Educational Journal
Volume-V, Issue-I, May, 2026
DOI: https://doi.org/10.3126/ej.v5i1.95825
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Influencing Factors on the Use of Antenatal Care in Bagmati Province, Nepal

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Abstract

Antenatal care (ANC) shows a crucial role in improving maternal and neonatal health results, yet unequal access to ANC continues to be a problem in Nepal because of socio-economic and demographic disparities. This study analyzes the ANC determinants of ANC use in Bagmati Province based on data provided by Nepal Demographic and Health Survey. An analysis design based on the cross-sectional was used in a weighted sample of 468 women aged between 15 - 49 years who had live birth during the two years before the survey. Descriptive statistics (with survey weights) and logistic regression models were employed to determine the factors linked to ANC usage (at least once). All in all, ANC services were used by 87.6% of women, and 12.4% of them did not. The proportion of usage was greater among women aged 30-49 years (39.1%) than the proportion of under 20 (3.2%). Women with first parity had more ANC use (47.2%) as compared to those with third or higher birth order (13.1%). The urban women represented 77.7 percent of ANC users against 22.4 percent in the rural regions. There were also wealth inequalities as 40.8 percent of ANC users belonged to the richest quintile whereas only 9.9% belonged to the poorest. The multivariable analysis showed that the women who belonged to the wealthiest households (AOR = 14.65; 95% CI: 1.81118.64) and those who belonged to Bramhins/Chhetri ethnicity (AOR = 13.06; 95% CI: 2.7063.16) had a significantly higher likelihood The results indicate that there are significant socio-economic disparities in ANC use. Interventions must be targeted at poor women, rural women, and high-parity women to achieve equal access to maternal healthcare services in Nepal.

Keywords: *ANC visits, Bagmati province, determinants maternal health, utilization*

Introduction

Antenatal care (ANC) is a vital aspect of maternal and childcare that has an important impact on the outcome of pregnancy. It will offer a platform upon which the healthcare providers can offer the necessary interventions, such as checking into the health of the mothers, detecting and treating pregnancy complications, and offering nutritional and health education. The economic and demographic diversity of Bagmati Province, which is an economically and demographically diverse area, offers a special occasion to study the factors affecting ANC utilization. ANC services are critical in enhancing the results of pregnancy through the provision of necessary and prompt healthcare services (Titaley et al., 2023). The use of ANC depends on various socio-demographic, economic, cultural, and institutional factors (World Health Organization, 2023; Ministry of Health and Population and ICF, 2022). Furthermore, mother education, the level of household income, cultural values, the availability of healthcare facilities, and healthcare policies indicate the level of ANC uptake globally (Chakraborty et al., 2023). The economic status is one of the key determinants because financial limitations tend to deny pregnant women the opportunity to seek prompt ANC services (Shrestha et al., 2022). The level of maternal education is always linked to more ANC visits because educated women believe in the advantages of ANC more and can make informed healthcare choices (Joshi & Aryal, 2023). One of the determinants of ANC utilization is access to health facilities. Women in regions with higher road networks and good transportation tend to visit ANC more since the physical accessibility will decrease the time and expenditures on traveling (Bhattarai et al., 2022). Conversely, the bad roads and inadequate means of transport serve as great obstacles to the use of the services. Another factor that influences ANC utilization in Nepal is cultural factors. These are traditional beliefs about pregnancy, dependence on home or spiritual care, gender based limitations of women in making healthcare choices, family factors like the role of husbands and elders in deciding on behavior to seek care.

The power in decision making in healthcare is usually affected by both traditional beliefs and gender norms (Khadka et al., 2023). Patriarchy in most societies suppresses women and their freedom to independently seek antenatal care (ANC) without authorization or overseeing of male or older people in the household (World Health Organization, 2023; Khadka et al., 2023). The women are not encouraged to attend health facilities because of religious and social beliefs because they do not match with the traditions (Gautam et al., 2023). The ANC utilization is determined by healthcare system related factors, including availability of services, quality of care, and attitudes of healthcare providers (Regmi et al., 2022). Poor healthcare facilities, absence of trained birth attendants, and poor experiences with healthcare providers may reduce the willingness of women who would be visiting ANC. To promote the use of ANC, the government of Nepal has introduced several policies and programs, including free maternal care and financial support (MoHP, 2023). Nevertheless, the differences in the quality of services and the inequalities in the access to healthcare in different regions are still critical issues (Poudel & Pant, 2023). The Bagmati Province, comprising of highly urbanized regions (Kathmandu) and more rural regions (Rasuwa, Sindhupalchok, & Nuwakot) is the context where ANC utilization disparities are coexisting. The Nepal Demographic and Health Survey evidence indicates that ANC use is much higher in cities (77.7%) than in villages (22.4%), which indicates considerable geographic disparities in access to maternal healthcare services (Subedi et al., 2023; Ministry of Health and Population and ICF, 2022).

Increased ANC use is typical in urban locations because of enhanced medical care facilities, increased literacy, and increased financial prospects. In contrast, rural and marginalized individuals have hindrances of long distance to healthcare institutions, cultural limits, and financial limitations (Acharya & Adhikari, 2023). This study reveals that variables that impact ANC use within Bagmati Province, Nepal. It analyses socio-demographic factors including maternal education, age, income, and employment status, cultural and traditional factors on healthcare-seeking behaviors. Also, it will discuss the barriers and facilitators associated with the healthcare system, evaluate the effectiveness of government policies and interventions, and offer policy suggestions towards enhancing maternal healthcare services in the area.

Data and Methods

This section employs the data of the Nepal Demographic and Health Survey, which is the nationally representative survey that was carried out by the Ministry of Health and Population in collaboration with ICF as part of the Demographic and Health Surveys (DHS) Program in 2022. The NDHS has detailed data regarding the health indicators of the mothers and others. The NDHS data is the main source of data that shall be analyzed in terms of the utilization of antenatal care (ANC) in Bagmati Province. The research design is based on a cross sectional study by analyzing secondary data of the NDHS by a quantitative approach. The analytical sample includes women aged 15- 49 years that have had a live birth during the two years before the survey which is similar to the definition of the Nepal Demographic and Health Survey. ANC utilization as the number of ANC visits in pregnancy is the main result variable. The independent variables consist of the socio-demographic variables (maternal age, education, and income level, employment status), cultural and traditional factors, and the factors associated with the healthcare system (availability and accessibility of ANC services). Also, the significant predictors of ANC utilization are identified with the help of logistic regression taking into consideration the possible confounding factors. Data-use policies of NDHS are followed in the research, where the respondents are anonymous and confidential (Ministry of Health and Population [MoHP] & ICF, 2022).

Results

Table 1 provides the distribution of the utilization of antenatal care (ANC) with regard to major socio-demographic factors. The use of ANC differed considerably by the age, birth order, education, religion, caste/ethnicity, place of residence, and wealth status. The use of ANC was more prevalent among women aged 30-49 years (39.1%) than among women who were younger (under 20 years of age) (3.2%). The largest percentage of ANC users was first-parity women (47.2%), with women with third or more birth order having much lower utilization (13.1%). There was a high gradient in education as women with higher education (36.4 *% of* ANC users) were higher than women with no education (8.1 percent). On the same note, differences between caste/ethnic groups were also apparent with Brahmin/Chhetri women having more ANC utilization (37.2%), and Dalit women making up only 6.7 percent. There were very strong urban-rural disparities with 77.7 percent of ANC users living in urban versus 22.4 percent in rural areas. The inequalities based on wealth were also high as 40.8 percent of

ANC users were representatives of the richest quintile, and only 9.9 percent of the users were the richest ones.

Access to healthcare is influenced by the caste and ethnicity because of the historical disparities, social-cultural norms, and socio-economic differences. This study showed the presence of disparities in ANC utilization based on caste/ethnicity. Dalit women were found to make a lesser percentage ANC user (6.7%) than Brahmin/Chhetri women (37.2%) (Table 1). This implies a possibility of disparities in the access of maternal healthcare services. The same tendencies have been described in the past literature: marginalized communities like Dalits and a section of the Janajati groups experience obstacles linked to socio-economic disadvantage, discrimination, and a lack of awareness (Mishra et al., 2021; Ministry of Health and Population and ICF, 2022). Place of residence: Place of residence is divided into urban and rural place. The urban women in general are very well exposed to healthcare facilities, education levels, as well as awareness of ANC services. Conversely, rural women encounter challenges of distances to healthcare services and lack of healthcare services, and financial limitations and thus low rate of ANC utilization. Wealth quintile: Wealth quintiles break down the population into five income groups (poorest, poorer, middle, richer, and richest) in terms of wealth measured in assets and economic status of the household. Women with more affluent families have a higher chance of using ANC services because they are financially stable, have better access to healthcare and are more health literate. Conversely, the poorest quintile constitutes people who are frequently limited by affordability and they have no means to transport and get medical care.

Table 1:

Distribution of Antenatal Care (ANC) Utilization among Women by Socio-demographic Characteristics, Bagmati Province, Nepal (NDHS 2022)

	No		**Yes**		**Total**	
Variable	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Age						
<20	7	11.8	13	3.2	20	4.2
20-24	18	30.6	106	25.8	123	26.4
25-29	19	34.0	131	32.0	151	32.2
30-49	14	23.6	160	39.1	174	37.2
Birth order						
First	20	34.5	194	47.2	213	45.6
Second	20	34.2	163	39.7	182	39.0

Third or higher	18	31.4	54	13.1	72	15.4
Level of education						
No Education	17	29.1	33	8.1	50	10.7
Basic Education	39	67.3	228	55.5	266	56.9
Higher Education	2	3.7	150	36.4	152	32.4
Religion						
Hindu	43	74.89	308	75.06	351	75.04
Other religion	14	25.1	102	24.9	116	25.0
Caste/Ethnicity						
Dalit	11	19.7	27	6.7	39	8.3
Janjati	40	69.4	222	54.0	261	55.9
Other Terai	2	3.4	9	2.1	11	2.3
Brahmin/Chhetri	4	7.5	153	37.2	157	33.6
Place of Residence						
Urban	27	46.9	319	77.7	346	73.9
Rural	30	53.1	92	22.4	122	26.1
Wealth quintile						
Poorest	25	43.3	41	9.9	65	14.0
Poorer	8	13.4	61	14.8	68	14.6
Middle	17	30.1	65	15.8	82	17.5
Richer	5	9.2	77	18.8	83	17.6
Richest	2	3.9	167	40.8	170	36.3
Total	57	100.0	410	100.0	467	100.0

Source: Nepal Demographic and Health Survey, 2022

Table 1 demonstrates the distribution of the use of antenatal care (ANC) based on major socio-demographic variables. The results indicate that there are extensive differences in ANC uptake due to age, birth order, education, religion, caste/ethnicity, place of residence, and wealth quintile. Age: ANC usage is rising by age with 39.1 percent of women aged between 30 and 49 years using ANC services, and only 3.2 percent of women under 20 years old using ANC. The ANC utilization rate is also rather high in the 25-29 age group (32.0% ANC) and 20-24 age group (25.8% ANC). The lowest use of ANC was in women who were below 20 years old (3.2%). The result shows that the degree of service embracing among this age group is low; but the reasons to support this cannot be identified using the current analysis. Birth order: ANC is most used among first-time mothers (47.2%), then there is second-time mothers (39.7%). The lowest ANC uptake is observed in women with a third or higher-order birth (13.1%), and could be explained by the previous pregnancy experiences, a less perceived risk, or even resource limitations in larger families. Education level: Education comes out as a good predictor of ANC use. Women who have very high education level experienced the highest level of utilization (36.4%), and ladies who do not have education at all have the lowest (8.1%). Most ANC users (55.5) are basic educated, which supports the importance of literacy and health awareness in obtaining maternal healthcare. Religion: The religion does not seem to play a major role in the ANC use because the level of ANC use is the same in Hindu women (75.06) and other religious women (24.9). This implies that other aspects including education and economic condition are even more important to define the access to healthcare. Caste/Ethnicity: Inequality occurs between caste and ethnic groups. The Brahmin/Chhetri women are the most ANC utilizers (37.2%), followed by Janjati women (54.0%). Conversely, ANC uptake is much lower in (6.7%), indicating comparatively lower utilization of ANC services among these groups within the study sample. lace of residence: There is a sharp prevalence between the urban (77.7%) and rural (22.4) women on ANC utilization. The considerably greater consumption rate of urban women underscores the differences in the healthcare and infrastructure and awareness in urban and rural contexts. Wealth quintile: ANC use increments with economic status. The highest level of utilization is reported by women in the richest quintile (40.8%), and the lowest by women in the poorest quintile (9.9%). Factors related to demographic and socio-economic variables: A survey-weighted logistic regression model was used to investigate the issues related to the utilization of antenatal care (ANC) considering the complex survey design in terms of stratification and clustering to give a precise estimation of the variance. The dataset was analyzed according to two strata and 75 primary sampling units (PSU), the clusters of villages or urban wards, and 340 respondents are the total respondents after weighting the survey dataset. The weighted size of the population was found to be 461.13 and the design degrees of freedom were determined as 73 which was the number of PSUs and the number of the strata, which ensures the strong inference of statistics. The general model showed that it was statistically significant, F-statistical value of 4.68 ($F(17, 57) = 4.68$) and a p-value that was below 0.001, which means that the explanatory variables in the regression model were significant to predict the ANC utilization. The high model fit indicates that the various socio-demographic variables are important variables in the determination of maternal healthcare access and additional interpretation of the regression coefficients, odds ratio and the confidence intervals will aid in determining the particular predictors that affect ANC utilization.

Table 2:

Determinants of Antenatal Care (ANC) Utilization: Survey-weighted Logistic Regression

Variables	Adjusted Odds Ratio	95% confidence interval	P-Value
Age			
≤20	1.00	-	-
20-24	4.06	0.71-23.16	0.114
25-29	4.70	0.51-43.63	0.171
30-49	9.98	0.86-116.38	0.066
Birth Order			
First	1.00	-	-
Second	0.65	0.22-1.93	0.434
Third or Higher	0.34	0.10-1.13	0.077
Religion			
Hindu	1.00	-	-
Other	3.66	1.26-10.59	0.017*
Caste/Ethnicity			
Dalit	1.00 (Ref)		
Janajati	1.86	0.47-7.38	0.372
Brahmin/Chhetri	13.06	2.70-63.16	0.002*
Residence			
Urban	1.00(Ref)	-	-
Rural	0.62	0.21-1.81	0.377
Wealth Quintile			
Poorest	1.00(Ref)	-	-

Poor	6.37	2.01-20.16	0.002**
Middle	2.21	0.65-7.43	0.198
Richer	9.70	1.71-54.83	0.011*
Richest	14.65	1.81-118.64	0.013*

Table 2 shows that the findings of the survey-weighted logistic regression model that tested the relationship between demographic and socio-economic factors and the use of antenatal care (ANC) are presented. Each of the independent variables has the odds ratio (OR), standard error (SE), t-statistic, p-value, and 95 percent confidence intervals (CI). There is a positive relationship between age and ANC utilization, with women in the age range (3049 years) having higher chances of using ANC services than women in the reference group (<20 years), but the relationship is not very significant (OR = 9.98, p = 0.066). There is also higher odds of ANC utilization in women aged 25-29 years (OR = 4.69, p = 0.171) and 20-24 years (OR = 4.06, p = 0.114); however, the results have no statistical significance. The lower the ANC utilization the greater the birth order is. Third and above order birth women are much less likely to use ANC services (OR = 0.34, p = 0.077), implying that multiparous women might use previous experiences or have financial and time limitations. Negative association is also seen in women who have a second birth (OR = 0.65, p = 0.434) but the effect is not significant. ANC utilization depends on religious affiliation greatly. Women in non-Hindu religions are over three-fold more likely to use ANC services (OR = 3.66, p = 0.017), so there is a likelihood that cultural and religious orientations may influence healthcare-seeking behavior. Caste/ethnicity implies a high level of inequality in the use of ANC. The Brahmin/Chhetri women are much more likely to use ANC (OR = 13.06, p = 0.002), whereas Janjati group (OR = 1.86, p = 0.372) and Other Terai (OR = 0.96, p = 0.969) groups are not statistically significant to use, which suggests that marginalized communities may be having barriers. There is no significant ANC utilization associating with education. There is no statistical significance in the effect of higher education by women (OR = 2.64, p = 0.262) seeking ANC over women with no education. The same concerns women having basic education (OR = 0.91, p = 0.864) who do not exhibit a significant change towards ANC utilization. The rural women have lesser chances of ANC utilization as opposed to urban inhabitants (OR = 0.62, p = 0.377) albeit the effect is not statistically significant. This implies that there are continuous rural-urban inequalities in maternal healthcare. The ANC use is highly dependent on the economic status. Poor, richer, and richest women (OR = 6.37, p = 0.002; OR = 9.70, p = 0.011; OR = 14.65, p = 0.013) have much higher odds of ANC use than the poor, thereby highlighting the importance of financial resources in access to healthcare. The positive yet non-significant effect is demonstrated by the middle-income group (OR = 2.21, p = 0.198).

Discussion

Age is one of the most important predictors of use of ANC. The highest probability of ANC service utilization is shown by women aged 30-49 years, the OR of 9.98 (p = 0.066), which suggests that older women may be more healthcare-aware or even have access. There is

also a positive correlation of ANC use with women belonging to the age groups 2529 years (OR = 4.69, p = 0.171) and 2024 years (OR = 4.06, p = 0.114), although this is not statistically significant. These trends have been identified in the previous studies, with higher ANC use among older women being explained by accrued healthcare knowledge and financial security (Basha, 2019; Singh et al., 2019). The women with higher birth order are less likely to utilize antenatal care (ANC) services. The women who have more than three births are much less likely to have ANC services (OR = 0.34, p = 0.077). This observation conforms to previous studies which assert that multiparous women tend to use previous experience, which causes them to make fewer ANC visits (Rahman et al., 2021). Moreover, it has been also reported that women having higher birth order are even less likely to have ANC due to financial and time limitations (Titaley et al., 2019). Lower odds of ANC utilization can also be found in women with a second birth (OR = 0.65, p = 0.434), which supports the trend of previous researches. The use of ANC is largely dependent on religious beliefs. Religious groups other than Hinduism have a more inclined odds of seeking ANC services (OR = 3.66, p = 0.017). This outcome points to that of the influence of religious and cultural norms on maternal healthcare behaviors. There are religious groups, which might value institutional healthcare services, resulting in more ANC visits, and groups, which may follow traditional beliefs, preventing healthcare-seeking behavior (Acharya et al., 2020). The results confirm the findings of the existing literature stating that religion plays an important role in determining the health service utilization (Moyer and Mustafa, 2013). Caste and ethnicity are important factors to ANC utilization, which displays the unequal access to healthcare. Brahmin/Chhetri, women have much higher chances of using ANC services (OR = 13.06, p = 0.002). On the other hand, there are no significant relationships between ANC utilization and Janjati (OR = 1.86, p = 0.372) and Other Terai (OR = 0.96, p = 0.969) groups. Such results reflect institutional healthcare obstacles to the marginalized groups. Similar differences have been reported in the previous research where the people of the lower caste face discrimination and limited access to maternal healthcare (Mishra et al., 2021). To mitigate such inequalities, there is need to implement special measures to enhance inclusivity in healthcare. In contrary to the expectations, education is not significantly related to ANC utilization. Educated women portray a better possibility to use ANC (OR = 2.64, p = 0.262) though the outcome is not significant. Once again, the significant change in ANC utilization is not demonstrated by women with basic education (OR = 0.91, p = 0.864). This finding is contrary to other researchers who reported a strong positive association between maternal education and ANC use (Shahabuddin et al., 2017). The first reason could be that the effect of education on ANC behavior could be eclipsed by other socio-economic influences, including income and geographical location. Females in the rural locations are less likely to be using ANC than their counterparts in urban areas (OR = 0.62, p = 0.377), though it is not significantly different. This observation is similar to the efforts of researchers who point to ongoing rural to urban healthcare disparities (Aregbeshola & Khan, 2021). ANC is usually hindered by logistical challenges to rural women like lack of transport and inadequate healthcare facilities. The solution to these barriers is to provide better rural healthcare services and community outreach programmes. The ANC utilization is greatly affected by economic status, with more affluent women having a higher likelihood of seeking ANC services. The women in poorer (OR = 6.37, p = 0.002), richer (OR = 9.70, p = 0.011) and richest (OR = 14.65, p = 0.013) quintiles are users of ANC more than those in the poorest

quintile. There is also a positive non-significant effect on the middle-income group (OR = 2.21, p = 0.198). These findings pose the importance of financial resources in accessing maternal healthcare. The biggest obstacle to the poorest women is the issue of financial constraints, which restricts the capacity of the latter to afford ANC services (Chakrabarti et al., 2019). This gap can be filled by increasing financial assistance programs to the low-income women in the society.

Conclusion

This study has shown that the socio-economic and demographic factors have a very strong influence on the use of antenatal care (ANC) in Bagmati Province. The most significant determinants turned out to be the wealth status and caste/ethnicity, as women in the wealthiest households, and Brahmin/Chhetri were found to have significantly higher odds of using ANC services. Conversely, greater birth order was linked to less utilization, which suggests less involvement with maternal healthcare between women with multiple births. Age and residence exhibited anticipated trends but their influence was not statistically significant when adjusted. These results indicate the existing disparities in maternal health care access with the most significant ones among the economically disadvantaged, high-parity, and marginalized groups. The research can add value to the existing literature by offering province-specific, evidence-based information using nationally representative data, highlighting that disparities still exist, even in relatively developed areas like Bagmati. Policy-wise, the findings highlight the necessity to implement interventions that focus more on vulnerable populations. The enhancement of financial support systems, increased outreach efforts to multiparous and low-income women, and the realignment of structural issues of caste and social exclusion are necessary to enhance equitable ANC use. Future studies are needed to examine other socio-cultural and health systems variables, such as quality of care and women autonomy to gain a better insight into the pathways that affect ANC uptake and to guide more comprehensive strategies to address maternal health.

References

Acharya, D., Khanal, V., Singh, J. K., Adhikari, M., & Gautam, S. (2020). Impact of religion on the utilization of maternal healthcare services in Nepal. *BMC Pregnancy and Childbirth, 20*(1), 1-10. https://doi.org/10.1186/s12884-020-03049-x

Aregbeshola, B. S., & Khan, S. M. (2021). Predictors of maternal health service utilization in sub-Saharan Africa: A systematic review. *BMC Health Services Research, 21*(1), 1-13. https://doi.org/10.1186/s12913-021-06759-5

Basha, G. W. (2019). Factors affecting the utilization of maternal healthcare services in Ethiopia. *Journal of Global Health, 9*(1), 010414. https://doi.org/10.7189/jogh.09.010414

Bhattarai, S., Sharma, K., & Karki, P. (2022). Accessibility and utilization of maternal health services in Nepal: A spatial analysis. *BMC Public Health, 22*(1), 1178. https://doi.org/10.1186/s12889-022-13760-2

Chakrabarti, A., Singh, R., & Mishra, R. (2019). Socioeconomic disparities in maternal healthcare utilization in South Asia. *Health Policy and Planning, 34*(5), 355–364. https://doi.org/10.1093/heapol/czz021

Chakraborty, N., Roy, S., & Sinha, D. (2023). Determinants of antenatal care utilization in South Asia: A systematic review. *Journal of Global Health Reports, 7*, e2023025.

Gautam, R., Bhandari, S., & Shahi, P. (2023). Gender norms and maternal health-seeking behavior in Nepal: Challenges and opportunities. *Global Health Research and Policy, 8*(1), 63.

Joshi, R., & Aryal, P. (2023). Maternal education and antenatal care visits in Nepal: Evidence from national surveys. *Health Policy and Planning, 38*(2), 224–238.

Khadka, R., Shrestha, P., & Timsina, S. (2023). Traditional beliefs and antenatal care practices among Nepalese women: A mixed-method study. *International Journal of Reproductive Medicine, 2023*, 456789.

Ministry of Health and Population (MoHP), Nepal, & ICF. (2022). *Nepal Demographic and Health Survey 2022*. Kathmandu, Nepal: MoHP.

Ministry of Health and Population (MoHP). (2023). Nepal Health Sector Strategy 2023-2030: Strengthening maternal and child health services. Kathmandu: Government of Nepal.

Mishra, P., Thapa, K., & Tamang, S. (2021). Caste-based discrimination and maternal health results in Nepal. *International Journal of Equity in Health, 20*(1), 1–10. https://doi.org/10.1186/s12939-021-01423-4

Moyer, C. A., & Mustafa, A. (2013). Drivers and deterrents of facility-based delivery in sub-Saharan Africa: A systematic review. *PLOS ONE, 8*(1), e53747. https://doi.org/10.1371/journal.pone.0053747

Poudel, S., & Pant, B. (2023). Evaluating the impact of maternal health policies on antenatal care coverage in Nepal. *Health Policy Open, 5*, 100058.

Rahman, M. M., Haque, S. E., & Mostari, K. F. (2021). Birth order and maternal health service utilization in South Asia. *Maternal and Child Health Journal, 25*(4), 597–605. https://doi.org/10.1007/s10995-020-03045-4

Regmi, M., Lama, S., & Thapa, P. (2022). Service quality and utilization of maternal health services in Nepal: A cross-sectional study. *Asian Pacific Journal of Public Health, 34*(3), 345–359.

Shahabuddin, A. S. M., Delvaux, T., Utz, B., Bardají, A., De Brouwere, V., & De Kok, B. (2017). Maternal health care-seeking behavior in South Asia: A review of qualitative literature. *BMC Pregnancy and Childbirth, 17*(1), 1–14. https://doi.org/10.1186/s12884-017-1448-9

Sharma, M. K., Khanal, S. P., Adhikari, R., & Acharya, J. (2021). Maternal health care services in Nepal: A qualitative perspective based on the socio-ecological model. *Journal of Health Promotion*, 9(1), 42–54.

Titaley, C. R., Dibley, M. J., & Agho, K. (2023). Determinants of antenatal care utilization: A global perspective. *Maternal & Child Nutrition, 19*(1), e13456.

World Health Organization. (2023). *WHO recommendations on antenatal care for a positive pregnancy experience*. Geneva: WHO.