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Abstract

Antenatal care (ANC) majorly offers women with maternal along with fetal screening for optimizing the level of providing medical or social interventions available where ever indicated. Cross-sectional study was conducted in Bateshwar Rural municipality of Dhanusha district. The study population were 184 mothers who gave birth to their child in last one year. 10% pretesting was conducted. Proportional sampling method was conducted approximately taking 60 mothers from each ward. SPSS 16 was applied for analyzing the data. About half (45.1%) completed ANC visits as per the protocol of GoN visiting 4 times. Almost all mothers (98.36%) reported that they received counseling about danger signs of pregnancy during ANC visit. (98.36%) of respondents reported the availability of health workers all the time when they visited for ANC. Despite of total proportion of mothers visiting for ANC, half of the mothers did not visit for ANC illustrating a need of mobilizing Female community health volunteers for conducting awareness raising events on the importance of ANC, provision of ANC protocols and incentives.

Keywords: ANC; Counselling; Health services; Incentives; Maternal Health

Conflict of interest: There is no conflict of interest.

Introduction

Antenatal care (ANC) majorly offers women with maternal along with fetal screening for optimizing the level of providing medical or social interventions available where ever indicated. (Solnes Miltenburg, A. et.al, 2017) ANC is a point of contact between pregnant women and health workers where interventions are offered to confirm the safety of both mother and the fetus. (Wolderufael, 2018) In developed countries, 97% of women visit for at least 1 ANC checkup, meanwhile, the coverage of at least 1 ANC visit is low in sub-Saharan Africa (69%). (Terefe & Gelaw, 2019) The study intends to benefit the community people to determine the utilization of ANC services among mothers, as ANC is the most important method for detect-

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Methodology

A non-experimental cross-sectional study was conducted in Ward 1,2 and 3 of Bataeshwar Rural Municipality of Dhanusha district. Inclusion. The study population was 184 mothers who gave birth to their child in the last one year. Only, the women who gave birth in the last one year of ward 1 to 3 of Bataeshwar rural municipality were taken as participants. Those mothers belonging to the 1 to 3 but not willing to participate in the study were excluded. Proportional sampling method was conducted approximately taking 60 mothers from each ward. Two - stage systematic random sampling techniques were done for the selection of expected samples. In the first stage, the Bataeshwar Rural Municipality of selected wards (ward number 1 to 5) of Dhanusha district was obtained and then 1 to 3 wards were selected randomly from the total estimated ward. In the second stage, mothers were selected through a random sampling method from the selected ward. Semi-structured questionnaires were used for the research study and a survey was conducted among mothers of Dhanusa. The questionnaires were translated into Nepali language for convenience of the participants. Pretesting was performed among 10% of mothers who gave birth to their children in the last one year. Raw data collected was edited to detect any errors. The data obtained were entered in Microsoft Excel, and converted into Statistical Package for Social Sciences version 16. Consistency of the entered data was checked and cleaned to ensure its quality and completeness before analyzing. The participants were informed that the participation was voluntary. Confidentiality was maintained and the purpose of conducting research study was clearly mentioned prior data collection. A written informed consent was taken.

Results

Socio-demographic characteristics of respondents

The sections of the results encompass five sections including socio-demographic status, distance and means of transportation, information on pregnancy, ANC incentives and health service utilization. Most of the mothers (74.44%) aged between 20 to 34 years. All of the respondents belonged to Hindu religion. About three fourth (71.9%) of the respondents were found residing in a joint family. Majority of fathers (35.32%) and mothers (36.95%) were found to drop off their study from secondary level. All of the mothers were whether housewife or engaged in agriculture. Labor was the major source of income (36.41%) in their family.



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Table 1: Socio-Demographic Characteristics (n=184)

Characteristics	Frequency	Percentage
Age of respondents		
Less than 19 years	44	23.91
20-34 years	137	74.44
More than 35	3	1.62
Religion of respondents		
Hindu	184	100
Type of family respondents		
Single	115	20.7
Joint	69	71.9
Education of mother		
Illiterate	45	24.45
Literate	23	12.5
Primary Level	32	17.39
Secondary level	68	36.95
Higher secondary level	13	7.06
Bachelor's level	3	1.63
Education of father		
Illiterate	34	18.47
Literate	13	7.06
Primary level	34	18.47
Secondary level	65	35.32
Higher Secondary level	28	15.21
Bachelor's level	8	4.34
Master level	2	1.08
Occupation of mother		
Housewife/agriculture	178	96.73
Main income source of respondents		
Farming	41	22.28
Services	18	9.78
Labour	67	36.41
Business	21	11.41
Foreign Employment	37	20.1

* Multiple Answer



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Distance and means of transportations to birthing facility

Out of the 184 mothers having child under the age of 1, majority (97.82%) of respondents had access to health centers within the distance less than 30 minutes. Contrary, most of the participants reported that it takes about 1 to 2 hour to reach nearest birthing center. 64.13% of respondents preferred to use private vehicle like bus, bike and jeep to reach birthing center for ANC checkup.

Table 2: Distance and means of transportations to birthing facility (n=184)

Characteristics	Frequency	Percentage
Time to reach nearest health center from home		
Less than 30 minutes	180	97.82
30-59 minutes	4	2.17
Time to reach birthing facility from home		
Less than 30 minutes	4	2.17
30-59 minutes	54	29.34
60-120 minutes	126	68.47
Means of transportation		
Bus, bike and jeep	118	64.13
Ambulance	60	32.6
Walking	6	3.26

Source: Primary data

Information on pregnancy

Table 3 depicts that, during the study period ANC of current child (49.45%) was of second pregnancy followed by third pregnancy outcome (23.91%). Majority of respondents had 2 children (51.08%) then, 23.91% bear 3 to 4 children. 51.08% of participants gave birth to male child.



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Table 3: Details of pregnancy (n=184)

Characteristics	Frequency	Percentage
Time of pregnancy		
First pregnancy outcome	29	15.76
Second pregnancy outcome	91	49.45
Third pregnancy outcome	44	23.91
Fourth pregnancy outcome	20	10.86
Number of children		
1 Children	43	18.47
2 Children	94	51.08
3-4 Children	44	23.91
4 and more children	12	6.51
Sex of child		
Male	94	51.08
Female	90	48.91

Source: Primary data

Incentives of ANC: Table 4 illustrates that all of the mothers visited for ANC checkup. About half (45.1%) completed ANC visits as per the protocol of GoN visiting 4 times. Almost all mothers (98.36%) reported that they received counselling about danger signs of pregnancy during ANC visit.

Table 4: ANC and Incentive (n=184)

Characteristics	Frequency	Percentage
ANC checkup in last pregnancy		
Yes	184	100
If yes how many time did you get the checkup		
1 time	11	5.97
2 times	31	16.84
3 times	59	32.06
4 times	83	45.1
Place of last ANC		
Health Institution	184	100
Counseling during ANC checkup		
Poor knowledge	21	11.41
Better knowledge	163	88.58
Counseling provided about danger signs during ANC		
Yes	181	98.36
No	3	1.67

Source: Primary data



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Health services utilization

Table 5 demonstrates that majority (98.36%) of respondents reported the availability of health workers all the time when they visited for ANC. All participants responded to receive care and respect from health workers during ANC visit

Table 5: Health service related results in nearest birthing facility (n=184)

Characteristics	Frequency	Percentage
Availability of health workers		
Available for all the time	181	98.36
Some times	3	1.63
Difficult to meet them		
Health workers care and respect patients		
Yes	184	100
No	0	0

Source: Primary data

Discussion

'ANC plays a vital role in the prevention of complications during pregnancy period through early screening of fetus. This study found that 45.1% completed ANC checkup which is comparatively less than the ANC visits done by 69% of mothers from Sunsari' (Deo, K. K., et.al, 2015), '69.5% from Illam' (Pradhan, P. M. et.al, 2013), slightly similar to complete ANC visit done by '46.4% mothers belonging to Tamang community from Lalitpur' (Sanjel, S. et.al, 2011). 'In this study, all of the respondents reported to visit ANC at least once whereas lower attendance for ANC was observed in Dalit communities of Gorkha (76%) (Awasthi et al., 2018), Tamang community of Lalitpur to be 78.9' (Sanjel, S. et.al, 2011), 95.1% from slum area of Dharan (Shrestha, S.et.al, 2019), 92.5% in western Nepal' (Khanal, V. et.al, 2023). 'Within this study, 98.36% reported that they received counselling about danger signs of pregnancy during ANC visit which is slightly higher 90.2%'. (Bhattarai G.et.al, 2023)

'Tendency of utilizing services in the health institutions escalates with the uplift in the number of ANC visits ever since, these mothers get aware about the benefits of institutional delivery and provision of cash incentives. When women are satisfied with the content of care received in the institutions, it is more likely that they utilize the services properly' (Thapa et al., 2023). A study found that only '77% of mothers visited at least once for ANC checkup, 25.6% for four times and 20% less than four times. It is believed that, the visit declines due to the far distance, lack of infrastructures within the health institution, unavailability of health professionals and lack of awareness. Awareness is one of the factors determining the utilization of ANC services' (Paudel et al., 2023).



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‘Women with better education also intend to utilize the ANC services due to awareness’ (Hossain Borsha et al., 2023). ‘Counseling is a crucial component of ANC where counseling regarding the risk of pregnancy and the sign of labor pain were low in one of the studies whereas this study confirms that almost all the mothers were provided with such counseling sessions (98.36%). Studies suggest that education plays a vital role in the utilizing ANC services by engaging women in healthy preconception behaviors including decision making regarding reproductive health’ (Reis-Muleva, B. et.al, 2023).

‘Mothers staying near the health institutions were found to receive good quality of care as compared to the women staying far from the health care facilities’ (Kayemba, V. et.al, 2023). In contrast, this study revealed that 68.47% of women had to travel around 60 to 120 minutes despite the fact that women found the quality of ANC services to be good due to the availability of health personnel and were cared for and respected. Regarding the quality of care, about a half percentage of participants considered good quality of ANC services provided ‘where 71.5% of participants responded to availability of skilled birth attendance along with low satisfaction rate (64%) with the time provided to them by the health professionals’ (Tasneem, S. et.al, 2023) . Likewise, 61% of respondents reported the inaccessibility or unavailability of health workers at the health institutions during their checkup due to which the ANC visit was delayed. ‘Those mothers who were not provided with counseling on ANC were more likely to delay their attendance of visits’ (Boka et al., 2023) The frontline worker's care and support plays a prominent role in adopting ANC services by mothers. Quality of services provided by them are key factors in improving the maternal health services utilization as they offer counseling and health education to mothers ensuring the reduction of maternal and infant mortality rate’ (Singh, A. et.al, 2023). ‘Pregnancy is one of the vulnerable states with a need of special and persistent attention from health care personnel, spouse, families and people around here’ (Putri et al., 2023). The study considered samples from one district therefore, it cannot be generalized for other districts as a limitation.

Conclusion: The research study depicted the socio-demographic status, distance and means of transportation used while visiting ANC, information regarding pregnancy, incentives and provision of health services. Overall, all of the mothers visited ANC at least once during their last pregnancy. The health post reaching hour was about 1 to 2 hour showcasing the need of provision of nearby facilities? About half of the respondents completed ANC as per the protocol i.e. 4 ANC checkup. Almost all of the participants reported to receive proper care from the health care professionals and their availability during the checkup. Despite of total proportion of mothers visiting for ANC, half of the mothers did not visit for ANC illustrating a need of mobilizing Female community health volunteers for conducting awareness raising events on the importance of ANC, provision of ANC protocols and incentives. Further, local government’s effort to enhance the rate of ANC is highly encouraged.



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