

Maternal Health Services Utilisation in Panchkhal Municipality, Kavrepalanchok, Nepal

Paudel L, Shrestha L, Budhathoki L, Zoowa SB, Bhandari G, Shrestha KK

Department of Community Medicine,
Nepalese Army Institute of Health Sciences,
Sanobharyang, Kathmandu, Nepal.

Corresponding Author

Leela Paudel
Department of Community Medicine,
Nepalese Army Institute of Health Sciences,
Sanobharyang, Kathmandu, Nepal.
E-mail: dr.leela1984@gmail.com

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ABSTRACT

Background

Maternal Health is a priority program of Nepal. The low utilization of maternal health services is one of the major contributing factors for high maternal morbidity and mortality in developing countries like Nepal.

Objective

To explore various maternal health services utilized by women and identify various factors affecting the utilization of maternal health services in Panchkhal Municipality.

Method

A descriptive cross-sectional study was conducted among 355 reproductive-age women who have given birth in the last 2 years in Panchkhal Municipality. The data collection period was from May to July 2020. A convenient sampling method was used to select the study population. The data analysis was done by using Statistical Package for Social Sciences (version 20.0). Variables were defined by the frequency in numbers and percentages.

Result

The findings from the study showed that the coverage of the antenatal care (ANC) visit was 77% and among them, 25.6% visited at least 4 antenatal care visits as recommended by the government of Nepal. Out of 355 respondents, 52.4% were delivered in the health institution, and only 20% visited postnatal care after the delivery. Among various factors, lack of treatment facilities and health facilities at a far distance were the most common factors for the underutilization of maternal health services.

Conclusion

The coverage of maternal health services is still low despite free maternal health services with an incentive scheme. A further detailed investigation is required to find the real scenario of the Panchkhal municipality to under-utilization of maternal health services.

KEY WORDS

Maternal health service, Nepal, Reproductive-age, Women

INTRODUCTION

Despite National Health Program, maternal mortality and morbidity remain high in Nepal.¹ Evidence suggests that three delays are important factors for maternal morbidity and mortality in Nepal (delays in seeking care, reaching care, and receiving care).² The main reason behind this could be underutilization or delay in seeking maternal health services.

The utilization of maternal health services during pregnancy, delivery, and postnatal period effectively reduces the risk of maternal morbidity and mortality in Nepal.³ Maternal health services are defined as health care that a woman receives during pregnancy, childbirth, and six weeks after the delivery of the baby.

So, this study is conducted to explore various maternal health services utilized by women and identify various factors affecting the utilization of maternal health services in Panchkhal Municipality. It will be of great help in strengthening the maternal health services and improvements in utilization indicators.

METHODS

A descriptive cross-sectional study was conducted in Panchkhal Municipality from May 2020 to July 2020. Women in the household who have given birth in the last 2 years were the study population. Convenient sampling method was used to select the study population.

The sample size was calculated as

$$\text{Sample size } (n) = Z^2pq/d^2$$

Where, Z=confidence level at 95% (standard value=1.96)

p=estimated prevalence of 4 or more antenatal care visit by women=69% q=1-p (1.96)²*0.69*0.31/(0.05)² =328.⁴

Considering, 5% non respondent

Final sample size=355

Pre-tested semi-structured questionnaires were used as a tool for data collection. Ethical approval was taken from the Institutional Review Committee of the Nepalese Army Institute of Health Sciences (Reference number: 245) and verbal consent was taken from each woman available in the house during the data collection period. The data obtained were entered and analyzed via the Statistical Package for the Social Sciences (SPSS, version 20). Variables were defined by the frequency in numbers and percentages.

RESULTS

The mean age of the respondents with standard deviation was 25.83±3.65 years (Range: 20 to 40 years). The majority of them had completed secondary level of education (56.3%) and only 2% of the participants were illiterate.

The major religion being followed was Hindu and most of the participants were Janajati by ethnicity followed by Brahmin, Dalit, and Chhetri. The nuclear family was more common than the joint family. The major occupation was found to be agriculture followed by services (Table 1).

Table 1. Demographic profile of the participants (N=355)

Variables	Frequency (n)	Percentage (%)	
Age (years)	< 25	127	35.8
	25-30	173	48.7
	≥ 30	55	15.5
Education	Illiterate	7	2.0
	Literate	4	1.1
	Secondary	200	56.3
	Higher secondary	144	0.6
Ethnicity	Brahmin	79	22.3
	Chhetri	14	3.9
	Janajati	207	58.3
	Dalit	55	15.5
Occupation	Agriculture	85	23.9
	Services	122	34.4
	Business	33	9.3
	Labor	7	2.0
	Housewife	108	30.4
Religion	Hindu	352	99.2
	Christian	2	0.6
	Buddhist	1	0.3
Family Type	Nuclear	205	57.7
	Joint	150	42.3

The mean age at marriage was 19.08±3.83 years. (Range: 12-31) while the mean age at first pregnancy was 21.38 ± 13.23 years (Range: 15-18) (Table 2).

Table 2. Age at marriage and pregnancy (N=355)

	Age at marriage (years)	Age at pregnancy (years)
Mean	19.08	21.38
Standard deviation	3.83	13.23
Range	12-31	15-18

Concerning various maternal health services utilization, almost 77% of mothers visited a health center for an antenatal check-up. Thirty-one percent of mothers visited a health center for an antenatal check-up more than four times, 25.6% visited four times and 20% visited for less than four times throughout their pregnancy. The prevalence of Institutional delivery was 52.4%. Similarly, 80% of the mother used temporary methods of family planning, 10% used permanent methods of family planning, and the remaining 10% did not use any methods of family planning. The percentage of mothers getting iron supplements during their pregnancy was almost 88%. Likewise, 87%

of the mother took TT injections during their pregnancy and only 20% of mothers visited for postnatal care after delivery (Fig. 1 and 2).

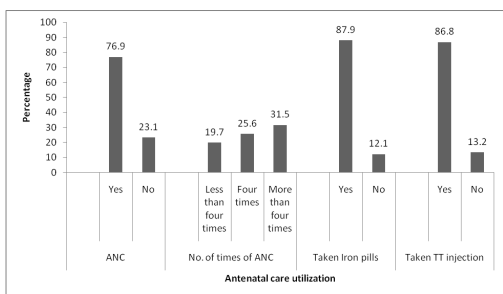


Figure 1. Percentage distribution of antenatal care utilization

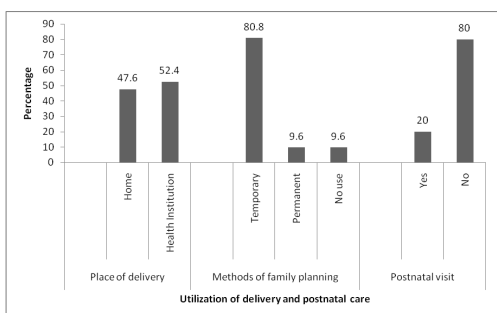


Figure 2. Percentage distribution of delivery and postnatal care utilization

Amongst various factors, lack of treatment facilities (6.5%), health facilities at far distance (5.9%), and unavailability of health personnel (4.8%) were the most common factors for the underutilization of maternal health services in Panchkhahal municipality (Table 3).

Table 3. Factors influencing the utilization of maternal health services

Variables	Frequency (n)	Percentage (%)
Lack of awareness	11	3.1
Refusal from home	4	1.1
Lack of transport facilities	5	1.4
Health facilities at a far distance	21	5.9
Lack of treatment facilities	23	6.5
Unavailability of health personnel	17	4.8
Feel it unnecessary	1	0.3

DISCUSSION

Maternal health is a priority program of the Ministry of Health and Population (MoHP). It aims to reach the Sustainable Development Goal (SDG) target of 70 maternal deaths per 100,000 live births but non-utilization of maternal health services is the widespread challenge resulting in maternal mortality and morbidity in Nepal.⁶ Demographic factors, socio-economic status, availability and accessibility of health care services, geographical location, and needs of health care are some factors that determine the utilization of maternal health care services.

In the current study, the antenatal visit was made by 77% of women which was lower than the study conducted by Nepal demographic Health survey (NDHS 2016) (84%), Shah et Al. (88%), Pradhan et al. (78%) and Koirala et al. (98%).^{5,7-9} However, in other studies the coverage of antenatal visits was 66.44% and 39.9% respectively much lower than the current study.^{1,10} The low coverage of ANC visits might be due to various factors like unavailability of health personnel, lack of time due to household works, a health facility at a far distance, lack of awareness, lack of treatment facilities, etc. So, efforts are needed to improve the quality of maternal health care to end preventable maternal and adverse pregnancy outcomes in Nepal.¹¹

Nepal follows the World Health Organization’s recommendations of initiation of ANC within the first four months of pregnancy and at least four ANC visits throughout an uncomplicated pregnancy. In this study, among those who visited health institutions, only twenty-six percent of respondents completed four ANC visits which is much lower than the study conducted by NDHS (69%), Shah et al. (82%), Pradhan et al. in Nepal(62%), Sanjel et. al (46.4%) in Nepal.^{5,7,8,12} The reason might be due to poor socio-economic conditions, opposition from family members, low autonomy status of women, lack of awareness, shortage of skilled human resources, and dissatisfaction with the services provided at public health facilities. One study done in Nepal showed that high women’s autonomy contributed to the positive association with the utilization of maternal health care services during pregnancy, delivery, and postnatal period in Nepal.¹³ Moreover, there is an implementation of incentive programs by the government of Nepal to increase the utilization of maternal health care services during pregnancy, childbirth, and the postnatal period but this study couldn’t see the encouraging response from the respondents.

According to NDHS survey data from 2011 to 2016, it showed that there was a 22% increase in the proportion of institutional deliveries (from 35% to 57%).⁵ But the percentage of women who delivered their child in health institution in the current study is 52.4% less than NDHS data (57%).⁵ It showed that women should be made aware of the importance of antenatal care visits and they should also be well aware about the maternal incentive program run by the government of Nepal. It will help in increasing the antenatal care visits as well as promote institutional delivery and which in turn helped to reduce maternal and child mortality in Nepal. Next study conducted in Africa, showed a significantly high proportion of institutional delivery compared to our study which was due to women getting enrolled in health insurance programs which was one of the strategy to improve the utilization of maternal health services in Africa.¹⁴ In addition, the study conducted in India and Central Ethiopia showed a slightly higher prevalence of institutional delivery than the current study which could be due to the availability of better health service facilities.^{15,16}

The current study showed that 90% of the mother used at least one method of family planning and among these, 80% used temporary methods and the remaining 10% permanent methods of family planning. This finding is similar to the study conducted in Kavre district, Nepal in which 91% used at least one method of family planning and among them, 9% used permanent methods of family planning.¹⁷ The percentage of a mother getting iron supplements during their pregnancy was almost 88%. Likewise, 87% of the mother took TT injections during their pregnancy which was less compared to National data.⁵

Nepal is a signatory to the Sustainable Development Goals, which have set an ambitious target to achieve coverage of 90% for four ANC visits, institutional delivery, SBA delivery, and three PNC check-up by 2030.¹⁸ In addition, three PNC check-up are recommended to reduce maternal and neonatal morbidity and mortality: the first within 24 hours of delivery, the second on the 3rd day, and the third on the 7th day of delivery.¹⁹ The current study showed a low proportion of three recommended PNC visits (20%) which is similar (17.5%) to the study conducted in Chitwan, Nepal in 2019.²⁰ So, new policies should be developed to increase PNC visits because serious and life-threatening complications can occur in the postpartum period even if the pregnancy is uneventful.

Among various factors, lack of treatment facilities (6.5%), health facilities at far distance (5.9%), and unavailability of health personnel (4.8%) were the most common factors for underutilization of maternal healthcare services in this study. A similar study conducted in eastern Nepal showed that family pressure, superstition, shyness, illiteracy, large family size as the most important factors for the

underutilization of maternal health services.⁴ So, a further detailed investigation is needed to know the actual causes of the non-utilization of maternal health services.

The findings of this study cannot be generalized because it doesn't represent the whole population of the kavrepalanchok district due to a convenient sampling frame.

CONCLUSION

The utilization of maternal health services was found to be low in spite of free maternal health services with an incentive scheme provided by the Government of Nepal. Among various factors, lack of treatment facilities and health facilities at a far distance were the most common factors for the underutilization of maternal health services. This study gives an important message to policymakers, health service providers, and other stakeholders to further strengthen both ANC and PNC services to reduce maternal and child morbidity and mortality. A detailed investigation is required to find the real scenario of Panchkhal municipality concerning the underutilization of maternal health services.

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