Original Article *Journal of Multidisciplinary Research Advancements (JOMRA), Vol. 3, No. 2 (2025), 175 – 182*
e-ISSN 2990-7721 Available online at https://www.nepjol.info/index.php/jomra

Factors Affecting Contraceptive Use Among Married Women of Reproductive Age in Dolpo-Buddha Rural Municipality, Nepal

Tsering Youdon Lama

Nobel College, Sinamangal, Kathmandu, Nepal

**Corresponding author: youdontsering2015@gmail.com*

Abstract: In Nepal, a significant gap exists between knowledge and use of family planning, particularly in remote areas. This study assessed the factors affecting contraceptive use among married women of reproductive age (MWRA) in the remote, high-altitude Dolpo-Buddha Rural Municipality, Dolpa. A community-based cross-sectional study was performed involving 255 MWRA, chosen through population proportion sampling. Data were gathered via in-person interviews employing a semi-structured questionnaire. Chi-square tests and descriptive statistics were used to analyse the data. The mean age of respondents was 31.96 (±6.68) years. Most were illiterate (81.6%) and farmers (57.3%). While 75.7% knew about contraception, only 14.1% had adequate knowledge. The contraceptive prevalence rate among those with knowledge was high (89.3%), with implants (Norplant) being the most used method (66.3%). Irregular menstruation was the main cause of dissatisfaction (94.7%) and the most common side effect (81.6%). The majority of users (57.4%) did not obtain counselling. There were strong links between contraceptive use and the woman's education (p=0.002), job (p=0.031), number of living children (p=0.01), talking to a partner (p=0.036), and making decisions together (p=0.024). Although many people used it, there was a significant lack of comprehensive knowledge and counselling. Stigma is a big problem. Interventions must focus on enhancing knowledge, ensuring counselling accessibility, and addressing socio-cultural barriers through targeted advocacy and partner engagement.

Keywords: *Contraceptive agents, Health knowledge, Attitudes, Practice, Rural population, Women's health, Nepal, Social stigma*

Conflicts of interest: None
Supporting agencies: None

Received 25.08.2025 Revised 21.11.2025 Accepted 28.11.2025

Cite This Article: Lama, T.Y. (2025). Factors Affecting Contraceptive Use Among Married Women of Reproductive Age in Dolpo-Buddha Rural Municipality, Nepal. *Journal of Multidisciplinary Research Advancements*, 3(2), 175-182.

1. Introduction

Dolpo Buddha Rural Municipality is one of the hard-to-reach mountain rural municipalities in Dolpa district, Karnali Province, Nepal, at an elevation higher than 4000 meters above sea level (Thapa, 2022). It is inhabited by the local indigenous Buddhist community, identifying themselves as 'Dolpo'. The total population of the Rural Municipality is 2040 (1148 male and 1272 female) with a 1.24% annual growth rate. Among 712 women of reproductive age, 540 were married. The sex ratio is 90.25% and 45.25% of the total population is educated. The education level is comparatively higher among males (54.04%) than in the female population (37.26%). There are 543 total families with an average family size of 4.46 (Dolpo-Buddha Rural Municipality, 2023).

Family planning enables every individual and couple to have their desired number of children, the gap and the time of birth using contraceptive methods (Cavalcanti et al., 2021). There are various types of contraception with varying effectiveness rate, which mainly depends upon correct usage. Contraceptive methods include: hormonal methods (oral pills, implants, patches or vaginal rings), Intrauterine Contraceptive Devices (IUCDs), emergency contraception, condom and lactation amenorrhea method (World Health Organisation [WHO], 2023). The barriers to contraceptive use include: desire for a son, small baby, family objection, fear of side effects and potential infertility in future, inaccessible, social norm, behaviour of health workers, age, parity, educational status and husband approval (Shahi & Timalsina, 2023; Sigdel et al., 2023; Gahungu et al., 2021).

The International Conference on Population Development (ICPD) 1994, adopted by 179 governments in Cairo, declared that all couples and individuals have the right to freely and responsibly decide the number and spacing of their children (United Nations Population Fund [UNFPA], 1994). It was reaffirmed by the 2030 Agenda for Sustainable Development in target 3.7, "ensuring 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 by 2030" (United Nations [UN], 2015). WHO works on ensuring human rights in contraceptive programs and produces evidence-based guidelines on the safety and service delivery of contraceptive methods (WHO, 2023).

According to the report of World Family Planning 2022, globally, the number of women of reproductive age increased by 46 % from 1.3 billion in 1990 to 1.9 billion in 2021. The need for family planning among them increased by 62% from 0.7 billion in 1990 to 1.1 billion in 2021. Yet 164 million had unmet need for family planning (United Nations Department of Economic and Social Affairs [UN DESA], 2022). The global contraceptive prevalence rate of any method is 63% with the modern method 55%. The situation in Asia is comparatively better than the global context, with prevalence of any method 67% and modern method 59% which is also higher than the status in South Asia, with prevalence of any method 62% and modern method 52% (Population Reference Bureau [PRB], 2022; Pradhan, 2022).

Family planning is a fundamental right of individuals and couples in the Constitution of Nepal 2015, and it is also included in the basic health service package under the Public Health Act 2018, paving the way towards Universal Health coverage. Family Planning Association of Nepal (FPAN), in 1959, is Nepal's first national sexual and reproductive health service and advocacy organisation, which introduced the Family Planning Program in Nepal. Since 1969, the government of Nepal has been actively involved in family planning services. Family Planning Program is one of the priority programs of the Government of Nepal with the aim of ensuring individuals and couples fulfil their reproductive needs and rights by using quality family planning methods voluntarily based on informed choice (Family Planning Association of Nepal [FPAN], n.d.; Family Welfare Division [FWD], n.d.).

In Nepal, Family Planning information and services are provided through the government, social marketing, Non-governmental organisations and the private sector. The most common method is female sterilisation (38%), followed by implant (18%), depo (14%), male sterilisation (11%), pills (7%), condom (6%) and IUCD (6%) (Department of Health Services [DoHS], 2022). The Government of Nepal's target under Sustainable Development Goal 3.7.1 (a) includes the use of modern contraceptive methods by women of reproductive age (15-49) with 56% by 2025 and 60% by 2030 (DoHS, 2022).

The national total fertility rate is 2.1, which is less than the global average (2.3) and South Asia (2.2). The fertility rate of Nepal is higher in rural areas (2.4 births per woman) than in urban areas (2.0 births per woman) (PRB, 2022; Pradhan, 2022). Over the past 26 years, the use of any method of Family Planning by married women has nearly doubled from 29% in 1996 to 57% in 2022. Similarly, use of modern contraceptive methods has increased from 26% in 1996 to 44% in 2006, but it has stalled at 43% from 2011 through 2022. The demand for family planning among reproductive age individuals is 78%; only 57% used any methods of family planning, leaving the remaining 21% with unmet need for family planning (Pradhan, 2022).

A study conducted in Dhading, Nepal, showed 92% of the respondents were aware of family planning, but only 49% used contraceptives (Panta et al., 2020). Another study conducted in Lamjung, Nepal, showed 94% had knowledge of family planning, but only 32% used contraceptives (Gupta et al., n.d.). Religious and ethnic variation, fear of side effects and potential infertility in future were major reasons for not using contraceptives. Privileged ethnic groups used family planning measures comparatively more than underprivileged groups (Bhatt et al., 2021).

Family planning is a fundamental human right, and the Family Planning Program is the government of Nepal's top priority. Based on various study findings, there is a gap between knowledge and use of family planning methods. So, high knowledge but low utilisation of contraceptives interferes with the program's target success. Though there are studies regarding family planning conducted in Nepal, there is no study conducted in Dolpa and the modern contraceptive prevalence is only 37% (DoHS, 2022). Despite the national and global emphasis on family planning, there is a complete absence of prior research on contraceptive use specifically within the Dolpo-Buddha Rural Municipality. The unique condition of its high-altitude isolation, specific indigenous culture, and documented low development indicators makes it a critical area of study. This research, therefore, serves as the first study in this municipality, aiming to provide essential insights for designing effective, culturally sensitive health interventions for the Dolpo community and other similar remote populations.

2. Materials and methods

A community-based cross-sectional study was conducted among married women of reproductive age (15-49 years) in Dolpo-Buddha Rural Municipality, Dolpa.

The required sample for the study was calculated using a single proportion formula based on a study conducted in Karnali province where the contraceptive prevalence rate was 21% (Shrestha, Chaulagain, & Pandey, 2018).

We have,

n= z^2^pq/d^2^

Where,
n= Sample size,
p= 0.21 prevalence of use (21%)
q= 1-p = 0.79,
d= 5% (allow-able error) =0.05,
α= level of confidence
In formula,
n= (1.96)^2^ x 0.21x 0.79/ (0.05)^2^=254.92 ≈ 255
Hence, the required sample size was 255.

From each ward, the required sample size was calculated using the population proportion sampling (PPS) method.

PPS=Total married women of reproductive age in particular ward/Total married women of reproductive age of all wards ×Calculated study sample size.

Data were collected through face-to-face interviews using a pre-tested, semi-structured questionnaire that had been translated into the local dialect. The tool covered socio-demographic characteristics, knowledge, service accessibility, and decision-making related to contraception. Interviews lasted 25-30 minutes each.

Data analysis was performed using SPSS version 16. Descriptive statistics (frequencies, percentages, mean, and standard deviation) were computed. For knowledge assessment, a score above the mean was classified as "adequate knowledge." Inferential statistics (Chi-square test) were used to determine associations between variables, with a significance level of $p<0.05$.

Ethical approval was obtained from the Institutional Review Committee of Nobel College. Written informed consent was secured from all participants prior to the interview, with consent from a guardian obtained for those under 18 years of age. Confidentiality and the right to withdraw were ensured.

3. Results

The study was conducted among 255 married women of reproductive age in Dolpo-Buddha Rural Municipality, Dolpa. The following were the findings related to this study:

3.1. Univariate Analysis

This section provides a summary of the general characteristics of the study population, knowledge, service and decision-related factors affecting the contraceptive use among the study population in terms of mean, median, standard deviation, frequency and percentage.

Socio-demographic Characteristics

Table 1 shows that the study population had a mean age of 31.96 with a standard deviation of 6.678, and the majority, or 30.6% belong to the age group of 31 to 35 years. The majority, 62.4% married before the age of 20 and 63.1% had their first pregnancy after the age of 20. Furthermore, more than half (54.1%) of the participants had been married for 10 to 20 years.

The majority of the study population were illiterate (81.6%), and the majority worked as farmers (57.3%). One third of the respondents (60.4%) live in a nuclear family, with 90.2% having a husband as their family head. More than half (57.6%) of the respondents' husbands were illiterate, with the majority (38.8%) of them being housewives. The majority (72.9%) of the respondents reported an annual family income ranging from 1 to 5 lakhs.

Table 1: Distribution of Socio-demographic characteristics of the study population (N = 255)

Variables	Category	Frequency	Percentage (%)
Age (In completed year)	31-35	78	30.6
	26-30	75	29.4
	36-40	36	14.1
Education of the respondent	Illiterate	208	81.6
	Non-formal education	31	12.2
Occupation of the respondent	Farmer	146	57.3
	House-maker	87	34.1
Family type	Nuclear	154	60.4
	Joint	95	37.3
Head of the family	Husband	230	90.2
	Myself	11	4.3
Education of husband	Illiterate	147	57.6
	Non-formal education	76	29.8

Occupation of husband	House-maker	99	38.8
	Farmer	84	32.9
Annual family income	1 to 5 lakhs	186	72.9
	Less than 1 lakh	55	21.6
Age at marriage	Less than 20	159	62.4
	20-30	96	37.6
Age at first pregnancy	More than 20	161	63.1
	Less than 20	94	36.9
Marital duration	10-20	138	54.1
	1-10	100	39.2

Knowledge related factors

Table 2 indicates that only 22.7% of the respondents heard about family planning, and more than half (53.4%) associate family planning with birth control. The majority, 79.3% heard about family planning through a health worker and among those, 82.8% had planned before pregnancy.

Of the total respondents, 193 individuals, accounting for 75.7% knew about contraceptive methods, with Norplant being the most known at 84%. The majority, 64.8% got to know about contraceptive methods from friends, and 78.3% mentioned that contraceptive methods were available from the health post. 97.9% affirmed the importance of contraceptives, and 63.5% emphasised their role in improving maternal and child health. However, 4% mentioned contraceptives are not important because they cause infertility. 63.2% mentioned contraceptive poses side effects, and the majority (77.4%) of them mentioned irregular period as a side effect of contraceptives. Furthermore, 141 individuals, accounting for 73.1% had heard about emergency contraceptives.

Table 2: Knowledge-related factors affecting contraceptive use

Variables	**Category**	**Frequency**	**Percentage (%)**
Heard about family planning (N=255)	No	197	77.3%
	Yes	58	22.7%
Know about contraceptive method (N=255)	Yes	193	75.7%
	No	62	24.3%
Most Known Contraceptive method (N=193) (MR)	Norplant	164	84.1%
	Depo Provera	54	27.7%
	Emergency Contraceptive Pill	49	25.1%
Main source of information (n=193) (MR)	Friends	125	64.8%
	Health worker	60	31.1%
Place of availability (n=193) (MR)	Health post	148	78.3%
	Hospital	49	25.9%
Believes contraceptive is important (n=193)	Yes	189	97.9%
	No	4	2.1%
Main advantage (n=189) (MR)	Improves maternal and child health	120	63.5%
	Proper birth spacing	91	48.1%
Believes methods have side effects (n=193)	Yes	122	63.2%
	No	71	36.8%
Main side effect known (n=122) (MR)	Irregular period	96	77.4%
	Weight loss	51	41.1%

Table 3 illustrates that only 36 individuals, constituting 14.1% have adequate knowledge of contraceptive methods, leaving 85.9% of them with inadequate knowledge.

Table 3: Level of knowledge among the study population (N=255)

Variables	**Category**	**Frequency**	**Percentage (%)**
Knowledge Level	Inadequate	219	85.9%
	Adequate	36	14.1%
	Total	255	100%

Contraceptive use among the respondents

Table 4 provides insights into various aspects of contraceptive use and related factors. Regarding the use of contraceptive devices, 89.3% of the surveyed individuals who had knowledge reported using some form of contraception, while 10.7% did not. The majority (66.3%) used Norplant, followed by Depo Provera (18.5%), and female sterilisation

(9.0%). The satisfaction level with the chosen contraceptive methods was relatively high, at 68%. However, 30.4% reported dissatisfaction, with reasons including irregular menstrual periods (94.7%).

The source from which respondents received contraceptive methods varied, with 81.5% obtaining them from health posts. Looking into the future, 48.35% expressed intent to continue using contraceptive methods. Counselling on contraceptive methods was received by 42.6% of respondents, primarily from health posts (65.3%). Concerning side effects, 45.5% reported experiencing them, most commonly irregular menstrual periods (81.6%).

Reasons for not using contraceptive methods included husband disapproval (15.8%), fear of infertility (31.6%), and stigma (42.1%). Preferred contraceptive methods included Norplant (72.5%). A small percentage (3.5%) experienced contraceptive failure, primarily with pills (66.7%). The behaviour of health personnel was generally positive, with 63.1% described as helpful. Most respondents (63.5%) were comfortable receiving services from any female health care provider. 82.7% used bikes as a means of transportation to health facilities. Emergency contraceptive device usage was relatively low (6.4%), with all users relying on emergency contraceptive pills. Similarly, the majority (88.1%) of the respondents who know about contraceptive methods reported discussion about contraceptive use with their partner, with discussion occurring sometimes (81.2%), and the decision of contraceptive use was found to be taken by both (89.1%).

Table 4: Contraceptive use among the respondents (n = 176 users)

Variables	Category	Frequency	Percentage (%)
Current use (among those with knowledge, n=193)	Yes	176	89.3%
	No	21	10.7%
Method currently used (MR)	Norplant	118	66.3%
	Depo provera	33	18.5%
	Female sterilization	16	9.0%
Satisfied with method	Yes	121	68%
	No	54	30.4%
Main reason for dissatisfaction (n=54) (MR)	Irregular menstrual period	54	94.7%
Received counseling before use	No	101	57.4%
	Yes	75	42.6%
Experienced side effect	Yes	79	45.5%
	No	96	54.5%
Main side effect experienced (n=79) (MR)	Irregular menstrual period	71	81.6%
	Weight loss	39	44.8%
Main reason for non-use (n=21) (MR)	Stigma	8	42.1%
	Fear of infertility	7	31.6%
Preferred method	Norplant	125	72.5%
	Depo provera	29	16.4%
Comfortable with any female provider	Yes	158	63.5%
Discusses use with partner (n=193)	Yes	170	88.1%
	No	23	11.9%
Decision maker (n=193)	Both decide together	172	89.1%
	Decide myself	21	10.9%

MR: Multiple Response

3.2. Bivariate Analysis

Association between socio-demographic characteristics and use of contraceptive methods

Table 5 shows the association between socio-demographic factors and contraceptive use among the study population who had knowledge of methods (n=197). Education of the respondent (p-value=0.002<0.05), occupation of the respondent (p-value=0.031<0.05), head of the family (p-value=0.01<0.05), occupation of the husband (p-value=0.01<0.05) and number of living children (p-value=0.01) showed statistically significant association with the use of contraceptives.

Table 5: Association between selected socio-demographic characteristics and use of contraceptive methods (n=197*)

Independent variable	Category	Using Contraception	p-value
		Yes (n=176) n(%)	No (n=21) n(%)	
Education of the respondent	Illiterate	149 (75.6)	13 (6.6)	0.002*
	Literate^	27 (13.7)	8 (4.1)	
Occupation of the respondent	Farmer/Homemaker	163 (82.7)	19 (9.6)	0.031*

	Employed/Business	13 (6.6)	2 (1.0)	
Head of the family	Husband	170 (86.3)	14 (7.1)	0.01*
	Self/Other	6 (3.0)	7 (3.6)	
Occupation of husband	Business/Service	51 (25.9)	0 (0.0)	0.01*
	Farmer/Homemaker	125 (63.5)	21 (10.7)	
Number of living child	1-2	110 (56.4)	21 (10.8)	0.01*
	≥3	66 (33.8)	0 (0.0)	

* Analysis includes only the 197 women who had knowledge of contraception.
^Literal: Primary education and above.

Association between level of knowledge and the contraceptive use

The p-value for level of knowledge (p-value=1.00>0.05) did not show a statistically significant association with contraceptive use.

Association between services related factors and the contraceptive use

Table 6 shows the association between service-related factors and contraceptive use. The p-value for discussion about contraceptive use with partner was 0.036 (<0.05), frequency of discussion was 0.01 (<0.05), and the decision taker was 0.024. There is a statistically significant association between these factors and contraceptive use..

Table 6: Association between decision-making factors and contraceptive use (n=197*)

Independent variable	Category	Using Contraception	p-value	
		Yes (n=176) n(%)	No (n=21) n(%)	
Discussion with partner	Yes	158 (81.9)	18 (9.3)	0.036*
	No	12 (6.2)	5 (2.6)	
Decision Maker	Both decide together	160 (82.9)	12 (6.2)	0.024*
	Self or Husband only	16 (8.3)	9 (4.7)	

* Analysis includes only the 197 women who had knowledge of contraception.

4. Discussion

The study was conducted among married women of reproductive age in Dolpo-Buddha Rural Municipality, Dolpa, to determine the association between socio-demographic characteristics, level of knowledge and service-related factors affecting contraceptive use.

In the study, 81.6% of the respondents were illiterate and 57.3% mentioned farming as their primary occupation. A similar study shows 67.7% of research participants were housewives, while 21.3% mentioned their primary occupation as agricultural (Joshi et al., 2020). The majority, 60.4% were living in a nuclear family, with 90.2% respondents whose family head was their husband. 57.6% of the respondents' husbands were illiterate and housemakers (38.8%). The majority (62.4%) of the respondents were married before the age of 20, and 63.1% had their first pregnancy after the age of 20. A similar study shows that the majority (91.79%) of the respondents were married before age 20 (Bhagat, 2019).

The majority (77.3%) of the respondent have not heard about family planning while another study conducted by Nabina Shahi and Indira Timalsina on the topic 'Awareness and Practice of Family Planning Methods Women in Jumla-A Cross-Sectional Study' showed the majority (62.50%) of the respondents were aware that family planning improves maternal and child health (Shahi & Timalsina, 2023). In this study, the majority (85.9%) had inadequate knowledge about contraceptive methods and 89.3% respondents, who knew about contraceptive methods, were current family planning users. So, there was no statistical association between the level of knowledge and contraceptive use. While another similar cross-sectional study on 'Awareness and practice of family planning services among married women of reproductive age in a rural municipality of Saptari District, Nepal' reveals that 91.78% of the respondents had an adequate awareness of family planning services, and 59.64% were current family planning users. So, there is no significant association between the level of knowledge and the use of family planning services (Bhagat, 2019). In the study, more than two-thirds (88.1%) of respondents discussed contraceptive methods with their husbands and the decision to use the method was made together (89.1%). Another study conducted in Dhading shows similar findings, but the decision to use the method was made by the respondent herself (64.6%) (Panta, Tripathi, Sharma, & Amgain, 2020).

In this study, the contraceptive prevalence rate was 89.3% while a similar study conducted in Jumla shows only a 21% contraceptive prevalence rate (Shrestha, Chaulagain, & Pandey, 2018). The contraceptive prevalence rate among the respondents varies with age, rising from 24.4% among women aged 26-30, peaking at 31.5% of women aged 31-35 and then slightly declining to 14.2% among women aged 36-40. This finding was similar to another cross-sectional study conducted in Jumla (Shrestha et al., 2018). Stigma (42.1%) was the major reason for not using family planning methods, while another study showed side effects (90%) as the major reason for not using family planning methods (Bhagat, 2019). In another study, the most common reason for not using a contraceptive method was the desire for a son (45.3%) (Shahi

& Timalsina, 2023). Norplant (72.5%) was the most preferred method, followed by Depo Provera (16.4%), male and female sterilisation (20%) and pills (1.1%). But the client demand for injection Depo was 69% while 13% chose IUCD, 11% chose Pills, and 8% chose implant as a temporary contraceptive method in a retrospective review of hospital records of family planning clinic clients (Shrestha et al., 2018).

The study showed statistically significant association between the use of contraceptive method and the respondents' education(p-value=0.002<0.05), occupation (p-value=0.031<0.05), head of the family (p-value=0.01<0.05), occupation of husband (p-value=0.01<0.05), number of living child (p-value=0.01), discussion about contraceptive use with partner (0.036 <0.05), frequency of discussion (0.01 <0.05) and the decision taker (0.024<0.05). A community-based descriptive cross-sectional study on 'Knowledge and Practice of Family Planning Methods among Married Women of Reproductive Age of Chepang Community in Benighat VDC of Dhading District' showed that the use of family planning is associated with inter-spousal communication, cultural taboos and decision makers about family planning (Panta et al., 2020). Another study reveals that residence, marital status, age, educational status, occupation, income level, knowledge, attitude and number of children were the factors significantly associated with family planning use (Tarekegn, Embaile, & Nebyat, 2018).

While this study provides valuable insights into contraceptive use in a remote and understudied population, its findings should be interpreted considering certain limitations. Firstly, the cross-sectional design captures a snapshot in time, which establishes associations but cannot determine causality between the identified factors and contraceptive use. Secondly, the study relied on self-reported data regarding sensitive topics such as contraceptive use, side effects, and spousal communication, which may be subject to social desirability bias, where participants provide answers they believe are socially acceptable rather than their true practices or beliefs. Additionally, the study was conducted in one specific rural municipality; therefore, the results may not be fully generalizable to all remote mountain communities in Nepal, though they offer important indicative findings for similar contexts. Finally, the study did not qualitatively explore the deep-rooted socio-cultural and religious beliefs that underpin the reported stigma, which is a key barrier identified. Future research employing mixed-methods or longitudinal designs could provide a deeper, causal understanding of these dynamics.

5. Conclusion

This study finds that in the Dolpo-Buddha Rural Municipality, contraceptive usage is prevalent among married women who are informed about available methods. Though there is a high usage rate, there is a lack of complete knowledge and counselling before use. The prevalence of long-acting reversible contraceptives, particularly implants, is a favourable outcome that suggests effective programmatic emphasis or their appropriateness for this challenging demographic. However, the main reason people didn't use it wasn't because of medical side effects or physical inaccessibility; it was because of deeply ingrained stigma, which shows how big a social and cultural problem this is.

The study found that the choice to use contraception is not an individual one, but rather a collective decision made by the household, significantly shaped by spousal communication and collaborative decision-making. Consequently, interventions exclusively aimed at women are probably ineffective.

References

Bhatt, N., Bhatt, B., Neupane, B., Karki, A., Bhatta, T., Thapa, J., et al. (2021). Perceptions of family planning services and its key barriers among adolescents and young people in Eastern Nepal: A qualitative study. *PLoS One, 16*(5). 10.1371/journal.pone.0252184. eCollection 2021.

Bhagat, R. (2019). Awareness and practice of family planning services among married women of reproductive age in a rural municipality of Saptari district, Nepal. *Journal of Patan Academy of Health Science, 6*(1). https://doi.org/10.3126/jpahs.v6i1.27080.

Cavalcanti, T., Kocharkov, G., & Santos, C. (2021). Family planning and development: Aggregate effects of contraceptive use. *The Economic Journal, 131*(634), 624-657.

Department of Health Services [DoHS]. (2022). DoHS Annual Report FY 2077/78 (2020/21). Government of Nepal.

Dolpo-Buddha Rural Municipality. (2023). Municipal Profile.

Family Planning Association of Nepal [FPAN]. (n.d.). Family Planning Association of Nepal. Retrieved from https://www.fpan.org/

Family Welfare Division [FWD]. (n.d.). Family Planning. Retrieved from https://fwd.gov.np/family-planning/

Gahungu, J., Vahdaninia, M., & Regmi, P. R. (2021). The *unmet* needs for modern family planning methods among postpartum women in Sub-Saharan Africa: a systematic review of the literature. *Reproductive Health, 18*(1), Article 35. https://doi.org/10.1186/s12978-021-01089-9.

Gupta, S., Singh, A., Gupta, N., Shrestha, V. L., & SA Gupta S. (n.d.). Family Planning knowledge and practice among women in a District Hospital, Lamjung, Nepal. Retrieved from https://pdfs.semanticscholar.org/4794/baa3f283bf3777e7eb8870c62484d1ac3d03.pdf.

Joshi, A. K., Tiwari, D. P., Poudyal, A., Shrestha, N., Acharya, U., & Dhungana, G. P. (2020). Utilization of family planning among postpartum mothers in Kailali District, Nepal. *International Journal of Women's Health, 12*, 487-494. https://doi.org/10.2147/ijwh.s249044.

Panta, P. P., Tripathi, P., Sharma, D., & Amgain, K. (2020). Knowledge and Practice of Family Planning Methods among Married Women of Reproductive Age of Chepang Community in Benighat VDC of Dhading District. *Journal of Karnali Academy of Health Sciences, 3*(1), https://www.nepjol.info/index.php/jkahs/article/view/28654.

Population Reference Bureau [PRB]. (2022). 2022 World Population Data Sheet. Retrieved from https://2022-wpds.prb.org/wp-content/uploads/2022/09/2022-World-Population-Data-Sheet-Booklet.pdf

Pradhan, A. (2022). Nepal Demographic and Health Survey 2022: Key Indicators Report.

Shahi, N., & Timalsina, I. (2023). Awareness and Practice of Family Planning Methods among Women in Jumla- A Cross-Sectional Study. *Journal of Karnali Academy of Health Sciences, 6*(1). https://doi.org/10.61814/jkahs.v6i1.780

Shrestha, S., Chaulagain, S., & Pandey, K. (2018). Utilization of Family Planning Services in Karnali Academy of Health Science, Jumla. *Journal of Karnali Academy of Health Sciences, 1*(3). https://www.nepjol.info/index.php/jkahs/article/view/24150.

Sigdel, A., Bista, A., Sapkota, H., & van Teijlingen, E. (2023). Barriers in accessing family planning services in Nepal during the COVID-19 pandemic: A qualitative study. *Plos One, 18*(5). https://doi.org/10.1371/journal.pone.0285248.

Tarekegn, M., Embaile, & Nebyat. (2018). Knowledge, attitude and practice of family planning among reproductive age women in a resource limited setting of Northeast Ethiopia. BMC Research Notes.

Thapa, W. (2022). "The Whole Village Will Know": Socio-cultural Beliefs and Values in Childbirth Decision-Making in the Mountain Region of Dolpa, Nepal. University of Washington.

United Nations [UN]. (2015). Transforming our world: the 2030 Agenda for Sustainable Development. Retrieved from https://sdgs.un.org/2030agenda.

United Nations Department of Economic and Social Affairs [UN DESA]. (2022). World Family Planning 2022: Meeting the needs for family planning: Contraceptive use by age and method. United Nations Publication.

United Nations Population Fund [UNFPA]. (1994). Programme of Action of the International Conference on Population Development. Retrieved from https://www.unfpa.org/sites/default/files/event-pdf/PoA_en.pdf

World Health Organization [WHO]. (2023). Contraception. Retrieved from https://www.who.int/health-topics/contraception.