

Original Article

# Utilization of Family Planning Methods and associated factors among women of reproductive age group in Sunsari, Nepal

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## ABSTRACT

**Background and objectives:** Family planning not only improves women's health but also promotes gender equality, better child health, and education, including poverty reduction. Therefore, the objective of this study was to assess the utilization of family planning methods and associated factors in Sunsari, Nepal.

**Materials and methods:** A cross-sectional analytical study was conducted among women of the reproductive age group (15-49 years) in Sunsari in 2020. Non-probability purposive sampling was used to collect information from 212 respondents through face-to-face interviews using a Semi-structured interview schedule from ward no 1 of Barju rural municipality. Descriptive and inferential analysis (binary logistic regression) were used to find the association of utilization of family planning methods with selected demographic variables. All the variables with a p-value <0.1 in bivariate analysis were included in multivariate analysis. A p-value of <0.05 was considered to indicate statistical significance at a level of significance of 5%.

**Results:** This study showed that the mean age and standard deviation of the respondents was 26±7.03 and 91.5 % of respondents' age at marriage was less than 20 years. Likewise, 67.5% of respondents use any methods of family planning and 55.2% of respondents use family planning services from the government health facility. Furthermore, education ((AOR 1.579, CI 1.013-2.462), husband's occupation (AOR 1.095, CI 0.744-1.610), type of family ((AOR 2.741, CI 1.210-6.210), and no of the living son ((AOR 0.259, CI 0.077-0.872) are the factors associated with the utilization of family planning methods.

**Conclusion:** This study concludes that two-thirds of the reproductive age women utilize family planning methods. Furthermore, education, husband's occupation, type of family, and no of living son are the factors associated with the utilization of family planning methods. This reflects that awareness through mass media including behavioral communication is needed to increase the utilization of family planning methods.

**Keywords:** Community, Family planning, Women

## INTRODUCTION

Family planning is a priority program in Nepal. Family planning not only improves women's health but also promotes gender equality, better child health, and education, including poverty reduction. In Nepal, 53% of

currently married women use a method of family planning, with 43% using a modern method and 10% using a traditional method[1]. Around the world among the 1.9 billion women of the Reproductive age group(15-49 years), 1.1 billion need family planning; of these, 842 million are using contraceptive methods, and 270 million have an unmet need for contraception in 2019 [2].

In the year 2076/77 among the all-current user, Female sterilization (41%) was the most common contraceptive method, followed by Implant (15%), Depo (14%), male sterilization (12%), condoms (7%), pills (6%), and IUCD (6%). Province No. 2 has the highest percentage of total users (23%) in the country, followed by Province No. 1 (18%), Bagmati (18%), and Lumbini (17%), with Karnali province having the lowest percentage [3].

The 2030 Agenda for Sustainable Development 3.7 targets “to ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programs”. For this reason, increasing access to contraception and ensuring that family planning needs are met with effective contraceptive methods are essential for achieving universal access to reproductive healthcare services [4]. This is further supplemented by revitalizing the initial 2015 commitment to maintaining and sustaining the efforts already initiated through the implementation of FP2020. The Government of Nepal started to continue to increase the government budget for family planning by 7% each year up to 2020. In the federal system, Nepal is committed to ‘leaving no one behind’ and ‘reaching the unreached’

to increase the number of new users of Family planning [5].

A community-based study conducted among reproductive-age women with disabilities showed low utilization of FP and the associated factors were marital status, attitude, and being employed [6]. Likewise, a polled study from a nationally representative survey showed that Muslims, Janajatis, and Dalits were less likely to use contraceptives than Brahmins and Chetris. The use of family planning increases with the use of mass media and the impact of family planning information on contraceptive use varied with ethnicity [7]. Furthermore, secondary data analysis using 2016 NDHS showed overall utilization of LARC was 4.7%. Younger women’s age, low or no husband’s education, from an indigenous community such as Janajati and Newer, being in the lowest wealth quintile negatively influenced the use of LARC. Whereas, women having their husbands as skilled workers, parity of less than two, and desire of having future children, positively influenced the use of LARC. The study emphasizes the need to reach women who were in a lower socioeconomic background to improve LARC use [8].

Studies have indicated that various factors are associated with the utilization of family planning methods in Nepal, however, most studies focused on the national wide use of family planning. The information regarding the use of family planning in the study area was limited. The objective of this study is to assess the utilization of family planning methods and associated factors in Sunsari, Nepal.

## **MATERIALS AND METHODS**

A cross-sectional analytical study was conducted to assess the utilization of family planning methods and associated factors among women of the reproductive age group in Sunsari in 2020. The study populations were married women of the reproductive age group 15-49 years. Ward no 1 of Barju rural municipality of Sunsari district was selected randomly for the study. Non-probability purposive sampling was used to collect information from 212 respondents through face-to-face interviews using a semi-structured interview schedule. House to house survey was used to trace out the respondents in the community. Tools were divided into 3 distinct parts Part I: Socio-demographic information, Part II: information related to Family planning, and Part III: information related to the health system. Validity of the tool was maintained by logical analysis, reviewing with peer groups by extensive literature review & consulting with subject expertise. Before conducting the study, approval was taken from the selected ward office of Barju rural municipality, and data collection was done, reference no. 1169. Written informed consent was taken from each respondent. Privacy and confidentiality of information of all the respondents were maintained throughout the study. Data collection was done by the researchers themselves.

Data processing was done by using SPSS version 17. Descriptive analysis i.e., frequency, percentage, the mean, and standard deviation were used. In inferential analysis binary logistic regression was used to find the association of utilization of family planning methods with selected demographic variables. All the variables with P-value <0.1 in bivariate analysis were included in multivariate analysis. The p-value of <0.05

was considered to indicate statistical significance at a level of significance of 5%.

## RESULTS

This study showed that more than half of the respondents 59.9% were from the age group 21-30 followed by 28.8% from 31-40 years. The mean age was  $26 \pm 7.03$ . Likewise, 91.5 % of respondents' age at marriage was less than 20 years. Regarding ethnicity, 37.3% of respondents were from relatively disadvantaged janajati and 24. % were from Dalit. The majority 98.6% were from the Hindu religion and 39.2% of respondents were illiterate. Regarding occupation, 67.9% of the respondents were homemakers. With regard to husband's education 36.3% were illiterate and 25.5% are from secondary level and in occupation, 51.5% were wage labor. Similarly, 65.1% of respondents' income was NPR. 10000-20000 and 59.4% of respondents have nuclear families.

With regard to obstetric characteristics, 63.4% of respondents were a second gravida and 20.6% were more than 3<sup>rd</sup> gravida, 66.1% of respondents were multipara. Regarding no of living sons, 79.4% have two sons and 65.2% have two living daughters. Similarly, 44.6% of respondents have a 3-year birth interval whereas less than one-third 10.1% have a one-year birth interval. When asked about spousal separation more than two-thirds 84.4% responded never away whereas 5.7% stated away for more than one year.

Regarding the source of information, 51.4% had stated family /friends .45.9% % had stated FCHVs and at least 6.6% had books/newspapers. When asked about the family planning methods heard about more than two-thirds 84% stated injectables followed by condoms 79.2% and least 1.9 %

stated lactational amenorrhea and the rhythm method. Regarding family planning use 67.5% of respondents use any methods of

**Table 1: Information about family planning n= 212**

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Heard a family planning message</b>		
Yes	204	96.2
No	8	3.8
<b>Sources of information</b>	50	23.6
TV/Radio	84	39.6
Health Workers	96	45.9
FCHVs	109	51.4
Friends /Relatives	57	26.9
Peer groups	14	6.6
Books/Newspaper		
<b>Type of family planning heard about</b>		
Female sterilization	137	64.6
Male sterilization	54	25.5
IUCD	108	50.9
Injectables	178	84.0
Implants	133	62.7
Pill	168	79.2
Condom	121	57.1
Emergency contraception	7	3.3
Lactation Amenorrhea	4	1.9
Rhythm Method	4	1.9
Withdrawal	5	2.4
<b>Use any method of family planning</b>		
Yes	143	67.5
No	69	32.5
<b>Type of family planning used (n=143)</b>		
Permanent	89	62.24
Temporary	54	37.76
<b>In temporary (n=54)</b>		
Depo	26	48.14
Norplant	11	20.37
Pills	10	18.51
Condom	6	11.11
IUCD	1	1.85
<b>Family planning user (n=143)</b>		
Female	137	95.80
Male	6	4.20
<b>Family planning services used from</b>		
Government health facility	117	55.2
Private health facility	32	15.1
FCHVs	8	3.8
From retailer	1	0.5
<b>Distance of family planning Service</b>		
<30 min	172	81.1
≥30 min	40	18.9
<b>The attitude of the service provider at family planning services</b>		
Friendly	157	74.8
Not friendly	10	3.8
<b>Reason for discontinuation of family planning</b>		
Husband being away	5	2.4
Side effects or health concerns	4	1.9
Desire to become pregnant	8	3.8
An objection of husband or family	3	1.4
Time to reach family planning service	1	0.5

**Table 2: Association of Utilization of Family planning methods and socio-demographic variables n=212**

Variables	Utilized	Not Utilized	OR	CI	p-Value
<b>Age</b>					
≤20	7(3.3)	22(10.4)	0.69	0.023-0.206	0.000*
21-30	90(42.5)	37(17.5)	0.529	0.242-1.158	0.111
≥31	46(21.7)	10(4.7)	(Ref)		
<b>Ethnicity</b>					
Dalit	21(9.9)	31(14.6)	0.738	0.288-1.889	0.526
Relatively disadvantage janajati	25(11.8)	54(25.5)	1.080	0.441-2.643	0.866
Brahmin /Chetri	13(6.1)	38(17.9)	1.462		
Others #	10(4.7)	20(9.4)	(Ref)	0.545-3.919	0.451
<b>Educational status</b>					
Illiterate	68(32.1)	15(7.1)	5.667	2.391-13.431	0.001*
Can read and write	26(12.3)	16(7.5)	2.031	0.821-5.024	0.125
Primary	33(15.6)	18(8.5)	2.292	0.957-5.486	0.063
Secondary and above	16(7.5)	20(9.4)	(Ref)		
<b>Husbands' education</b>					
Illiterate	61(28.8)	16(7.5)	3.119	1.474-6.600	0.003*
Can read and write	16(7.5)	12(5.7)	1.091	0.441-2.696	0.851
Primary	33(15.6)	14(6.6)	1.929	0.861-4.318	0.110
Secondary and above	33(15.6)	27(12.7)	(Ref)		
<b>Occupation</b>					
Homemaker	105(49.5)	39(18.4)	1.974	0.835-4.668	0.121
Agriculture	23(10.8)	19(9.0)	0.888	0.331-2.382	0.813
Others #	15(7.1)	11(5.2)	(Ref)		
<b>Husband Occupation</b>					
Wage labor	70(33.0)	39(18.4)	0.608	0.323-1.143	0.122
Agriculture	11(5.2)	9(4.2)	0.414	0.157-1.137	0.087
Others #	62(29.2)	21(9.9)	(Ref)		
<b>Type of family</b>					
Nuclear	97(45.8)	29(13.7)	2.909	1.608-5.263	0.000*
Joint	46(21.7)	40(18.9)	(Ref)		
<b>Distance to healthfacility</b>					
<30 minutes	117(53.2)	55(25.9)	1.145	0.533-2.363	0.713
>30 minutes	26(12.3)	14(6.6)	(Ref)		
<b>Income</b>					
<20000	112(52.8)	48(22.6)	1.167	0.207-6.586	0.861
20000-30000	27(12.7)	19(9.0)	0.711	0.118-4.281	0.709
≥30000	4(1.9)	2(0.9)	(Ref)		

*\*Significant p-value<0.05, others# in ethnicity= relatively advantaged janajati and religious minorities, others# in occupation= business, service, labor and others, others# in husbands' occupation=business, service, and others*

**Table 3: Association of the utilization of family planning methods with obstetric characteristics n=212**

Variables	Utilized	Not Utilized	OR	CI	p-Value
<b>Age at marriage</b>					
≤20	129(60.8)	65(30.7)	0.567	0.179-1.792	0.334
>20	14(6.6)	4(1.9)	(Ref)		
<b>Gravida</b>					
1	8(4.1)	23(11.9)	0.101	0.034-0.302	0.000*
2	99(51.0)	24(12.4)	1.198	0.504-2.847	0.683
≥3	31(16.0)	9 (94.6)	(Ref)		
<b>Para</b>					
1	13(7.1)	19(10.4)	0.249	0.085-0.728	0.011*
2	100(54.6)	21(11.5)	1.732	0.679-4.415	0.250
≥3	22(12.0)	8(4.4)	(Ref)		
<b>No. of living son</b>					
1	12(5.7)	31(14.8)	0.111	0.052-0.237	0.000*
2	129(61.7)	37(17.7)	(Ref)		
<b>No. of living daughter</b>					
1	36(17.6)	35(17.2)	0.287	0.154-0.534	0.000*
2	104(51)	29(14.2)	(Ref)		
<b>Birth interval</b>					
1year	12(8.1)	3(2.0)	1.000	0.167-5.985	1.000
2 years	37(25.0)	15(10.1)	0.617	0.132-2.501	0.499
3 years	56(37.8)	10(6.8)	1.400	0.334-5.867	
>3 years	12(8.1)	3(92.0)	(Ref)		
<b>Spousal separation</b>					
Never away	121(57.1)	58(27.4)	2.921	0.889-9.59	0.71
Away for <1 year	17(8.0)	4(1.9)	5.950	1.223-28.95	0.27
Away for >1 Year	5(2.4)	4(3.3)	(Ref)		

family planning and 55.2% of respondents uses family planning services from government health facility and 3.8% from FCHVs. Very few 0.5% use FP from the retailer. With regard to the reason for discontinuation of family planning, 3.8% said the desire to become pregnant and 1.4% stated objection of husband or family, and least 0.5% said time to reach family planning service and rumours about FP.

In bivariate analysis demographic variables like age (OR 0.69, 95% CI 0.023-0.206), educational status (OR 5.667,95% CI 2.391-13.431), husband's education (OR 3.119,95% CI 1.474-6.600), type of family (OR

2.909,95% CI 1.608-5.263) is associated with utilization of family planning methods. Likewise in obstetric characteristics gravida (OR 0.101, 95% CI 0.034-0.302), para (OR 0.249,95% CI 0.085-0.728), No of the living son (OR 0.111, 95% CI 0.052-0.237), no of living daughter (OR, 95% 0.287 CI 0.154-0.534) are associated with utilization of family planning methods. In multivariate analysis education, husband's occupation, type of family, and no of living son are the factors associated with the utilization of family planning methods. The women who were educated were more likely to utilize family planning methods than the illiterate (AOR 1.579, CI 1.013-2.462).

**Table 4: Association of the utilization of family planning methods with demographic variables (multivariate analysis)n=212**

Variables	Unadjusted OR	Adjusted OR	CI	p-Value
<b>Age</b>				
≤20	0.69	0.871	0.393-1.930	0.733
21-30	0.529			
≥31	(Ref)			
<b>Educational status</b>				
Illiterate	5.667	1.579	1.013-2.462	0.044 *
Can read and write	2.031			
Primary	2.292			
Secondary and above	(Ref)			
<b>Husbands' education</b>				
Illiterate	3.119	1.095	0.744-1.610	0.646
Can read and write	1.091			
Primary	1.929			
Secondary and above	(Ref)			
<b>Husband Occupation</b>				
Wage labour	0.608	1.992	1.160-3.422	0.013 *
Agriculture	0.414			
Others	(Ref)			
<b>Type of family</b>				
Nuclear	2.909	2.741	1.210-6.210	0.016 *
Joint	(Ref)			
<b>Gravida</b>				
1	0.101	0.710	0.211-2.868	0.706
2	1.198			
≥3	(Ref)			
<b>Para</b>				
1	0.249	1.121	0.279-4.499	0.872
2	1.732			
≥3	(Ref)			
<b>No of Son</b>				
1	0.111	0.259	0.077-0.872	0.029 *
2	(Ref)			
<b>No of daughter</b>				
1	0.287	0.466	0.177-1.226	0.122
2	(Ref)			



## DISCUSSION

This study showed that 67.5% of respondents use any methods of family planning which contradicts the findings of the study conducted in the Dang district which showed that 39% of the women and 8% of their husbands were using family planning[11]. Regarding the source of information, 51.4% had stated family /friends .45.9% % had stated FCHVs, and least 6.6% books/newspapers which contradicts the findings of the study conducted in Sindhupalchok district in Nepal in which health workers 55%, hospitals 48%, friends 44%, and newspaper 25% is the major source of information [9]. When asked about family planning methods heard about more than two-thirds 84% stated injectables followed by condoms 79.2% and least 1.9 % stated lactational amenorrhea and rhythm method which is similar to the findings of the study which showed 88.69% of respondents heard about family planning and the most commonly known methods were injectables, pill and IUCD [9]. Similarly, another study showed that 99.5% of participants had knowledge about modern FP [11]. Likewise in this study, 55.2% of respondents use family planning services from government health facilities and 3.8% from FCHVs. Very few 0.5% use FP from the retailer which is consistent with the findings of the study showed more than two-thirds of the women and their husbands (68%) obtain family planning devices from government health facilities [11]. With regard to the reason for discontinuation of family planning, 3.8% said the desire to become pregnant and 1.4% stated objection of husband or family and least 0.5% said time to reach family planning service and rumors about FP which is supported by the findings of the study which

showed reasons are two-fourth (40.5%) of the participants reported their husband is not at home, 10.5% reported fear of side effect and 10.2% of the mothers reported not resuming sex as a reason while 6.8% mentioned husband disapproval for not using any form of FP methods[12] where as it contradicts with the findings of the study stated that reasons were due to fear of side effects (42%), and inaccessibility was 1% [11]. Likewise, a study reflected that fertility-related issues and opposition were the reasons for the difficulty to get service points [13].

This study showed that education, husband's occupation, type of family, and no of living son are the factors associated with the utilization of family planning methods. The women who were educated were 1.579 times more likely to utilize family planning methods than the illiterate (CI 1.013-2.462). which is consistent with the findings of the study conducted in Ethiopia [13]. Likewise, another study showed Women with no formal education were significantly less likely to practice modern family planning relative to those with some formal education (OR = 0.57, 95% C.I 0.37- 0.87) [14].

The findings are also supported by the study conducted in Nepal showed women with no education were less likely to use LARC by 33% compared to women who had secondary education and above [8]. The women who have education might have knowledge about the use of family planning which is reflected in their behavior. In this study occupation of the husbands showed a significant association with the utilization of family planning methods with an AOR of 1.095 (CI 0.744-1.610) which is consistent with the findings of the study conducted in Kailali District, Nepal which showed Occupation of

husbands significantly associated with utilization of family planning methods with an adjusted odds ratio of 3.2 (95% CI: 2.0–6.0) [12]. Similarly, the women who are from nuclear families were 2.741 times more likely to utilize family planning methods than those from joint families (CI 1.210-6.210) which is not supported by the findings of the study conducted in India showed that type of family significantly associated with unmet need ( $p=0.001$ ). Respondents who belong to a joint family were found to have fewer unmet needs compared to nuclear families [15].

With regards to the number of living sons, women who have two living sons were 0.259 times more likely to utilize family planning methods than one (CI 0.077-0.872), which contradicts with findings of the study which showed there was no association of the number of children women had with family planning use behavior ( $p = 0.133$ ) [16].

The occupation is not associated with the utilization of family planning methods which is supported by the study conducted in different settings that showed neither the marital status of the women nor their occupation had a significant influence on their modern FP use behavior [16].

## CONCLUSIONS

This study concludes that two-thirds of the reproductive-age women utilize family planning methods. Furthermore, education, husband's occupation, type of family, and no of living son are the factors associated with the utilization of family planning methods. This reflects that awareness regarding family planning is needed including behavioral change communication. Education through mass media with periodic reinforcement will play an important role in creating awareness.

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