

## Research Article

# Women's Autonomy Decision Making Power on Postpartum Modern Contraceptive Use and Associated Factors in North West Ethiopia

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**Background.** Most postpartum women (95%) do not want pregnancy within 24 months after birth, however, 70% of them do not use modern contraceptives. In Ethiopia postpartum modern contraceptive use is low. Evidences show that women's autonomy within the household is the most important thing in modern contraceptive use. Yet, there is dearth of information in Ethiopian context. Therefore, this study was aimed to assess women's autonomy on modern contraceptive use and its associated factors among women who attended their children immunization service. **Methods.** Facility-based cross-sectional study was carried out from May 5 to June 15, 2017 in sekota town and its surroundings among 415 women who attended immunization service for their children. Participants were selected by using a systematic sampling technique. The data were collected through face-to-face interviews using pre-tested structured questionnaires. The data were entered into epi.info version 7 and analyzed using SPSS version 23. Both descriptive and logistic regression analyses were performed. A P-value less than or equal to 0.05 at 95% confidence interval was set to test statistical significance. **Result.** The proportion of women's decision making power on postpartum modern contraceptive use was 77.3%. Being counseled on postpartum family planning (2.29, 95% CI: 1.27, 5.71), discussed on postpartum family planning with their husbands (AOR = 14.62, 95% CI: 6.52, 32.75), and had the index child within one year after previous birth (AOR = 7.98, 95% CI: 2.52, 30.65) were found positively associated with women's autonomous decision making power on postpartum modern contraceptive use. In addition, those women who knew that pregnancy could happen during the postpartum period (AOR = 6.53, 95% CI: 3.2, 14.12) were more autonomous in decision to use postpartum contraception. **Conclusion.** The proportion of women's autonomous decision making power on postpartum modern contraceptive use was low. Those women who were counseled on postpartum family planning, discussed with partners, and those who knew that pregnancy could happen during the postpartum period had higher odds of autonomous decision making power. Therefore, strengthening counseling, educating on postpartum family planning, and encouraging women to discuss postpartum family planning with their husbands may improve women's power.

## 1. Introduction

Postpartum Family Planning (PPFP) refers to the use of contraceptives within the first six weeks after giving birth to protect women from unplanned pregnancies [1]. A Short inter-pregnancy interval put endanger new baby, mother and previous child [2, 3]. Globally, six million children were died in 2016 before reaching their fifth birthday and approximately 35 women dying every hour due to the complications of pregnancy and childbirth [1, 4, 5].

Despite, 30% of maternal deaths and 10% of child death could be avoided by extending pregnancy above two years [6], 41% of women in Sub-Saharan Africa who intended to use modern contraceptives in the first year postpartum, were not using it [2]. Another report identified 95% of women who were 0–12 months postpartum want to avoid a pregnancy in the next 24 months, however, 70% of them were not using modern contraceptives [7]. As a result, 20% of birth in low-income countries were before 24 months of the previous birth [8, 9]. According to Ethiopian demographic and health survey

(EDHS) 2016, while the proportion of women who want to have another child within the first 24 months sharply decreased, using modern contraceptive remain low [10].

On key strategy for ensuring the optimal birth interval is modern contraceptives (MC) use during the postpartum period (PPP) [8]. However, the post-partum period is a period when women usually have a high unmet need for FP due to reasons related to lack of knowledge about contraceptive methods, opposition from partners or families, or limited autonomy [2, 11]. Women's autonomy decision making power in the household is the most important factor in using modern contraceptives during the postpartum period [6]. Women's decision making power in the household on PFP has paramount importance, however, however, the postpartum period is usually given less emphasis on family planning (FP) users. In relation to this, little is known about factors affecting women's autonomy decision making power on postpartum modern contraceptive use in the study area. Therefore, this study was aimed to assess women's decision-making power on postpartum modern contraceptives use and its associated factors in sekota Town and its surroundings.

## 2. Methods

**2.1. Study Area and Period.** This study was conducted in Sekota town and its Surroundings from May 5 to June 15, 2017. Sekota is the capital town of Waghmra zone located at 720 Kms from Addis Ababa to the North Ethiopia. According to the 2007 Ethiopian population and housing census population projection made, an estimated of 10,980 women delivered in 2016/17. There are eight governmental health centers, 39 health posts and one general hospital in Sekota town and its surroundings, which provide health services to the community [12].

**2.2. Study Design.** Facility-based cross-sectional study design was employed.

**2.3. Sample Size.** The minimum sample size was determined by using a single population proportion formula by considering the following assumption: margin of error 5%, confidence level 95% ( $Z_{\alpha/2} = 1.96$ ), the proportion of women's decision making power on modern contraceptive use from South Ethiopia, 53.8% [13], and adding 10% non-response rate the minimum sample size calculated was 421.

**2.4. Study Population.** All women who gave birth before six months prior to the survey and attended immunization service for their children at the public health facility were included.

**2.5. Sampling Technique and Process.** In this study, a systematic sampling technique was employed to recruit 421 women who attended their children's immunization service.

All the health facilities in the study area (that is one hospital, 8 health centers, and 34 health posts) that provide vaccination service either in static or outreach approaches were included in the study. The calculated sample size was, then, proportionally allocated to health facility based on the number

of vaccination. Next, systematic random sampling technique was applied to select the study participants until the allocated sample size was obtained. Accordingly, interview was made for every other women.

### 2.6. Operational Definition, Definition of Terms and Measurement

**2.6.1. Women's Autonomy Decision Making Power on Modern Contraceptive Use.** A woman was considered as having "autonomous decision making power on postpartum family planning use" if she decided independently or together with husband/partner on contraceptive use, number of children, choice of contraceptive methods and when to give birth in conditions where their idea did not coincide, the women's decision accepted.

**2.6.2. Modern Contraceptive Use.** A woman was considered as "modern contraceptive user" if she was used tuba-ligation (female sterilization), intrauterine device (IUD), Injectable, oral contraceptive (pills), and a condom.

**2.6.3. Knowledge about Family Planning.** A woman was considered as "knowledgeable about family planning" if she heard about family planning and list at least one of the modern contraceptive methods [14].

**2.7. Data Collection.** The data were collected through face-to-face interviews using a pre-tested structured questionnaire. The tool was prepared in English and translated to local languages, Amharic and Himritana. Nine female diploma midwives and three bachelor degree holder nurses were deployed as data collectors and supervisors, respectively after receiving a one day intensive training.

**2.8. Data Analysis.** The collected data were entered into Epi Info V.7 and exported to SPSS Version 23 for analysis. Both descriptive and inferential statistics were done. In the analytical study, first bivariable logistic regression analysis used to identify the independent effect of each on women's autonomous decision making power. Variables having  $P$ -value  $\leq 0.20$  in the bivariable analysis were remained in the multivariable analysis to control the effect of confounders. The Hosmer-Lemeshow goodness-of-fit statistic was used to assess the fitness of the model. Odds ratios (AOR) with their 95% CI were calculated to measure the strength of association, and  $P$ -value  $\leq 0.05$  was considered as statistically significant.

## 3. Results

**3.1. Socio-Demographic Characteristics of the Respondents.** Four hundred and twenty-one (421) mothers were invited for an interview, however, the response rate was 98.6% (415). The mean age of mothers was 28.1 years (Standard deviation  $\pm 6$ ). Out of the total mothers, 401 (96.6%) were Orthodox and the rest were Muslim (3.4%). The majority of mothers were rural residents 318 (76.6%) and did not attend formal education 278 (67.0%) (Table 1).

TABLE 1: Socio-demographic characteristics of mothers in Sekota town and its surroundings, Northwest, Ethiopia 2017 ( $n = 415$ ).

Variables	Categories	Frequency $n$ (%)	Variables	Categories	Frequency $n$ (%)
Age	15–24	122 (29.4)	Occupation	Housewife	219 (52.8)
	25–34	218 (52.5)		Students	17 (4.1)
	35–44	75 (18.1)		Daily labor	9 (2.2)
	Married	382 (92.0)		Merchant	44 (10.6)
Marital status	Unmarried	33 (8.0)	Governmental employee	32 (7.7)	
Educational status	No formal education	278 (67.0)	Private employee	8 (1.9)	
	Primary	59 (14.2)	Farmer	80 (19.3)	
	Secondary	43 (10.4)	Unemployed	6 (1.4)	
	Secondary plus	35 (8.4)	Religion	Orthodox	401 (96.6)
Monthly family income	<700	120 (28.9)	Muslim	14 (3.4)	
	701–900	101 (24.3)	Himtana	329 (79.3)	
	901–1500	100 (24.1)	Ethnicity	Other*	86 (20.7)
	>1500	94 (22.7)			

Key: Other\* = Amhara and Tigre.

TABLE 2: Obstetric history of mothers, in Sekota town and its surroundings, Northwest, Ethiopia, 2017 ( $n = 415$ ).

Variables	Categories	Frequency $n$ (%)	Variables	Categories	Frequency $n$ (%)
Gravidity	$\leq 2$	189 (45.5)	Unplanned for ( $n = 111$ ) used contraceptive ( $n = 111$ )	Spacing	79 (71.2)
	3–4	126 (30.4)		Limiting	32 (28.8)
	$\geq 5$	100 (24.1)		Yes	5 (4.5)
No of parity	$\leq 2$	210 (50.6)	No	106 (94.5)	
	3–4	131 (31.6)	Fear of side effect	10 (9.4)	
	$\geq 5$	74 (17.8)	Spousal disapproval	23 (21.7)	
No of living children	$\leq 2$	211 (50.8)	On breastfeeding	17 (16.0)	
	3–4	131 (31.6)	Amenorrhoeic	26 (24.5)	
	$\geq 5$	73 (17.6)	Lack of FP method	5 (4.7)	
Index child place of delivery	Health facilities	340 (81.9)	Why did not used ( $n = 106$ )	Absent of choice methods	5 (4.7)
	home	75 (18.1)		Religious reason	20 (18.9)
	$\leq 1$ year	71 (23.0)		Want another before 2 years	16 (3.9)
Time gap b/n previous and index birth $n = 309$	1–2 years	162 (53.0)	Future fertility desire	Want another after 2 years	190 (45.8)
	$\geq 3$ years	76 (24.0)		Do not want more child	63 (15.2)
	Yes	304 (73.3)		Not decide	146 (35.2)
Present birth planned	No	111 (26.7)			

3.2. *Obstetric History.* About 24.4% and 4.1% of mothers had a history of abortion and still birth respectively during their last life. Almost two-third (65.8%) and one-fourth (25.0%) of mothers respectively had at least one antenatal and postnatal care visits during the last pregnancy. About 111 (27%) of mothers reported that their index births were unplanned, of which 32 (28.8%) were unwanted (Table 2).

3.3. *Contraceptive Knowledge.* About 396 (95.4%) mothers had mentioned at least one type of modern contraceptives. Most frequently mentioned modern contraceptives method was injectable (Depo-Provera) (89.4%) followed by pills (74.5%). Health extension workers (HEW), the lowest health professionals at kebele level were the major source of family planning information (69.8%). The majority of mothers

(78.1%) knew that pregnancy could happen during the postpartum period (within 6 weeks after birth) (Table 3).

3.4. *Modern Contraceptive Use during Postpartum Period.* From the total mothers about 30% of mothers were using a modern contraceptive during the postpartum period, of which 62.9% of them were using for spacing purpose. Many of them were using implants (52.4%), followed by pills (20.2%) (Table 4).

3.5. *Information on Breastfeeding.* All mothers were breast feeding the index child, of which 366 (88.2%) mothers feed their children at least eight times per day. Nevertheless, breast feeding initiation within one hour during the index birth was practiced by 57.6% of the respondents.

TABLE 3: Contraceptive knowledge of mothers, in Sekota town and its Surroundings, Northwest, Ethiopia 2017 ( $n = 415$ ).

Variables	Categories	Frequency (%)	Variables	Categories	Frequency (%)
Heard about FP	Yes	415 (100)	Source of information	Mass media	60 (14.5)
	No	0 (0.0)		Health profession	165 (39.8)
List at least one MC	Yes	396 (95.4)	Discusses with husband on use of PPMC ( $n = 382$ )	HEW	290 (69.8)
	No	19 (4.6)		Friends	175 (42.2)
Which MC method did hear	Condom	134 (32.3)	Knew pregnancy could happen in the PP period	Families	55 (13.3)
	Pills	309 (74.5)		Yes	244 (58.8)
	Injectable	371 (89.4)	No	138 (33.3)	
	IUCD	28 (6.7)	Perceived idea of a husband on MC use	Yes	256 (61.7)
	Implants	143 (34.5)		No	159 (38.3)
tuba ligation	7 (1.7)	He approves	157 (42.2)		
Vasectomy	5 (1.2)	He disapproved	64 (17.2)		
Counseled about PFPF	yes	273	He has no idea	88 (23.7)	
	no	142	Don't know	63 (16.9)	

TABLE 4: Modern contraceptive use during PPP among mothers, in Sekota town and its Surroundings, Northwest, Ethiopia 2017 ( $n = 415$ ).

Variables	Categories	Frequency (%)	Variables	Categories	Frequency (%)
used modern contraceptive methods during PPP	Yes	124 (29.9)	The reason not used MC during the PP period ( $n = 291$ )	Menses not resume	97 (33.3)
	No	291 (70.1)		Religious reason	49 (16.8)
Which method used ( $n = 124$ )	Condom	18 (14.5)	When did you start after birth ( $n = 124$ )	Not start sexual intercourse	56 (19.2)
	Pills	25 (20.2)		Breastfeeding	51 (10.7)
	Injection	2 (1.6)		Husband disapproval	20 (6.9)
	Implant	65 (52.4)		Fear of side effect	28 (9.6)
	IUCD	9 (7.3)		Lack of time	8 (2.7)
Who decided to use the method ( $n = 124$ )	Tuba ligation	5 (4.0)	Used MC after PPP ( $n = 291$ )	Need to have another child	17 (5.8)
	Self	68 (54.8)		yes	87 (29.9)
	Jointly	37 (29.8)		no	204 (70.1)
Where did you use ( $n = 124$ )	Husband	19 (15.3)	Intended to use MC in future ( $n = 204$ )	Yes	142 (69.6)
	Public health institution	119 (96.0)		No	62 (30.4)
	Private health institution	5 (4.0)			
Reason using contraceptive ( $n = 124$ )	To space	78 (62.9)			
	To limit	37 (39.8)			
	Partner pressure	9 (7.3)			

3.6. *Women's Autonomy Decision Making Power on Postpartum Contraceptive Use.* Of the respondents who attended immunization service for their children, the overall proportion of women with decision making power on PP modern contraceptive use was 77.3% ( $p = 77.3$ , 95% CI: 73.0, 81.2), of which 45% of mothers could make decision together with husbands. Yet, significant proportion, 22.7 %, of mothers need partners' approval.

3.7. *Factors Associated with Women Decision Making Power to Use FP.* On bivariable analysis, women's educational status, age, ANC, place of delivery, ethnicity, knowledge about PFPF,

discussion with husband, time gap between the previous and index births, knowledge on likelihood of pregnancy during PP period, and counseling about PFPF were associated with women's autonomy decision making power on PPMC use. On multivariable analysis, however, discussion with husband about PPMC, time gap between previous and index birth, know that pregnancy could happen during PP period and counseling about PFPF remain significantly associated with women's autonomy decision making power on PPMC use.

The Odds of women's autonomy decision making power on PPMC use among mothers who had discussed with their husbands/partners about post-partum contraceptive use were

TABLE 5: Factors associated with women's autonomy decision making power on PPMC use, in Sekota town and its surroundings, Northwest, Ethiopia 2017.

Variables	Women's autonomy decision making power on PPMC use		COR	AOR
	Yes	No		
<i>Age</i>				
15–24	88	34	1	1
25–34	178	40	1.72 (1.02–2.90)	1.72 (0.59–5.01)
35–44	55	20	1.06 (0.56–2.03)	2.18 (0.65–7.41)
<i>Educational status</i>				
No formal education	206	72	1	1
Primary education (1–8)	44	15	1.02 (0.53–1.95)	1.06 (0.29–3.86)
Secondary education (9–12)	39	4	3.41 (1.18–9.90)	3.74 (0.28–49.68)
Tertiary & above	32	3	3.73 (1.11–12.55)	0.83 (0.14–5.08)
<i>Time gap b/n previous &amp; index birth</i>				
<1 year	64	7	<b>5.33 (2.15–13.24)</b>	<b>7.98 (2.50–25.52)*</b>
1–3 years	129	33	2.28 (1.25–4.17)	2.11 (0.95–4.70)
>3years	48	28	1	1
<i>Index birth planned</i>				
Yes	230	74	1	1
No	91	20	1.46 (0.84–2.54)	0.54 (0.22–1.31)
<i>Had ANC</i>				
Yes	288	68	3.33 (1.87–5.95)	1.97 (0.74–5.30)
No	33	26	1	1
<i>Counseled about PFP</i>				
Yes	231	42	<b>3.19 (1.98–5.15)</b>	<b>2.29 (1.27–5.71)*</b>
No	90	52	1	1
<i>Place of delivery</i>				
Health facility	282	58	4.49 (2.63–7.65)	2.14 (0.93–4.93)
Home	39	36	1	1
<i>Discussed on PPMC with husband</i>				
Yes	224	20	<b>12.22 (6.94–21.53)</b>	<b>14.62 (6.52–32.75)*</b>
No	66	72	1	1
<i>Ethnicity</i>				
Himtana	246	83	1	1
Other*	75	11	2.30 (1.17–4.54)	1.10 (0.31–3.86)
<i>Had knowledge on PFP</i>				
Yes	311	85	3.29 (1.30–8.36)	1.00 (0.13–7.03)
No	10	9	1	1
<i>Knew pregnancy could happen within PPP</i>				
Yes	225	31	<b>4.76 (2.91–7.80)</b>	<b>6.53 (3.2–14.12)*</b>
No	96	63	1	1

\*= Statistically significant at  $p \leq 0.05$ .

14.6 times higher compared to their counterparts (AOR = 14.62, 95% CI: 6.52, 32.75). The Odds of having autonomy on PPMC use among mothers who counseled about PFP were almost two folds higher compared with those who did not get counseling (AOR = 2.29, 95% CI: 1.27, 5.71) (Table 5).

#### 4. Discussion

According to this study, 77.3% of mothers had autonomous decision making power on PPMC use ( $p = 77.3\%$ , 95% CI: 73%, 81.2%). The finding was consistent with the study done in Wolaita Soddo Town, South Ethiopia (77.5%) [15]. However, this finding was lower compared to the studies done in

Southeast Ethiopia (91.7%), and Hosanna town (90%) [16, 17]. The reason for this variation might be due to the educational status of women. The majority of women in southeast Ethiopia and Hosanna town were literate when compared to our participants. Women's education, contribute to women understand their rights and responsibilities on the reproductive and sexual issues. Secondly, women with better educational levels have better access to health care information from different sources, like school, leaflet, newspaper media and internet pregnancy [18–22]. Conversely, it was higher compared to the study done in Mizan Aman southern Ethiopia (67.2%) [23], South Ethiopia (53.8%) [13]), and EDHS 2011 (25%) [3]. The reason might be due to religious, marital status, and cultural

differences of women. Unmarried women were the most likely to have autonomous decision-making power on modern contraceptives use [24]. In addition, the Muslim tradition, beliefs, and cultural norms put husband as a decision-maker for all household matters [20, 25]. The current women's autonomous decision making power on PP modern contraceptive use also higher compared to the studies done out of Ethiopia in Malawi (28.5%) [26], India (68%) [27], Pakistan (28%) [28].

In this study the proportion of joint decision making power with their husbands/partners was 45.1% (95% CI: 40.2–50.1%), lower compared to studies done in Southeast Ethiopia (83.4%), Hosanna town (81%), Wolaita Soddo town (71.4%), and Tigray region (78%) [15–17, 29]. However, it was higher compared to Performance Monitoring and Accountability 2020 (PMA2020) Project report from different part of Ethiopia such as in south nation and nationality people region (30.7%), Gambella region (12%) and Somali region (2%) [30]. The possible reason might be due to religious difference of study participants. Almost all women in Somlai region are Muslim religion followers.

In this study women who discussed with their husbands/partners about PPMC were more likely to have autonomous decision making power on PPMC use compared to those women who didn't discuss the issue. This finding was in line with previous studies done in the different parts of Ethiopia [15, 17, 23]. The reason might be the number of children would have been decided by both (wife and husband), and this could in turn enabled them to discuss the means to do so.

The birth interval was found to be associated with women's autonomy decision making power on PPMC use. Women who had the index child within one year after a previous birth were more likely to have autonomy decision making power on PPMC use compared to women had the index child after three years of previous birth. This finding was in line with a study done in Ghana [31]. The reason might be women know that pregnancy could happen during the postpartum period and this could in turn enabled them to discuss with partners and health care providers.

Women who had counseled about PP family planning were more likely to have autonomous decision-making power on PPMC use compared to don't receive counseling. The finding was in line with previous studies[32, 33]. The reason might be women received more information about family planning and unplanned pregnancy during the discussion. The other finding in this study is that women who knew that pregnancy could happen during PP period were more likely to have autonomy decision making power on PPMC use compared to women who didn't know that pregnancy could happen during PP period. This finding was in line with the study done in South Africa [34]. The reason might be women who had information about the pregnancy can happen during the postpartum period, might have a better educational level. On the other hand, they might be among women who had the index baby within one year after a previous birth.

## 5. Conclusions

The proportion of women's autonomy decision making power on PPMC use was low. Women who discussed with husbands/

partners on PPF, counseled about PPF, knew that pregnancy could happen in the postpartum period, and the index child within one year after previous birth were more likely to autonomous decision making power on PPMC use. Health professionals including Health extension workers, strengthening women to discuss with their husbands about postpartum family planning may improve women's autonomy decision making power on PPMC use. Furthermore, counseling and educating women on postpartum family planning should be strengthened. Moreover, the concerned bodies should promote interventions targeting the predisposing and reinforcing behavioral factors affecting women's autonomous decision making power on PPMC use.

## Data Availability

The data used to support the finding of this study are available from the corresponding author upon the request.

## Ethical Approval

Ethical clearance was obtained from Bahir Dar University's ethical review committee. Permission written letter was also obtained from Amhara Regional Health Bureau, Waghmra Health Department. Informed consent was obtained from each health facility and respondent. Each study participant was informed about the purpose and anticipated benefits of the research project. They were also informed on their full right to refuse, withdraw and partially reject part or all of their part in the study.

## Conflicts of Interest

The authors declare that they have no conflicts of interests.

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## Supplementary Materials

The file attached at supplementary material was questionnaire. (*Supplementary Materials*)

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