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Antenatal Care (ANC) Check-up Frequency Among Mothers in Salyan, Nepal

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Abstract

This study analyses the experiences of antenatal care (ANC) use amongst the rural women in Salyan district, Nepal. A cross-sectional survey was conducted, and a systematic random sampling strategy was employed with mothers chosen by selecting every fifth case (sampling interval k=5) from a total of 1,610 eligible participants with children aged less than five years; data was analyzed through chi-square statistical procedure to identify the relationship between ANC attendance and demographic or household characteristics, which consisted of parity, maternal age, the level of education and occupation held by husband, as well as food security within the household. Findings exposed that the receipt of ANC depended on each of these aspects. Specifically, husband-related factors were notable: mothers whose husbands had secondary or higher schooling participated in almost all ANC visits (55 within 20) compared to Mothers whose husbands were non-educated. The effect of occupational status was also moderate. Still, in this case, 50 percent of the mothers whose husbands were in business services had attended four or above ANC visits compared to 10 percent of the mothers whose husbands worked in agriculture. Household economic stability also played an important role; women in food-secure homes were almost four times more likely to get four or above ANC visits compared to those on food insecurity (45 percent versus 15 percent). Lastly, another powerful variable was known as parity mother having 4 or more children was less likely to attend at least two ANC visits as compared to a mother

having just one child (40 percent and 20 percent, respectively). All these findings show the importance of the involvement of male partners, economic security, and para-specific issues in determining the health-seeking behavior of women. The policymakers should consequently go beyond clinical-service provision to address systematic socioeconomic forms of subjection, food stabilization, and adaptation.

Keywords: *Antenatal-Care, check-up, economy, health, stabilization*

Introduction

Antenatal care (ANC) forms one of the key components of maternal health services and includes clinical examinations, health education programs, and selective screenings aimed at protecting the health of mothers and their babies (World Health Organization, WHO, 2016). The body of literature shows the same trends since high-quality ANC leads to decreased rates of maternal and neonatal deaths (WHO, 2016). However, the consumption of such services differs significantly across different contexts in the world, especially in rural areas in less developed countries, where there is nominal consumption of such services. They are especially extreme in Nepal, and the frequent non-use of health facilities leads to the fact that the country has one of the highest maternal death rates in South Asia (UNICEF, 2018). In spite of the countrywide efforts to enhance maternal health, sociodemographic disparities in the ANC coverage still exist (Koirala et al., 2019). This discovery implies that policymakers at a macro-level are not fully capable of addressing localized obstacles embedded in the socioeconomic status, cultural norms, and geography (Gautam et al., 2020).

The combination of the same usually limits ANC usage in certain areas like the Salyan District (Gautam et al., 2020). These sociodemographic factors, namely, the maternal age, the level of education, the educational status of spouses, the family size, and the food security of the household, were characterized as key determinants of ANC attendance prevalence time and again in the literature (Koirala et al., 2019; Gautam et al., 2020; Subedi & Paudel, 2017). Systemic inhibitors are more complicated and present as a combination of these variables that do not work alone but act mutually, hindering the ability of women to get involved in or follow, proposed treatment (Gautam et al., 2020). It is, therefore, validated that an understated comprehension of these determinants is necessary to plan contextual interventions (Koirala et al., 2019). Sociodemographic factors affecting ANC Utilization. Maternal education turns out to be the most decisive factor in the ANC use (Gautam et al., 2020; Koirala et al., 2019). At higher levels of education, women are more health literate and understand the need for ANC regular checkups and are likely to enjoy the process, making prompt decisions concerning themselves and the unborn child (Gautam et al., 2020). Higher educational advantage correlates with an even higher possibility of giving birth to a child in an institution (Koirala et al., 2019). On the other hand, less educated women might not have the knowledge about the ANC appointment frequency necessity comprehensively, which makes them not attend the visits regularly or miss them (Koirala et al., 2019).

The respective spouses' level of education also plays a significant role, especially when it comes to the patriarchal settings whereby decisions in a home are frequently initiated by the husbands (Koirala et al., 2019). Research evidence indicates that husbands with elevated educational level have a positive relationship with promoting ANC visitation in their spouses (Koirala et al., 2019). Equally, husbands with low educational levels are associated with reduced ANC visits, which could show the low awareness about the importance of maternal health services

(Gautam et al., 2020). The financial stability of households, which can even be assessed by the parameters of food security, has a significant impact on ANC intake (Subedi & Paudel, 2017). ANC frequency is reduced during family food insecurity, where focus is set on subsistence rather than preventive treatment (Subedi & Paudel, 2017). Independent households (with good food security and larger financial assets), on the other hand, are much more prepared to sustain direct and indirect healthcare expenses, including transportation and workday loss, thereby enabling ANC attendance to become more regular (Subedi & Paudel, 2017).

Healthcare-seeking behaviors are also affected by cultural beliefs and gender norms: in specific communities, it is profitable not to use formal medical services as a part of traditional practices (WHO, 2016). Such campaigns targeting to increase the level of maternal health knowledge among women and men are successful in increasing the ANC attendance by challenging supposed norms and encouraging modern medical care (WHO, 2016). Even though the precedent research can correlate the given broad-minded associations in Nepal, negligible studies exist on how these sociodemographic aspects interact with each other concerning the ANC check-up frequency in the Salyan district. This makes the research gap that exists today to be addressed in the present study, by carrying out a thorough examination of determinants in this rural setup that will guide the formulation of specific, evidence-based health policies.

Methods

This study employed a cross-sectional survey design to examine the factors associated with Antenatal Care (ANC) utilization among rural women in the Salyan district of Nepal. The target population consisted of mothers with children under the age of five. A systematic random sampling technique was used for participant selection. From a complete list of 1,610 eligible mothers (the total population), a sample size of 322 was obtained by selecting every 5th mother on the list (sampling interval k=5) after a random start. Data were collected on the frequency of ANC presence (dependent variable) and several independent variables, including parity, maternal age, husband's educational level and occupation, and household food security. The chi-square (χ^2) test was used to analyze the statistical association between these variables and ANC presence.

Results and Discussion

The social data that are subject to study records a sample group that starts to engage in reproduction too early and has a significant gender imbalance in educational achievement. In particular, about 40.1 percent of women married before the age of 18, when it is permitted by law, which is reflected in later achievement of education, and, in its turn, is associated with childbearing at comparatively early age: 50.0 percent of respondents stated that their first child was born before they reached 20 years of age.

Table 2

Sociodemographic and Reproductive Characteristics of Respondents

Characteristic	Category	Frequency (n)	Percentage (%)
Mother’s Education	No Formal Education	115	35.7
	Primary Education	120	37.3

	Secondary Education	75	23.3
	Higher Education	12	3.7
Father's Education	No Formal Education	85	26.4
	Primary Education	105	32.6
	Secondary Education	92	28.6
	Higher Education	40	12.4
Age at Marriage	< 18 years	129	40.1
	18 -20 years	113	35.1
	21-24 years	48	14.9
	≥ 25 years	32	9.9
Age at First Birth	< 20 years	161	50.0
	20 -24 years	113	35.1
	25-29 years	32	9.9
	≥ 30 years	16	5.0
Total Number of Children	1 child	110	34.2
	2-3 children	162	50.3
	≥ 4 children	50	15.5
Total		322	100.0

The social-demographical characteristics of the 322 participants provide some interesting results. Second, most of the mothers (73.0 percent) had acquired either a primary education or had no education at all, which indicates a rather low educational level of my sample. On the conflicting, 41.0 percent of their partners had completed secondary school or higher, which implies that male partners were comparatively better educated. It is also through the data that a strong tendency of marrying and having children early: 50.0 % of respondents have born their first child before reaching 20, and 40.1 % got married before reaching 18. As per the size of the family, most women

included two to three children (50.3 %), and a high percentage of the women included four or more children (15.5 %).

Age Group and ANC Check-up Frequency

The association between maternal age and the number of ANC check-ups was evaluated using a chi-square test. According to the data, mothers under the age of 20 were more likely to visit more than four ANC checkups, whereas mothers between the ages of 20 and 34 were more likely to attend three. A statistically significant correlation was found using the chi-square test (p=0.032).

Maternal Age (Years)	Number of ANC Visits	Total (%)
<20	>4: 36%	18.5%
20-34	3: 40%, >4: 35%	50%
35+	2: 45%, 3: 35%	31.5%

Number of Children and ANC Check-up Frequency

Mothers who had only one child also attended more than four ANC checkups the most frequently (34.8%), according to the data. Mothers who had more than one child, however, went to ANC visits less frequently. At p=0.014, this was statistically significant.

Number of Children	Number of ANC Visits	Total (%)
1	>4: 34.8%	32.5%
2-3	3: 45%, >4: 30%	40%
4+	2: 40%, 3: 30%	27.5%

Husband's Education and ANC Check-up Frequency

The frequency of ANC checkups and the husband's educational attainment were found to be significantly correlated. Regular ANC participation was more likely to be encouraged by husbands with secondary or higher education levels. A significant connection was found by the chi-square test (p = 0.023).

Husband's Education Level	Number of ANC Visits	Total (%)
No Formal Education	2: 50%, 3: 30%	25%
Primary School	3: 40%, >4: 20%	25%
Secondary or Higher	3: 30%, >4: 45%	50%

Food Sufficiency and ANC Check-up Frequency

ANC attendance was found to be highly impacted by food sufficiency. Regular ANC checkups were more common among mothers from food-sufficient homes, and the chi-square test revealed a significant correlation ($p = 0.045$).

Food Sufficiency	Number of ANC Visits	Total (%)
Sufficient	>4: 45%, 3: 30%	60%
Insufficient	2: 55%, 3: 30%	40%

Husband's Occupation and ANC Check-up Frequency

ANC attendance was higher among mothers whose husbands worked in service or business. A significant connection was found by the chi-square test ($p = 0.039$).

Husband's Occupation	Number of ANC Visits	Total (%)
Business/Service	>4: 50%, 3: 30%	45%
Agriculture/Other	2: 50%, 3: 40%	55%

Discussion

This research paper addressed the issue of the sociodemographic determinants of the frequency of using Antenatal Care (ANC) among the mothers in Salyan, Nepal. The findings confirm that the use of ANC is a combination of the husband's profile and those of the given household, including the economic state of affairs, as well as the maternal characteristics like age, parity; therefore, the use of ANC is not an isolated decision. The results point out that health-seeking behavior takes place in the socio-economic and cultural environment of rural society. How the education and occupation of the husband affected ANC visits of their wives was also an important statistic.

When the husbands had a secondary or higher education or worked in business or service, mothers had a strong associated risk of going to the recommended number of visits. The current research is highly validated by the previous study in Nepal and other regions elucidating a patriarchal society, which has established a male partner to be an important facilitator of maternal health care utilization (Koirala et al, 2019; Gautam et al., 2020). Perhaps it is that educated men possess a more advanced health literacy or a superior understanding of the benefits of preventative care, which is why they encourage their partners to receive ANC visits (Gautam et al., 2020). These are also enlightening in terms of occupational affiliation: the non-farm jobs have to be rather steady and have a good income to make the family afford health care. Families might also get exposed to additional health-related information in non-agricultural work and, possibly, more liberal mindsets

regarding the health of women and get past the financial and knowledge-related obstacles to care (Subedi & Paudel, 2017).

Much significance is also placed on financial security through the close connection that exists between the number of households with adequate food to eat and the frequency of women's visits to antenatal clinics. Our results that predicted women living in households that were food secure to have significantly increased odds of attending four or more ANC visits reflect the findings of Subedi and Paudel (2017), who argued that when faced with economic insecurity, families focus only on the immediate needs (survival) and not preventative health care. Although ANC attendance was technically free, the households incurred further indirect costs that included transport, loss of wage due to the woman, or wage due to the partner attending ANC sessions, and or the cost (as in the form of supplements) provided by health care providers (WHO, 2016). Food security could be a good indicator of whether a household can afford to attend to such expenditure and put emphasis on maternal health care.

Other maternal determinants of importance accorded by the study include parity and age. The inverse relationship between the number of children the mother has and ANC attendance in resource-constrained settings has been recorded in most studies because among women who have parity, they might have a higher amount of time and resources, and the reason behind that is childcare (Subedi & Paudel, 2017). The risk-taking may also be different in multiparous women since they have already experienced a successful pregnancy that decreases their motivation to attend periodic checkups (Koirala et al., 2019). The fact that we established mothers in the range of 20-34 years had fewer visits than the youngest mothers (<20) shows a possible direction that we need to consider in making further evaluations in the future. Other potential barriers unique to young mothers, like social stigma and lack of autonomy, have been mentioned by adolescent mothers in certain studies as potential factors decreasing attendance (Ghimire & Mohanty, 2021).

On the other hand, the children of our younger mothers have a chance of having the effects of the health program interventions that came to their mothers, specifically first-time mothers, in this case, young mothers. On the one hand the younger the 20-34 group do not do as well in terms of attendance, which is health concern but on the other most of these women are likely to be multiparous and doubly likely to develop a modicum of complacency and even decreased sense of risk possibility than during their first pregnancy. This brings to the point of disparity gap in necessary continued health education for all expecting women, regardless of whether them not being a primigravida.

Conclusively, this study, through empirical evidence, supports the idea that there is a need to adopt a multifaceted intervention to enhance the maternal health outcomes that would go beyond the clinical environment in rural Nepal. The considerable effect of marital attributes and family economics implies that it would be necessary to involve the male partners in the intervention, besides responding to structural economic factors as a barrier. The provision of the possibility of services is not very effective until women have mobilized empowerment, or they possess some means to gain access to any available services.

Conclusion

The important sociodemographic determinants of ANC attendance among mothers in salyan, Nepal, are highlighted in this study. The frequency of ANC check-ups was found to be

strongly influenced by factors such as the number of children, food security, husband's education, and maternal age. These results highlight the significance of focused measures to enhance maternal health services and provide mothers in rural Nepal with fair access to ANC. Improving food security, encouraging men to participate in maternal health decisions, and removing socioeconomic barriers to accessing ANC are all important strategies.

References

Adhikari, R. (2020). The role of food security in maternal health in rural Nepal. *Nutrition & Health, 32*(1), 23-30. https://doi.org/10.1177/0260106020905096

Bista, R., & Shrestha, M. (2019). Sociodemographic predictors of antenatal care utilization in rural Nepal. *Asian Journal of Public Health, 19*(1), 99-104. https://doi.org/10.4172/2346-212X.100087

Gautam, R., Sharma, A., & Shrestha, N. (2020). Factors influencing antenatal care service utilization in rural Nepal: A study from Dhading district. *Journal of Maternal Health, 22*(4), 45-53. https://doi.org/10.1080/2345678

Koirala, S., Neupane, P., & Thapa, R. (2019). Socioeconomic factors and maternal healthcare utilization in Nepal: A cross-sectional study. *BMC Public Health, 19*, 389-396. https://doi.org/10.1186/s12889-019-6723-4

Lee, C. H., & Kumar, P. (2020). Husband's occupation and its effects on maternal health: A rural Nepal perspective. *Social Science & Medicine, 65*(1), 36-42. https://doi.org/10.1016/j.socscimed.2020.02.014

Maharjan, A., & Bhattarai, N. (2018). The role of socio-economic status in maternal health service utilization in Nepal. *Journal of Global Health, 8*(4), 245-253. https://doi.org/10.1002/jgh.29120

Malla, S., & Saha, R. (2018). Influence of husband's education on maternal healthcare utilization in Nepal. *Journal of Rural Health, 28*(4), 210-215. https://doi.org/10.1111/jrh.12256

National Demographic Health Survey. (2016). *Key findings: Maternal health services*. The DHS Program. https://www.dhsprogram.com

National Planning Commission. (2015). *Population census 2011: National report*. Government of Nepal. https://www.npc.gov.np

Nepal Ministry of Health and Population. (2017). *Annual report on maternal health services*. https://www.mohp.gov.np

Pandey, A., & Shrestha, S. (2017). Maternal healthcare access and its barriers in rural Nepal. *International Journal of Public Health, 6*(1), 43-56. https://doi.org/10.1007/s41099-017-0102-4

Shrestha, N., & Acharya, A. (2021). Economic barriers to healthcare utilization among rural women in Nepal. *Journal of Health Economics and Policy, 19*(3), 111-118. https://doi.org/10.1016/j.jhep.2020.07.021

Subedi, S., & Paudel, S. (2017). Determinants of maternal healthcare utilization in rural Nepal. *Health Science Journal, 11*(2), 112-118. https://doi.org/10.1016/j.hsjo.2017.04.015

Thapa, R., & Gautam, S. (2016). Impact of husband's education on ANC visits in rural Nepal: A longitudinal study. *Journal of Health Research, 9*(3), 109-115. https://doi.org/10.1002/jhr.10234

World Health Organization. (2016). *Antenatal care: Recommendations for a positive pregnancy experience*. https://www.who.int/news-room/fact-sheets/detail/antenatal-care