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Unmet Need for Family Planning and Associated Factors among Married Women of Reproductive Age in Siranchowk Rural Municipality, Nepal: A Cross-Sectional Study

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ABSTRACT

Introduction: The unmet need for family planning remains a hurdle to reproductive health equity despite, global efforts to improve access, including in Nepal. This study aimed to assess the prevalence of unmet needs for family planning and associated factors among rural women in Nepal.

Methods: In 2023, a cross-sectional study was conducted among married women of reproductive age in a rural municipality in Gandaki Province, Nepal. We recruited 310 participants using consecutive sampling. Data were collected through face-to-face interviews using a structured questionnaire developed from previous literature, validated by experts, and pretested. Descriptive analysis was conducted for categorical variables, and multivariate logistic regression analysis was performed to identify factors associated with unmet needs.

Results: The mean age of the respondents was 28.5 ± 5.75 years (range: 17–45 years), and the mean age at marriage was 21.07 ± 3.32 years (range: 14–34 years). More than 80% of the respondents reported having good family planning knowledge, with healthcare workers being the primary source of information (74.8%). The unmet need for family planning was 18.1% (spacing: 16.5%; limiting: 1.6%). The odds of unmet need were higher in Dalit women (AOR 6.66, 95% CI: 1.98–22.40) and women without children (AOR 2.78, 95% CI 1.09–7.13). Conversely, women with a basic education or below (AOR 0.14, 95% CI: 0.03–0.71) and those with husbands who are engaged in business (AOR 0.32, 95% CI 0.12–0.83) had lower odds.

Conclusion: This study highlights the significant unmet need for family planning among rural women in Nepal, particularly among adolescents, Dalit women, and those without children. Therefore, targeted interventions are required to address these disparities. Continued efforts should focus on improving family planning access in the study area and similar rural settings, although the findings may not be generalizable to the entire country.

Key words: Family planning; Reproductive health; Unmet need; Nepal

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INTRODUCTION

Modern contraceptives facilitate family planning, which offers crucial health benefits by enabling women to regulate their fertility for child spacing or limiting childbearing.[1] The unmet need for family planning is defined as the percentage of women who wish to avoid or delay pregnancy but are not using contraception and is a key indicator of gaps in access to or utilization of reproductive health services, reflecting progress toward universal coverage.[2]

Despite anticipated reductions in some regions, the unmet need for family planning remains a significant challenge.[3] Approximately 214 million women in developing countries face unmet needs and lack access to modern contraceptive methods. This gap results in over 80 million unintended pregnancies and 18 million unsafe abortions annually, especially in low- and middle-income countries, posing a serious risk to maternal and child health.[4]

In Nepal, 78% of currently married women demand family planning; however, 21% experience unmet needs (13% for limiting births and 8% for spacing).[5] Although this represents a modest decline from 24% in 2016, disparities remain, particularly in rural settings. For instance, rural women report slightly higher unmet needs (21.1%) than urban women (20.7%).[5,6] Although seemingly small, these differences reflect deeper systemic barriers in rural regions, including limited healthcare infrastructure, geographic isolation, transportation challenges, and shortages of contraceptive supplies. Additionally, patriarchal norms, spousal approval requirements, son preference, and cultural or religious stigma surrounding contraception continue to hinder uptake.[7] Women with less education, adolescents, and those without children are particularly vulnerable, facing misinformation about side effects, social judgment, and reduced autonomy.[8]

While global and national initiatives aim to reduce disparities, the intersection of geographic, cultural, and socioeconomic factors continues to drive high unmet needs in rural Nepal. Understanding the context-specific determinants of unmet needs is essential for designing equitable interventions.[9] Therefore, this study aimed to assess the prevalence and identify factors associated with the unmet need for family planning among rural women in Nepal. The findings may inform locally tailored interventions and community-level programming, particularly for rural and underserved populations. The insights from this research can support health workers, local authorities, and NGOs in designing context-sensitive strategies to improve access to family planning services and promote reproductive autonomy in similar settings.

METHODS

Study design and setting

This community-based cross-sectional study was conducted in Siranchowk Rural Municipality, Gandaki Province, Nepal. This rural municipality was purposively selected based on accessibility and the presence of an active family planning program.

Study population and eligibility criteria

The target population comprised all Nepali married women of reproductive age (15–49 years) who were permanent residents of Siranchowk Rural Municipality. Women were eligible if they were married, aged 15–49 years, sexually active in the past 12 months, living with their husbands, or biologically fertile. Women were excluded if they were pregnant during the survey; had given birth within the past six months and were practicing exclusive breastfeeding; had undergone tubal ligation or husbands had undergone vasectomy; were medically sterile or self-reported as sterile; had not had children in the past 4 years despite multiple attempts; had husbands been absent for more than a year (e.g., due to foreign employment); had serious medical conditions; or had declined to provide consent.

Sample size and sampling technique

According to municipal records, 421 couples were registered during the study period, and 310 eligible respondents participated, forming the final sample size for our study. Our recruitment strategy employed a consecutive sampling approach and selected respondents who met the inclusion criteria. Female Community Health Volunteers (FCHVs) assisted in locating and identifying households. This approach was chosen because of its feasibility for accessing the study area's participants.

Questionnaire and definitions

The questionnaire was self-constructed and developed based on relevant literature.[10-12] It was divided into four sections: sociodemographic characteristics, reproductive characteristics, family planning knowledge assessment, and contraception unmet need assessment.

Sociodemographic characteristics: Variables included age, ethnicity, education, religion, occupation, husband's occupation, and family type. Age was categorized into six categories:15–19, 20–24, 25–29, 30–34, 35–39, and ≥40 years. Ethnicity was categorized as Brahmin/Chhetri, Janajati, Newar, or Dalit. Religions are categorized as Hinduism, Buddhism, and Christianity. These classifications followed the national standards of the Central Bureau of Statistics and the Nepal Demographic and Health Survey. Educational levels were grouped into informal education, basic (grades 1–8), secondary (grades 9–12), and university. The occupation participants were categorized as homemaker, business/self-employed, service worker (salaried employment), or student. Husbands' occupations were classified as business owners/self-employed, service workers, laborers (daily wage workers), farmers, and others. Occupational categories were retained as reported to preserve context-specific distinctions.

Reproductive characteristics: Variables included age at marriage, duration of marriage, number of living children, youngest child's sex, and experiences of family planning-related side effects. Age at marriage was categorized as <20 and ≥20 years based on Nepal's legal minimum marriage age.[13] Marriage duration was categorized as <6 and ≥6 years based on the median. Number of children (open-ended), youngest child's sex (male/female), and experience of side effects from contraceptive use (yes/no).

Family planning knowledge assessment: The respondents' understanding of family planning was evaluated, covering topics such as meaning, importance, side effects, and types and places to access family planning services. A set of nine questions was used to measure the participants' knowledge of family planning. The overall questionnaire, including the knowledge items, was developed by synthesizing relevant literature.[10-13] Respondents scoring at or above the mean were categorized as having "good knowledge." The nine items to measure knowledge and classification of participants' knowledge based on a mean score cutoff were based on a previously published study with a similar objective.[14] Although the structure and scoring approach were adapted from this study, additional sources were used to refine and contextualize the specific items to the Nepali setting.

Unmet contraception need assessment: This section assessed the respondents' unmet contraception needs. The unmet need for contraception was assessed among eligible women by assessing their current use of contraceptives. Women who did not use any method were asked about their pregnancy desires, including not wanting to get pregnant at all (unmet need for limiting), wishing to postpone the birth of a child for at least 2 years, or not knowing when or if they wanted another child (unmet need for spacing). The overall unmet need for contraception was calculated as the percentage of fertile, sexually active women aged 15-49 not using any contraception for spacing or limiting purposes.[3, 15]

Validity and reliability

The English version of the questionnaire was reviewed by three subject experts. For field use, the questionnaire was translated into Nepali for better comprehension and was translated by a bilingual researcher with expertise in public health research. The same subject experts reviewed the translated version to ensure that the original meaning was preserved. Additionally, the translated version underwent pre-testing on a sample of 31 individuals with similar characteristics in an area outside the study site. Wording was refined for clarity, reliability, and cultural appropriateness after pre-testing. The authors were directly involved in data collection, which further supported administration consistency.

Data collection procedures

Face-to-face interviews were conducted for data collection from March 24 to April 8, 2023. The authors were directly involved in data collection to ensure data quality. All interviews were conducted by female researchers in private settings (e.g., separate rooms or secluded outdoor spaces) without family members to minimize social desirability bias. The participants were assured of confidentiality and were encouraged to honestly respond. Before the interviews, we explained the purpose of the study and addressed concerns to build rapport.

Statistical analysis

The collected data were meticulously reviewed to ensure consistency and completeness. Data

entry was performed after coding using the Statistical Package for the Social Sciences version 26. Descriptive statistics were used to summarize the categorical variables. Univariate logistic regression was used to identify variables that were significantly associated with an unmet need for family planning ($p < 0.05$). Only variables with significant associations were included in the multivariate model. This approach has been used in epidemiological studies to ensure parsimony and minimize overfitting.[16] All selected variables were entered simultaneously into the multivariate logistic regression model using the Enter method to estimate adjusted odds ratios (AORs) while controlling for potential confounders. The dependent variable was unmet need for family planning, whereas the independent variables were sociodemographic characteristics, reproductive characteristics, and family planning knowledge.

Multicollinearity among independent variables was assessed using the variance inflation factor (VIF > 5), tolerance (< 0.1), and correlation matrix. Furthermore, the condition index (>15) and variance proportions (>0.50) were examined to detect potential multicollinearity between the variables. No multicollinearity issues were detected. Model fit was assessed using the Omnibus Test of Model Coefficients, Hosmer-Lemeshow Test, and Nagelkerke R^2. Statistical significance was set at $P < 0.05$.

Ethical approval

Ethical clearance was obtained from the Institutional Review Committee of the Yeti Health Science Academy, Maharajgunj, Kathmandu, Nepal, on March 21, 2023, before the study was conducted.

RESULTS

Of the 310 participants, the largest proportion were aged 25–29 years (33.9%; 95% CI: 28.62 – 39.44%; n = 105), with a mean age of 28.47 ± 5.75 years. Nearly half were Brahmin/Chettri (49.4%; 95% CI: 43.66–55.06%; n = 153); 60.0% (95% CI: 54.31–65.50%; n = 186) had completed secondary education and 52.9% (95% CI: 47.18–58.57%; n = 164) were homemakers. Most (67.4%; 95% CI: 61.89–72.61%; n = 209) lived in a joint family. Among their husbands, 59.7% (95% CI: 53.98–65.18%; n = 185) had secondary education and 43.5% were engaged in business ownership/ self-employment (95% CI: 37.95–49.27%; n = 135). Reproductive characteristics included a mean age at marriage of 21.07 ± 3.32 years (68.4% married at ≥20 years; 95% CI: 62.89 –73.53%; n = 212), 51.6% (95% CI: 45.90–57.30%; n = 160) had been married for six years or more, 40.3% (95% CI: 34.82–46.02%; n = 125) had only one child, and 61.3% (95% CI: 54.46–67.81%; n = 133) reported their youngest child was male. Nearly all participants (97.7%; 95% CI: 95.40–99.09%; n = 303) reported experiencing side effects from family planning (Table 1).

Our study revealed an unmet need for family planning of 18.1% (95% CI: 13.94–22.81%; n = 56), with a strong emphasis on spacing methods (16.5%; 95% CI: 12.50–21.06%, n = 51) compared with limiting births (1.6%; 95% CI: 0.53–3.72%; n = 5). The met need (currently using modern methods) was 81.9% (95% CI: 77.19–86.06%; n = 254), consisting of 30.9% (95% CI: 25.86–36.44%; n = 96) for limiting and 51.0% (95% CI: 45.26–56.66%; n = 158) for spacing (Figure 1). However, a significant

Table 1. Sociodemographic and reproductive characteristics of married women aged 15–49 years in Siranchowk Rural Municipality, Nepal (n = 310)

Variables	Number (%)	Variables	Number (%)
Age (years)		Husband's occupation	
Mean ± SD (range)	28.47 ± 5.75 (17 - 45)	Business owner/Self-employed	135(43.5)
15-19	10(3.2)	Service Worker1	73(23.5)
20-24	75(24.2)	Labor2	57(18.4)
25-29	105(33.9)	Farmer	36(11.6)
30-34	65(21.0)	Others	9(2.9)
35-39	41(13.2)	Types of family	
≥40	14(4.5)	Nuclear	84(27.1)
Ethnicity		Joint	209(67.4)
Brahmin/Chettri	153(49.4)	Extended	17(5.5)
Janajati	75(24.2)	Age at marriage (years)	
Newar	48(15.5)	Mean ± SD (range)	21.07 ± 3.32 (14 - 34)
Dalit	34(11.0)	≥20	212(68.4)
Religion		<20	98(31.6)
Hinduism	241(77.7)	Marriage duration (years)	
Buddhism	39(12.6)	≥6	160(51.6)
Christian	30(9.7)	<6	150(48.4)
Participant's education		Number of living children	
Informal education	16(5.2)	0	93(30.0)
Basic (1-8 grades)	56(18.1)	1	125(40.3)
Secondary (9-12 grades)	186(60.0)	2	87(28.1)
University education	52(16.8)	3	5(1.6)
Husband's education		Sex of the youngest child (n = 217)	
Informal education	9(2.9)	Male	133(61.3)
Basic (1-8 grades)	52(16.8)	Female	84(38.7)
Secondary (9-12 grades)	185(59.7)	Experience with side effects	
University education	64(20.6)	Yes	303(97.7)
Participant's occupation		No	7(2.3)
Homemaker	164(52.9)		
Business/Self-Employed	65(21.0)		
Service Worker1	51(16.5)		
Student	30(9.7)		

[1]'Service' denotes salaried monthly employment (e.g., government or private sector jobs).
[2]'Labor' refers to manual work paid on a daily wage basis (e.g., construction).

disparity in unmet need exists across various sociodemographic and reproductive characteristics (Figure 2). Among adolescents aged 15–19, 50.0% (95% CI: 18.71–81.29%; n = 10) reported an unmet need for family planning, although this estimate is based on a small subgroup. Notably, unmet need was highest among the Dalit ethnic group (38.2%; 95% CI: 22.17–56.44%; n = 13) and among women whose husbands were unskilled laborers (28.1%; 95% CI: 16.97–41.54%; n = 16). Despite these unmet needs, a positive trend in knowledge has emerged. Most participants (81.9%; 95% CI: 77.19–86.06%; n =254) demonstrated good knowledge about family planning methods. However, a minority (18.1%; 95% CI: 13.94–22.81%; n = 56) had poor knowledge. Health workers (74.8%; 95% CI: 69.62–79.57%; n = 232) were identified as the primary source of family planning information, followed by family/husband/neighbor (51.9%; 95% CI: 46.22–57.62%; n = 161) and social media (44.5%; 95% CI: 38.90–50.24%; n = 138). Notably, only 30% (95% CI: 24.95–35.44%; n = 93) of

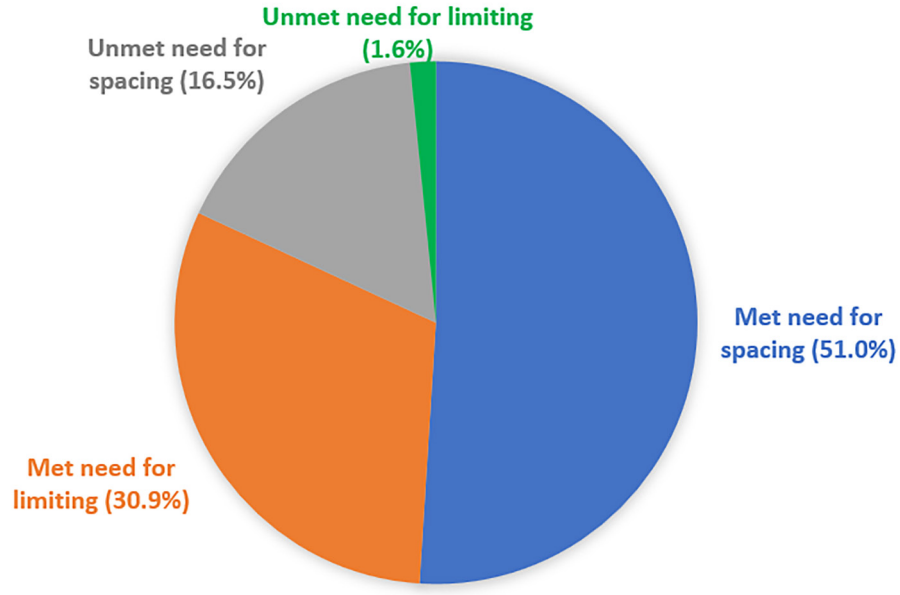

Figure 1. Distribution of met (currently using modern methods) and unmet need for family planning by reason (spacing or limiting) among married women aged 15-49 years in Siranchowk Rural Municipality, Nepal |(n=310)

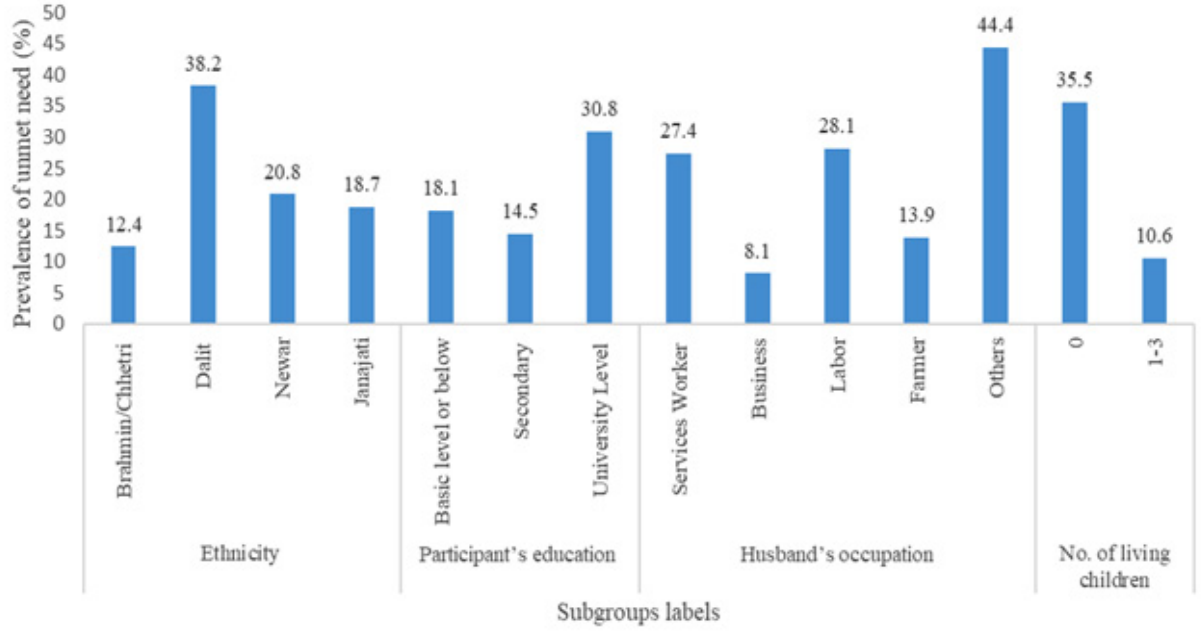

Figure 2. Percentage of unment family planning needs by socio-demographic and reproductive characteristics (n=310)

the respondents reported health institutions as a source.

The association between sociodemographic factors and unmet family planning needs was assessed using a multivariate logistic regression model. The model demonstrated good fit, as indicated by the Omnibus Test of Model Coefficients ($p < 0.001$), Hosmer-Lemeshow Test ($p = 0.883$), and Nagelkerke R2 (0.33) (Table 2). In the multivariate model, several factors were significantly associated with an

Table 2. Univariable and multivariable logistic regression of factors associated with unmet need for family planning among married women aged 15–49 years in Siranchowk Rural Municipality, Nepal (n = 310)

Variables	OR (95% CI)	P value*	AOR (95% CI)	P value*
Age of the respondents (per 1-year increase)	0.87(0.82-0.93)	<0.001	0.98(0.87-1.10)	0.709
Ethnicity				
Brahmin/Chhetri	Ref. (1.00)	-	Ref. (1.00)	-
Dalit	4.37(1.88- 10.14)	0.001	6.66(1.98-22.40)	0.002
Newar	1.86 (0.80 - 4.33)	0.152	4.17(1.25-13.87)	0.020
Janajati	1.62 (0.76 - 3.44)	0.211	4.86(1.63-14.55)	0.005
Participant's education				
University Level	Ref. (1.00)	-	Ref. (1.00)	-
Basic or below level	0.50 (0.21 - 1.15)	0.102	0.14(0.03-0.71)	0.018
Secondary	0.38 (0.19 - 0.78)	0.008	0.20(0.06-0.64)	0.007
Participant's occupation				
Homemaker	Ref. (1.00)	-	Ref. (1.00)	-
Business owner/Self-Employed	0.41 (0.15 - 1.10)	0.076	0.51(0.15-1.71)	0.276
Student	2.43 (1.03 - 5.75)	0.043	0.67(0.19-2.31)	0.526
Service worker	1.66 (0.79 - 3.52)	0.184	1.02(0.31-3.31)	0.981
Husband's occupation				
Services Worker	Ref. (1.00)	-	Ref. (1.00)	-
Business owner/Self-Employed	0.24(0.11-0.53)	<0.001	0.32(0.12-0.83)	0.020
Labor	1.03(0.48-2.24)	0.932	1.30(0.42-3.96)	0.649
Farmer	0.43(0.15-1.25)	0.121	0.46(0.10-1.80)	0.297
Others	2.12(0.52-8.70)	0.297	2.00(0.30-13.25)	0.474
Number of living children				
1-3	Ref. (1.00)	-	Ref. (1.00)	-
0 (nullipara)	4.64(2.53- 8.50)	<0.001	2.78(1.09-7.13)	0.033
Marriage duration (per 1-year increase)	0.84(0.77-0.90)	<0.001	0.93(0.81-1.06)	0.271
Experience with side effects				
Yes	Ref. (1.00)	-	Ref. (1.00)	-
No	6.44(1.40- 29.62)	0.017	3.45(0.54-21.86)	0.189

unmet need for family planning. Compared with the Brahmin/Chettri ethnic group, participants from the Dalit ethnic group had significantly higher odds (AOR = 6.66, 95% CI 1.98–22.40). Participants with education at the basic level or below (AOR = 0.14, 95% CI 0.0–0.71) and secondary level (AOR = 0.20, 95% CI 0.06–0.64) had significantly lower odds of unmet need than those with university education. Respondents whose husbands were engaged in business had significantly lower odds (AOR = 0.32, 95% CI 0.12–0.83) than those with service occupations. Notably, participants without children had higher odds of unmet need (AOR = 2.78, 95% CI 1.09–7.13) (Table 2).

DISCUSSION

Our study found that nearly one in five women had an unmet need for family planning, the majority

of which was for spacing rather than limiting births. Despite relatively high levels of knowledge about family planning methods, almost all respondents reported experiencing side effects from contraceptive use. Unmet need was particularly pronounced among adolescents, though estimates were imprecise due to small numbers. In the multivariate analysis, Dalit ethnicity and having no children were associated with higher odds of unmet need, whereas lower educational attainment and husbands' engagement in business were protective factors.

The prevalence of the unmet need for family planning in our study area was 18.1%, which is consistent with the findings from Karnataka, India,[12] Pakistan,[17] Gambia,[18] and Myanmar.[19] This figure is marginally lower than the 2022 national average of 21%. Notably, there has been a fluctuating trend in unmet needs nationally, decreasing from 32% to 25% between 1996 and 2006, followed by an increase to 28% in 2011.[5] This underscores the importance of sustained efforts to improve FP services' access and utilization.

The national targets aim to reduce the unmet need to 18.3% by 2022, 15.2% by 2025, and 10% by 2030.[20] Encouragingly, our study area appears to be on track to meet the 2025 target. However, significant disparities exist in Nepal and globally. Although our study area has shown progress, other regions face greater challenges. For instance, sub-Saharan Africa reports a higher unmet need (23.70%),[21] and Eastern Ethiopia's unmet need stands at 26%.[11] A stark contrast is observed in Kailali District, Nepal, where the unmet need among postpartum mothers is as high as 50%.[22] Conversely, India has demonstrated a significant reduction in unmet needs, from 20.6% in 1993 to 9.4% in 2021,[23] which is lower than our current findings. These differences may reflect methodological variations, including sample sizes, rural versus urban populations, and differences in the availability and accessibility of contraceptive methods. Factors such as access to services, cultural beliefs, and demographics may influence unmet needs in different regions. Local programs or interventions may also have contributed to the comparatively lower rate in our study setting; for example, FCHV and outreach clinics may have improved service uptake. Reaching national targets and ensuring equitable access to family planning services across Nepal requires continued effort.

Our study revealed that the majority of unmet needs were concentrated among the age group of 15-19, corroborating national data.[6] The findings still highlight systemic gaps in Nepal's adolescent sexual and reproductive health (SRH) services, although the small subgroup size and wide confidence intervals limit statistical precision. Despite national efforts, access to SRH services remains insufficient, which may contribute to these unmet needs.[24, 25] Other barriers, such as cultural taboos, early marriage, and pressure from male partners, may also play a significant role. To overcome these challenges, targeted interventions, including school-based SRH education, improved accessibility of services, and community sensitization, are urgently needed.

Interestingly, most of the respondents in our study exhibited a good understanding of family planning methods, which is consistent with previous research.[14] Unmet needs persist in the study area, indicating a gap between knowledge and access. Fears of side effects and partner opposition may contribute to this gap, indicating that without supportive social and health system environments,

knowledge alone is insufficient. However, this finding contrasts with that of Ethiopia,[26] where less than half of the participants had adequate knowledge. This discrepancy between our findings and those of an Ethiopian study can be attributed to several factors, including differences in sample size, sociocultural contexts, and specific assessment tools used to measure knowledge and the impact of strong community health worker engagement in Nepal.

Ethnicity emerged as a significant factor associated with an unmet need for family planning, echoing findings from other studies.[27] This indicates that cultural and community-specific factors may play a crucial role. Education level was also significantly associated with unmet needs; respondents with basic or secondary education had significantly lower odds of unmet needs than university-educated individuals. While previous studies have associated lower education (e.g., no formal schooling) with higher unmet needs,[1, 10] this discrepancy may reflect differences in the reference groups and sample characteristics. In our study, in which most participants had secondary education and good family planning knowledge, basic education may have been sufficient to access and use services. Conversely, despite higher educational attainment, university-educated women may face structural or social barriers, such as delayed fertility intentions, limited access to preferred contraception methods, and partner resistance to contraception.

Interestingly, our study found that mothers without children had higher odds of unmet need, which contrasts with a study from Congo,[28] which reported that the odds of unmet need increased with the number of living children. This discrepancy may stem from several factors, including the study population's age distribution, prevalence of different contraceptive methods, cultural norms surrounding family size, and specific contraceptive methods available in each setting. This finding highlights the importance of considering the specific needs and circumstances of childless women when designing and implementing family planning programs.

Limitations of the study

This study has several limitations. First, its cross-sectional design precludes causal inferences. Second, reliance on self-reported data on sensitive topics, such as contraceptive use and fertility intentions, may introduce social desirability bias. The triangulation of clinical records in future studies may improve the results' validity. Third, we used consecutive sampling in a single rural location, which may have introduced selection bias and limited generalizability beyond the study setting. Fourth, small subgroup sizes, especially among adolescents and certain ethnic groups (Dalit, Newar, Janajati), resulted in wide confidence intervals, which limited statistical precision and called for cautious interpretation of these subgroup analyses. Fifth, we may have underestimated the prior unmet needs by excluding pregnant, postpartum, or sterile women. Sixth, the Nepali version of the questionnaire was not subjected to formal psychometric validation, which could introduce measurement error; however, expert translation and pre-testing were used to reduce this risk. Finally, rural settings limit the comparability of rural and urban populations, where access and norms may differ.

Future research should adopt longitudinal designs, include diverse populations from multiple regions, and explore barriers among specific groups, such as adolescents and marginalized ethnicities. Despite these limitations, this study contributes to the understanding of disparities in access to family planning access and offers evidence for targeted interventions to support Nepal's national goals.

CONCLUSION

This study assessed the unmet need for family planning in Siranchowk Rural Municipality, revealing a slightly lower prevalence than the national average but a notably higher prevalence among adolescents. This highlights the importance of strengthening adolescent-focused family planning and reproductive health programs. Ethnic disparities further underscore the need for culturally tailored interventions to address caste-based biases, such as training community health workers. Despite the good overall knowledge of family planning, a gap remains between awareness and use. Sociodemographic factors, such as ethnicity, education, husband's occupation, and number of living children, were significantly associated with unmet needs.

Continued efforts are necessary to improve equitable access across all regions of Nepal, especially among women with lower education levels and those whose husbands are not in business occupations. Further research should explore the reasons behind the higher unmet needs of childless women and examine how social norms and cultural beliefs influence family planning decisions across different ethnic groups.

Conflicts of interest

The authors declare no conflicts of interest.

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