

Utilization of Free Maternity Services among Reproductive Age Women of Chepang Community in Nepal

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ABSTRACT

Background: Approximately 287,000 women died globally from causes related to pregnancy and childbirth in 2010. Nepal is among the countries with high maternal mortality rates in South Asia region with estimated Maternal Mortality Rate 239/100,000 live births. Underutilization of health services is one factor contributing to high maternal mortality rate. In Nepal, 81% of births take place at home without skilled health providers. Many complications related to childbirth can be prevented by utilization of maternal health services.

Methods: A descriptive cross-sectional study was carried out among 71 respondents from May 15, 2019 to November 16, 2019 and it took by using total enumeration sampling technique. Structured self developed questionnaire was used to collect data using interview technique. Data was analyzed via SPSS software version 16 by using descriptive and inferential statistics.

Results: Utilization of free maternity services was extremely low among Chepang women of Western Region of Nepal. With regards to antenatal utilization during their latest pregnancy was 73.2%. Only 22.5% of the respondents had given birth of their baby in health institution rest of them delivered at home. Majority of the respondents did not utilize postnatal services (95.8%) whereas only 4.2% respondents utilized postnatal services. There was statistically significant association between utilization of ANC services and age ($p=0.000$), income ($p=.006$), education of the respondent ($p=0.001$) and religion of the respondents ($p=0.044$). Similarly, there was statistically significant association between utilization of delivery services and age ($p=0.29$), education of the respondent ($p=0.007$) but there is no significant association between utilization of postnatal services and selected demographic variables.

Conclusion: The study concluded that maternity services utilization is extremely low among Chepang women of Nepal. There was significant association between age, educational status and religion. Therefore, the government and non government organizations effort on health awareness programme are essential to maximize the utilization of maternity services.

Key words: Antenatal, Delivery, Chepang, Postnatal, Utilization

INTRODUCTION

Free maternity services are the services that provides during antenatal, natal and postnatal period. It also includes incentives for four ANC visit and transportation incentives for institutional delivery. A cash payment of NRs. 400 is

made to women on completion of four ANC visits at the 4, 6, 8 and 9 months of pregnancy. A cash payment is made to women immediately following institutional delivery: NPR. 1,500 in mountain, NPR. 1,000 in hill and NPR. 500 in Terai region. ^[1] Iron capsule and TT vaccine is provided

during antenatal period. The maternity services are to provide safe, high-quality, accessible and equitable care to women and their families. Attendance of antenatal care, delivery in a medical setting and having a skilled health worker at delivery improve maternal health^[1].

Utilization of maternal health services vary from country to country and within the country itself in many developing countries. Access to health care services has a great deal of impacts on maternal and child survival and significantly affects mortality trends in a population. Antenatal care may play an indirect role in reducing maternal mortality by encouraging women to deliver with assistance of a skilled birth attendant or in a health facility. In most rural settings, there are challenges in increasing such health care service utilization mainly because the decisions that lead women to use the services seem to occur within the context of their marriage, household, and family.^[2]

Globally, approximately 287,000 women died from causes related to pregnancy and childbirth in 2010. Of these, 162,000 were in Sub-Saharan Africa and 83,000 were in South Asia. The maternal mortality ratio ranges from 16 in the developed countries to 220 in South Asia and 500 in Sub-Saharan Africa.^[3]

Globally, one-third of deliveries take place at home without skilled health workers.^[4] The situation is worse in developing countries due to inadequate access or poor utilization of health services. In Nepal, 85% of women received antenatal check up, only 35% undergoes institutional delivery and 51% use postnatal services.^[5] The maternal mortality ratio in developing countries in 2013 was 230/100,000 live births versus 16/100,000 live births in developed countries. There are large disparities between countries with few countries having extremely high maternal mortality ratio around 1000/100,000 live births. There are also large disparities within countries between women with high and

low income and also women living in rural and urban area^[6].

Factors that prevent women from receiving or seeking health care during pregnancy and childbirth include inadequate services, poverty, distance, lack of information, and cultural practices^[7]. Underutilization of health services is one factor contributing to high maternal mortality rates, for example, 81% of births take place at home, many without skilled health providers^[8]. Complications during pregnancy and childbirth such as haemorrhage, sepsis, abortion complications, pre-eclampsia and eclampsia, and prolonged/obstructed labour are the leading causes of death and disability among women of reproductive age in developing countries and millions of women still lack access to adequate skilled care during the period of pregnancy and child births^[9]. All these complications can be prevented through promoting the utilization of maternal services during pregnancy, delivery and postnatal period.

The Nepal is promoting safe motherhood through maternity incentives schemes. The Safe Motherhood Programme provides essential maternity services to all women through an extensive four-tiered district health system: (i) sub-health post; (ii) health post; (iii) primary health care centre; and (iv) district hospital. In addition, there are outreach mobile clinics and female community health volunteers at the peripheral level. At the sub-health posts, maternal and child health workers provide antenatal and postnatal care and assist in home deliveries. Auxiliary nurse midwives provide antenatal and postnatal care at health posts, some of which have birthing facilities. The goal of the National Safe Motherhood Programme is to reduce maternal and neonatal morbidity and mortality and improve maternal and neonatal health through preventive and promotive activities and by addressing avoidable factors that cause death during pregnancy, childbirth and the postpartum period^{[1][5]}. Evidence suggests that three

delays are important factors for maternal and newborn morbidity and mortality in Nepal (delays in seeking care, reaching care and receiving care).

In Nepal, utilization of maternal health services depends on the Socio Economic Status (SES) of women. Higher SES women in terms of education level, wealth and urban residence utilize better health care services including maternity care [10]

Chepangs, also called 'Prajans', are regarded as one of the marginalized and socio-economically deprived indigenous ethnic communities living in Central and Southern Nepal especially in Chitwan, Tanahun, Gorkha and Dhading districts and also known as one of the isolated tribal groups of Nepal. Utilization of safe motherhood is deprived in women who belong to low-caste groups of Nepal. Low socioeconomic status, poor knowledge and awareness on obstetric complications, lack of decision-making autonomy, and limited health care options lead to underutilization of existing maternal health care service.

Maternal mortality reduction has also been global, regional, and national commitment, with a vital role to be played in the Agenda for Sustainable Development. Globally various program has been launched according to need of the country even though global target for reduction of maternal mortality has not met till now. In Nepal, government has launched free maternity health service with the target of reduction of maternal mortality rate but the condition has not been improved yet due to poor utilization of maternity health services. [1][5]

A community based cross-sectional survey was carried out in Euthopia. The study shows that 54 % of women undergone ANC visit and only 4.1 % of women delivered babies in the Institution, which is very low¹¹. A descriptive Cross-sectional study was conducted among Chepang and Non-Chepang communities of Makawanpur and Chitwan districts of Nepal in July 2014 for assessing the antenatal and Post-natal

Check-up Practices Among Chepang and Non-Chepang Communities. In this study, out of 1250 (511 Non-Chepang and 739 Chepang), only 11.4% and 7.6% Chepang had visited health post and hospital respectively for delivery whereas 14.7% and 54.6% Non-Chepang had visited health post and hospital respectively for delivery. The practice of home based delivery is found high among the Chepang community which creates the high risk in mortality of mother and baby. 57.9% Non-Chepang followed by only 20.5% Chepang had visited four and more than four times for ANC check-up¹². All these research study shows that utilization of maternity services are very low especially in indigenous group. Very few researches have been conducted in the similar community people of different places such as Chitwan and Makwanpur but only this research is not sufficient. More study is necessary to find out the actual only this research is not sufficient. More study is necessary to find out the actual marginalized group.

Objectives of the study

To find out the utilization of free maternity health services in Vyas Municipality.

To identify association between utilization of free maternity services and selected demographic variables.

MATERIALS AND METHODS

A descriptive cross-sectional study design was adopted for the study to find out the utilization of free maternity health services among reproductive age group women having at least one child up to five years. The study was conducted at Vyas municipality of Tanahau District, which is belongs to Western region of Nepal. The Study population was Reproductive age group (15-49 years) women of Chepang community having at least one child up to five years. Total enumeration sampling technique was used. The sample size was 71. Before conducting the research, formal approval was taken from Institutional Review Committee (IRC, MMIHS). Formal

permission was taken for the data collection from Vyas Municipality of Tanahau. The researcher explained the purpose of the study to the participants and written consent was taken before data collection. Validity of the tool was maintained by consulting with the subject expert and extensive literature review before data collection. Reliability of the research instrument was done with 10% of the sample in non study population to increase the reliability of the instrument and modification of the instrument was applied as per the suggestion from pretest. Data was collected by using Self-developed structured questionnaire through face to face interview schedule within allocated time i.e. May 15, 2019 to November 16, 2019 and it took 20-25 minutes for each respondent. The questionnaire was divided into two parts i.e, Socio demographic information of respondents and questions related to service utilization. Confidentiality was maintained. The data were analyzed by using SPSS version 16 where descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics (chi square test) was used.

RESULTS

Table 1 illustrates that majority of the respondents 80.2% were between the age 15-30 years and the mean age of the respondents was 25.95 and standard deviation ± 7.01 years. Majority of respondents (63.4%) followed Christian religion and only 8.5% respondents and 4.2% of their spouse had secondary level education. Majority (83.1%) of the respondents was engaged in household work and 69% of their spouses do work as a labor. Regarding income 87.3% of respondents had more than 15000 per month

income 69% told that is sufficient for their fulfillment of daily needs. Majority 84.5% of respondents belonged to a nuclear family.

Table 2 shows that 71.8% of the respondents utilized ANC services. Only 22.5 % and 4.2% respondents utilized delivery and postnatal services.

Table 1: Socio-Demographic Characteristics of the respondents, n=71

Characteristics	Frequency(n)	Percentage (%)
Age in years		
15 – 30	57	80.2
>30	14	19.8
Mean age 25.95 \pm 7.01 years		
Religion		
Hindu	26	36.6
Christian	45	63.4
Educational Status		
Illiterate	18	25.4
Read & Write only	29	40.8
Primary	18	25.4
Secondary	6	8.5
Spouse Education		
Illiterate	13	18.3
Read & Write only	36	50.7
Primary	19	26.8
Secondary	3	4.2
Occupation		
Agriculture	9	12.7
Household work	59	83.1
Service	2	2.8
Labor	1	1.4
Occupation of spouse		
Agriculture	5	21.1
Business	1	1.4
Service	2	2.8
Labor	49	69
Foreign employment	4	5.6
Monthly Income		
Up to Rs.15000	9	12.7
More than Rs. 15000	62	87.3
Sufficiency of Income		
Yes	49	69
No	22	31
Types of family		
Nuclear	60	84.5
Joint	11	15.5

Table2 Utilization of free Maternity Service n=71

Variables	Utilization of Services	
	Yes, n (%)	No, n (%)
ANC service utilization	52 (73.2)	19 (27.8)
Delivery and incentive utilization	16 (22.5)	55 (77.5)
Postnatal service utilization	3 (4.2)	68 (95.8)

Table 3 Utilization of Antenatal Services n=71

Variables	Frequency	Percentage
ANC visits		
Yes	52	73.2
No	19	26.8
Reason for not visit health centre for ante partum (n=19)		
Lack of Knowledge	6	31.6
Lack of time	9	47.4
Lack of availability of health facility	2	10.5
Not having any problem	2	10.5

Table 3 Continued...

Number of ANC visit during last pregnancy(n=52)		
< 4 times	28	53.85
≥4 times	24	46.15
Month of ANC visit for first time(n=52)		
As soon as pregnancy detected	7	13.5
3 rd month of pregnancy	15	28.8
Four and later month of pregnancy	30	57.7
ANC visit at the month of 4,6,8,9		
Yes	24	46.15
No	28	53.85
Place of antenatal visit for check up during last pregnancy(n=52)		
Health post	28	53.85
District hospital	24	46.15
Consumption of iron/folate(n=71)		
Yes	52	73.2
No	19	26.8
Intake of anti-helminthes (n=71)		
Yes	40	56.3
No	31	43.7
TT vaccine (n=71)		
Yes	52	73.2
No	19	26.8
Number of TT vaccine (n=52)		
One dose	29	55.7
Two dose	23	44.3

Above table illustrated, 73.2% of respondents had attended an ANC clinic. Among them only 46.15% of had undergone four or more ANC visits. Reason for not visiting antenatal clinic was lack of time (47.4%). Near about sixty percent 57.7% of the respondents had visit ANC clinic in the fourth or later months of pregnancy. All respondents prefer government hospital for ANC visit. Regarding the utilization of Iron. Folate tablet, Tetanus Toxoid injection and antihelminthes, 73.2% respondent had consumed that medication and 56.3% had received T.T injection and 56.3% had received anti-helminthes (albendazole).

Table 4 shows that last baby in home followed by only 22.5% respondent had delivered their baby in government hospital that indicate that only 22.5% utilized the free maternity health services and 74.6% respondent had delivered their baby at home that indicate the practice of home based delivery is found high among the Chepang community which creates the high chances of morbidity and mortality of mother and new born baby. The reason for not attaining hospital delivery 52.8% respondent answered there was no accessibility of health services that means away from the home. All respondents who delivered health facility received Vitamin A capsule.

Table 4 Utilization of Delivery Services, n=71

Variables	Frequency(n)	Percentage (%)
Hospital delivery		
Yes	18	25.4
No	53	74.6
Place of delivery (n=71)		
Home	53	74.6
Government hospital	16	22.5
Private hospital	2	2.8
Reason for not seeking health facility (n=53)		
Long distance	18	52.8
Lack of knowledge	13	24.5
Traditional view of laws	3	5.7
Shyness	9	17
For Hospital delivery, person conducting delivery(n=18)		
Doctors	2	11.1
Nurse/SBA	16	88.9
Vitamin A capsule consumption(n=71)		
Yes	18	25.4
No	53	74.6

Table 5 Utilization of Postnatal Services, n=71

Variables	Frequency(n)	Percentage (%)
PNC visits(n=71)		
Not done	57	80.3
<3 Visits	11	15.5
≥3 visits	3	4.2
Timing of PNC (n=14)		
First 24 hours	11	78.6
Within 3- 7days	2	14.3
Within 45 days	1	7.1
Receipt of PNC services(n=14)		
Examination of mother and baby	11	78.6
Contraceptives	1	7.1
Immunization	2	14.3
Reason for not going postnatal check up(n=57)		
Lack of knowledge	36	53.2
Not having any complications	9	15.8
Far from house	5	8.8
Lack of transportation	7	12.3

Table 5 illustrate that majority (80.3%) of the respondents did not utilize postnatal services among them only (4.2%) respondents had utilized adequate number and service of postnatal. Majority 78.6% of respondents had visited postnatal services within 24 hours after delivery and minimum

7.1% respondents had visited postnatal services at six weeks of postnatal period. Most of them 78.6% came for examination for herself and for baby. Reason for not coming postnatal service utilization respondents 53.2% answered they had no knowledge about it.

Table 6 Association between socio-Demographic variables and Utilization of ANC n=71

Variables	Utilization of ANC services				P value
	Yes n=51	(%)	No n=20	(%)	
Age in years	47	82.5	10	17.5	# .000*
15-30	4	28.6	10	71.4	
>30					
Educational status					.001*
Illiterate	7	38.9	11	61.1	
Literate	44	83.0	9	17.0	
Religion of Respondents					.044*
Hindu	15	57.7	11	42.3	
Christian	36	80.0	9	20.0	
Types of family					# 1.000
Nuclear	43	71.7	17	28.3	
Joint	8	72.7	3	27.3	
Sufficiency of income					.006*
Yes	40	81.6	9	18.4	
No	11	50.0	11	50.0	

Key:* significant (P value≤ 0.05) and #= Fisher's Exact test.

Table 6 revealed that there was statistically significant association between utilization of ANC services and age

(p=0.000), sufficiency of the income (p=.006), education of the respondent (p=0.001) and religion of the respondents (p= 0.044).

TABLE 7 Association between socio-Demographic variables and Utilization of delivery services

Variables	Utilization of delivery services				P value
	Yes n=16	(%)	No n=55	(%)	
Age in years					#.029*
15-30	16	28.1	41	71.9	
>30	0	0.0	14	100.0	
Educational status					#.007*
Illiterate	0	0.0	18	100.0	
Literate	16	30.2	37	69.8	
Religion of Respondents					.207
Hindu	8	30.8	18	69.2	
Christian	8	17.8	37	82.2	
Types of family					#.253
Nuclear	12	20.0	48	80.0	
Joint	4	36.4	7	63.6	
Sufficiency of income					#.122
Yes	14	28.6	35	71.4	
No	2	87.5	20	90.9	

Key:* significant (P value≤ 0.05) and #= Fisher's Exact test.

Table 7 revealed that age (p=0.29), education of the respondent (p=0.007) is significant with delivery service utilization.

DISCUSSION

The present study showed that out of 71 respondents, 73.2% of respondents had

utilized antenatal services at their last trimester this findings is compare with study done in Lalitpur 2017, Nepal, reporting out of 153 respondents 86% of respondents had gone for ANC check-up four or more time as recommended by WHO¹³. The difference could be due to large sample size i.e 153

and different sampling technique which is simple random sampling. As compare with national statistics this figure is higher than NDHS 2011 (58.3%) and lower than NDHS 2016 (84%).^{[14][15]} This may be due to large sample size i.e 12,862 reproductive age women were interviewed and different sampling technique was used. This study reveals that only 22.5% respondents had utilized the free delivery services and 77.5% respondents had not utilized the delivery services. Similar study conducted in Chitawan and Makwanpur district in 2014 Chepang community shows that only 3.7% had utilized the delivery services and 96.3% Chepang women did not utilized such services¹². This may be due to lack of knowledge about free maternal health services, inaccessibility free maternal services, poor decision power of women etc. Similarly, the utilization of postnatal services, study shows that only 4.2% of respondents utilized the postnatal services with an accurate visit. This study is contracted with study done by NDHS 2016 which is 57%¹⁵. This may be due to large sample i.e. 12,862 and different sampling technique.

In regards to number of ANC visit, 46.15% had attended four or more than four visit at accurate month that is 4,6,8 and 9 which is recommended by WHO, among them all respondents had chosen government health facility for place of ANC visit either it is health post or district hospital. As compare to study conducted in Ethiopia shows 46.5% answered they attended more than four antenatal visits which is similar to this study but 86.5% respondent had chosen public health facility for antenatal checkup.¹¹ Similarly among 71 respondents, 73.2% respondents had taken iron/folate tablets and Tetanus Toxoid injection but only 56.3% respondents had taken antihelminth medication. Contradict with the findings of the study conducted in Nigeria 2013 94.1% respondents received iron/folic acid tablet, 87.9% respondents received Tetanus Toxoid injection^[12]. This may be due to large sample size i.e 405 and

multistage sampling technique another reason of these differences may be majority of respondents were literate and employed.

Nepal government has developed different policies to promote the institutional delivery although the result has not been improved. This study revealed that majority 74.6% delivery had take place at home. Compare to similar study conducted in Chepang women at Makawanpur and Chitawan 96.3% had given birth at home¹³. This may be lack of knowledge about free maternity health services, poor decision making power of women, and inaccessibility of health services that mean away from the home. On area of postnatal service utilization only 19.7% respondents had attended postnatal visit, among them only 4.2% had done more than three visit which is recommended number for visit. Compare with study conducted by NDHS 2016 which is not similar i.e 57%¹⁵. This may be due to large sample size, different study setting and sampling technique. Types of service utilization 78.6% respondents came for examination of mother and baby.

The present study findings reveal that there was statistically significant between age, educational level, family income and religion with utilization of the antenatal services. Consistent to cross sectional study carried out in slums of Pokhara Sub-Metropolitan city, Nepal reflects that utilization of antenatal services is significantly associated with age of the respondents.¹⁶ This study also reveals that there was statistically significant between age and educational level with delivery services utilization. Compare with the study conducted in Euthopia shows that there was statistically significant between marital status, education, proximity of health facility to the village, and husband's occupation, while use of institutional delivery was mainly associated with parity, education, having received ANC advice, a history of difficult/prolonged labour, and husbands' occupation.

CONCLUSION

It is concluded that utilization of Antenatal services is relatively acceptable as compared to utilization of Delivery and Postnatal services among Chepang women of Vyas municipality. There was significant association between utilization of antenatal services with respondents Age, types of family and sufficiency of income. Despite the provision of free maternal health care services provided by Government of Nepal utilization of these services among such indigenous group is still low. Hence improving the quality of Antenatal Care through the provision of proper counseling and advice to Antenatal Care attendants might increase the rate of institutional delivery and postnatal visit.

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