwest Ethiopia, 2019.

Variable	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Adopt contraceptive in the future	27(3.3%)	243(29.6)	15(1.8%)	388(47.3%)	147(17.9%)
Encourage your friend to adopt PFP	17(2.1%)	94(35.9%)	319(3.8%)	356(43.4%)	122(14.9%)
Contraceptive utilization helps a mother to regain strength	63(7.7%)	31(3.8%)	74(9.0%)	457(55.7%)	195(23.8%)
Discussing PFP use with a partner is good	429(5.1%)	260(31.7%)	42(5.1%)	342(41.7%)	134(16.3%)
Using postpartum contraceptive is a shame	138(16.8%)	369(45%)	45(5.5%)	257(31.3%)	11(1.3%)
PFP is good for mother and child health	38(4.6)	260(31.7%)	68(8.3%)	316(38.5)	138(16.8)
Small family size makes the family happy	40(4.9%)	276(33.7%)	64(7.8%)	307(37.4%)	133(16.2%)
Contraceptive utilization causes a loss of confidence between a husband and a wife.	102(12.4%)	376(45.9%)	60(7.3%)	259(31.6%)	23(2.8%)
Following PNC visit gives an opportunity for modern contraceptive	15(1.8%)	257(31.3%)	67(8.2%)	344(42%)	137(16.7%)
Unmarried women can use contraceptive	44(5.4%)	277(33.8%)	76(9.3%)	325(39.6%)	98(12%)
The attitude of the respondents	Favorable attitude:		401 (48.9%)		
	Non-favorable attitude:		419 (51.1%)		

Table 4: Characteristics of the respondents related to maternal health services user in Pawe district Northwest Ethiopia, 2019.

Variables	Categories	Frequency	Percent
Attended ANC (n=820)	Yes	630	76.8
ANC visit(n=630)	1	66	10.5
	2-3	193	30.6
	>=4	371	58.9
Place of delivery(n=820)	Home	510	62.2
	Health institution	310	37.8
Counseled at last delivery	Yes	547	66.7
Attended PNC (n=820)	Yes	576	70.2
PNC visit(n=576)	1	160	27.8
	2-3	331	57.5
	>=4	85	14.7
Counseled at PNC visit(n=820)	Yes	495	60.4
PNC at six week (n=576)	Yes	549	95
Heard about modern contraceptive before	Yes	808	98.5
Used modern contraceptive before	Yes	651	79.4
Time of started postpartum contraceptives after birth			
	≤ 6 weeks	305	37.2
	> 6 weeks	515	62.8

Table 5: Bivariable and Multivariable analysis of factors associated with timely initiation of contraceptive in Pawe district, Northwest Ethiopia, 2019.

Figures

Variables and categories		Timely Postpartum contraceptive	initiated modern	Crude OR (95%CI)	Adjusted OR(95%CI)
		Yes	No		
The educational level of wife					
No formal education		181	343	1	1
Elementary school		47	78	1.14(0.76,01.71)	0.73(0.39,1.35)
Secondary school		40	58	1.31(0.84,2.03)	0.85(0.45,1.63)
Above Secondary school		37	36	1.95(1.12,3.19)	0.74(0.35,1.56)
Attended ANC	No	30	160	1	1
	Yes	275	355	4.1(2.73,6.23)	2.06(1.13,3.76)*
Last pregnancy planned					
No		6	37	1	
Yes		299	478	3.86(1.60,9.25)	1.11(0.29,4.19)
Place of delivery					
Home		122	388	1	1
Health institution		183	127	4.58(3.38,6.21)	2.03(1.219,3.39)**
Counceld at delivery		34	239	1	1
Counceld at delivery					
Yes		271	276	6.90(4.64,10.26)	2.34(1.22,4.49)*
Attended PNC	No	16	228	1	1
	Yes	289	287	14.35(8.43,24.44)	7.84(3.98,15.44)***
Time menses returned					
> 6 weeks		54	407	1	1
<= 6 weeks		251	108	17.52(12.19,25.17)	18.32(11.66,28.8)***
Time resumed sexual intercourse					
> 6 weeks		130	318	1	1
<= 6 weeks		175	197	2.17(1.63,2.89)	2.06(1.33,3.21)**
Husband approval of the contraceptive					
No		42	258	1	1
Yes		263	257	6.29(4.35,9.09)	2.45(1.42,4.22)**
Knowledge level	Poor Knowledge	17	149	1	1
	Adequate	288	366	6.89(4.08,11.58)	3.04(1.40,6.59)*
Attitude level					
Non Favorable Postive atitude		131	288	1	1

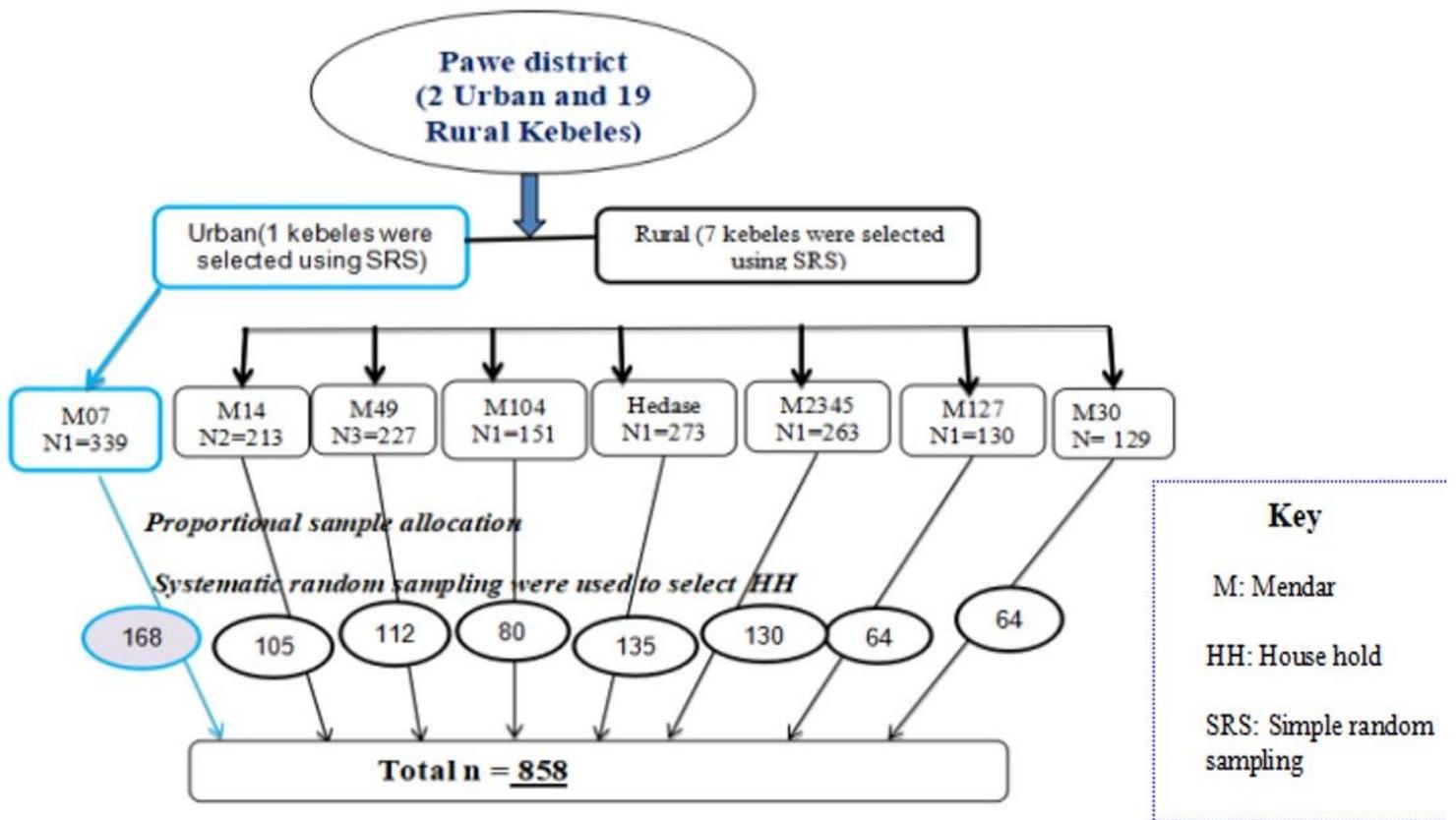


Figure 1

Diagrammatic presentation of the sampling procedure in Pawe district North west Ethiopia, 2019

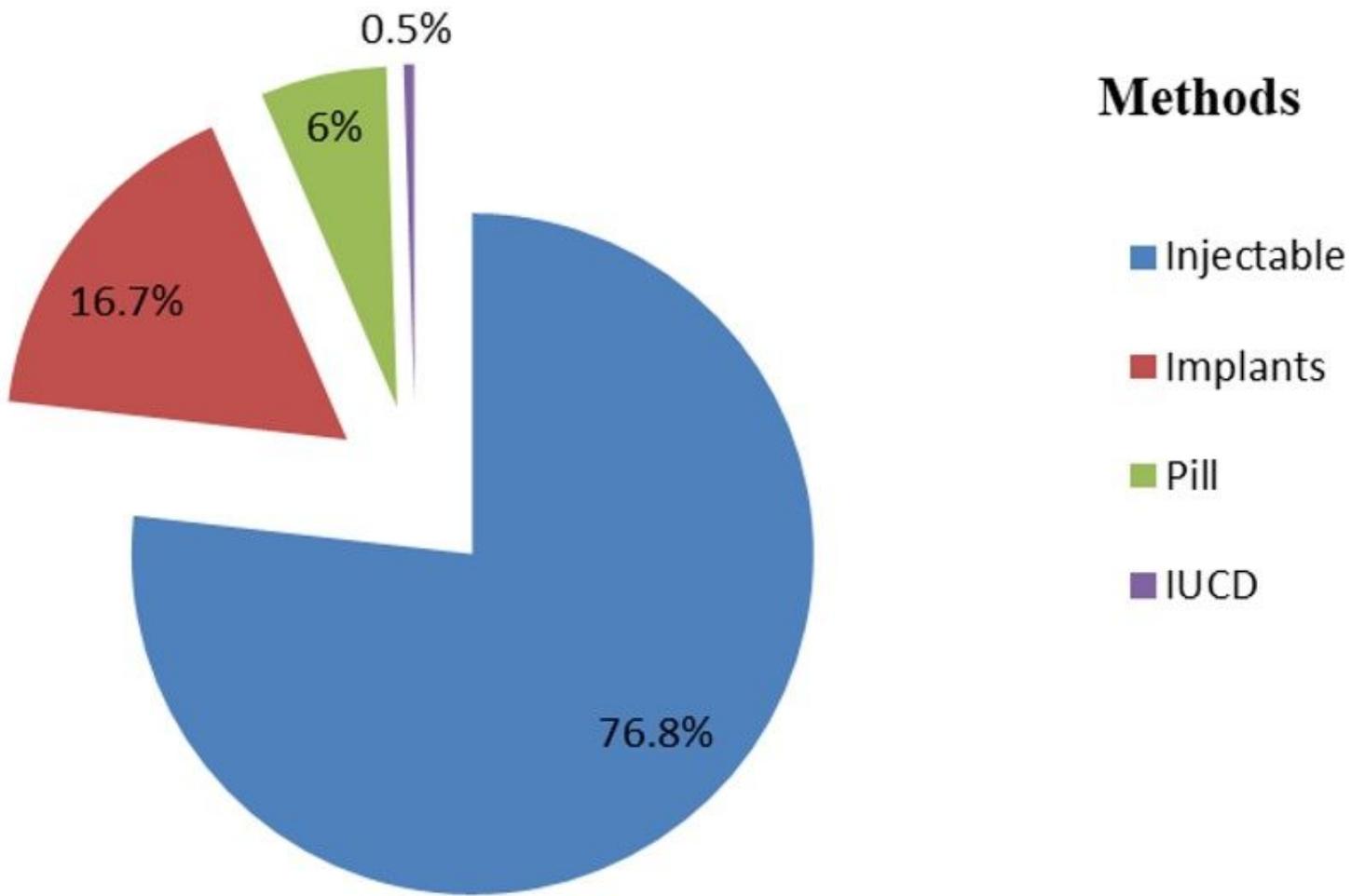


Figure 2

Percent distribution of Modern contraceptive user by the method in Pawe District, Northwest Ethiopia, 2019.

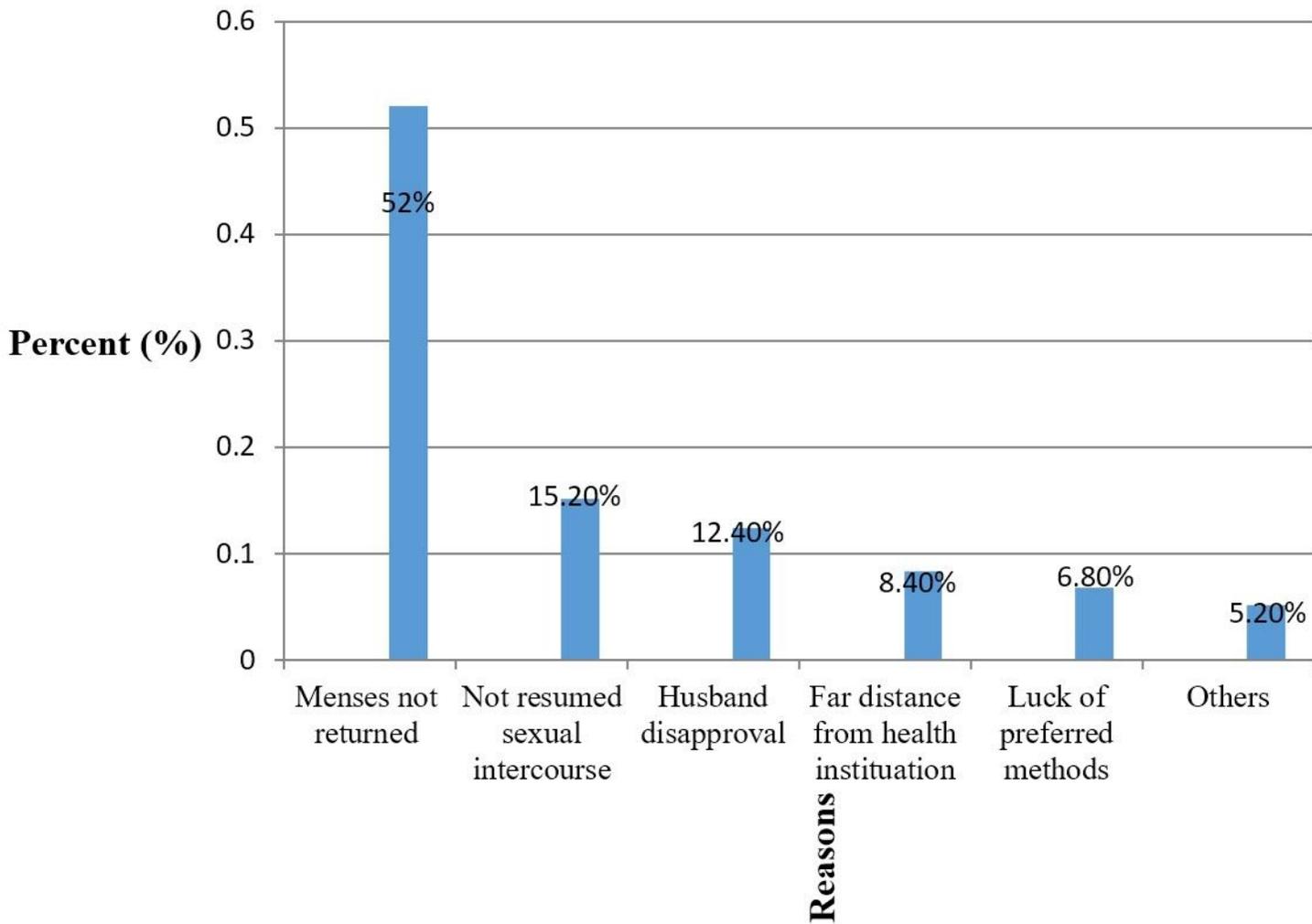


Figure 3

Others = Busy due to work and luck of the awareness. Reason of respondents not initiated postpartum modern contraceptive in the first 6 weeks of delivery in Pawe district Northwest Ethiopia, 2019