



## UTILIZATION OF POSTNATAL AND NEONATAL CARE SERVICES IN MUSHAR BASTI, MOHATTARI

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### Abstract: -

**Background:** Postnatal care (PNC) & Neonatal care is an important part of maternal care, as serious and life-threatening complications can occur in the postpartum period & premature period, even in a woman who had an uneventful pregnancy and delivery. Utilization of Postnatal & neonatal care services is very vital to reduce maternal mortality and morbidity as well as good health of children for the developing country like Nepal. A postnatal care service was utilized very less by people than antenatal services. Therefore, a proper understanding for the utilization of postnatal & neonatal care services during postnatal & neonatal period is important for the sound health of both mother and newborn.

**Methods:** A descriptive cross-sectional study was conducted among 157 mothers. Purposive sampling was adapted for area selection while the respondents were selected by using snow-ball sampling method. A semi structured questionnaire was prepared whereas face to face interview was done for information collection. The privacy and confidentiality of the collected data was maintained.

**Findings:** Only about half of the respondents i.e. 56.1% had attended postnatal care services during their last pregnancy and only about one-third of the respondents (40.9%) had complete PNC whereas about 95.45% of them received their first PNC checkup within 24 hours. The study shows that, out of total respondents who had utilized PNC services, about 95.5% of respondents were satisfied with the PNC services provided in health institution. Lack of awareness about the importance of PNC services is the main reason with 46.4% behind not utilized PNC services. Similarly, majority of respondents (64.3%) said they had no proper transportation facility to visit health center.

**Conclusion:** The study reveals that about only half of the respondent (mothers) had utilized Postnatal and Neonatal care services. Postnatal and Neonatal care was provided by either doctor or nurse in the health institutions among which most of them had first postnatal care within 24 hours of delivery. Lack of the awareness about the importance of postnatal and neonatal care services is the main reason behind not utilizing PNC and Neonatal care services. Similarly, about one-third of respondent had no proper transportation facility to visit health center which can be another major barrier for the utilization of postnatal and neonatal care service.

**Keywords:** Postnatal and Neonatal care services, Utilization, Mushar Basti.

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## Introduction

The postnatal & neonatal period is critical to the health and survival of a mother and her newborn. The most vulnerable time for both is during the hours and days after birth. Lack of care in this time period may result in death or disability as well as missed opportunities to promote healthy behaviors, affecting women, newborns, and children. There has been limited research into provision and content of postnatal care and the number and range of postnatal contacts women have with their midwife, health visitor are not well documented. Although midwives were required to visit postnatal women every day for 10 days until 1986 when a policy of selective visiting was introduced, in many locations the traditional daily visit pattern persisted, as highlighted in a report by the Audit Commission published in 1997.

According to postnatal & neonatal care service factsheet of WHO (World Health Organization), every year in Africa, at least 125,000 women and 870,000 newborns die in the first week after birth, yet this is when coverage and program are at their lowest along the continuum of care. The first day is the time of highest risk for both mother and baby. The fact that 18 million women in Africa currently do not give birth in a health facility poses challenges for planning and implementing postnatal care (PNC) for women and their newborns. Regardless of place of birth, mothers and newborns spend most of the postnatal period (the first six weeks after birth) at home. The postnatal care has a low uptake and is often regarded as inadequate in Nepal. A descriptive cross-sectional study carried out in rural area of Nepal in 2006, according to which the proportion of women who had received postnatal care after delivery was low (34%). Less than one in five women (19%) received care within 48 hours of giving birth (1).

As Nepal is developing country there are various factors or barrier that are associated with utilization of postnatal & neonatal care services such as lack of awareness among women and their family about the care, distance to health facilities, lack of trained health workers and lack of health facilities in the village. Similarly, women who had low education, the high number of pregnancies and children had less access to postnatal care. These all factors have the direct impact on health of the mother and children and this study aimed to assess the postnatal & neonatal care practice among the mother Mushar Basti.

### Study design

A descriptive cross-sectional study designed was adapted to determine the utilization of postnatal & neonatal care services in Mushar Basti of Mohattari district. This study was quantitative in nature.

### Study variables

#### Dependent variable

Utilization of postnatal & neonatal care services among the mother of children was considered as dependent variable of the study.

#### Independent variables

The independent variable of the study includes different categories of information i.e. Socio-demographic factors, Socio-economic factors, service related factors, cultural factors, legal and environmental factors.

### Socio- demographic factors

- Age of respondents
- Education qualification of respondent
- Education qualification of husband
- Family size
- Ethnicity of respondents
- Geography

### Socio-economic factors

- Occupation of respondents
- Occupation of husband
- Family income

### Service-related factors

- Accessibility of health services
- Health worker behavior
- Skilled of health worker
- Information excess/media exposure

### Cultural factors

- Cultural taboos

### Environmental factors

- Transportation facilities

### Study area

Bhatuliya Village and Bardibas municipality Mushar Basti in Mohattari district was the study area.

### Study population

The study population was mothers having two years of children living in the Bhatuliya Village and Bardibas municipality Mushar Basti in Mohattari District

### Sampling technique

In this research study, Bhatuliya Village and Bardibas Mushar Basti were purposively selected and the mothers having children under 2 year taken as a study unit.

All the interested mothers having children under two years living in Bhatuliya Village and Bardibas municipality Mushar Basti were the respondent and was selected by using snowball sampling technique.

### Sample size (estimation)

Sample size of the study was determined on the basis of study conducted of annual report of Department of Health services 2016/17. Using the prevalence 18% with 95% confidence interval and 6% margin of error, sample size was calculate by using following statistical formula for infinite population.

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

Where,

n= Sample size with infinite population

$Z = Z$  Statistic for a level of confidence (1.96)

$P =$  Prevalence of mother utilizing postnatal care services (18%)

$d =$  Acceptable margin error (6%) Now,

$$n = [1.96^2 \times 0.18 \times 0.82] \div (0.06)^2$$

$$= 0.56 \div 0.0036$$

$$= 157.1$$

So, the calculate sample size of the study is 157.

### Data collection tools and technique (instrumentation)

The instrumentation for data collection was semi-structure questionnaire to assess the utilization of postnatal & neonatal care service and the information was collected through face to face interview method. It was designed in English language and composed in six different sections. A written form was given in consent during the data collection process. The questionnaire was developed according to the objectives after literature review, discussion with supervisor.

### Data management, analysis and interpretation procedure

Data was collected by face-to-face interview using questionnaire prepared for the purpose of this study. The collected data was entered, coded and decoded by using IBM SPSS 20 statistical tool. The necessary data was analyzed using simple descriptive statistics such as percentage, frequency etc. and interpreted through graph, tabulation, pie-chart and bio-diagram. Bivariate analyses was done. This was followed by a chi-square test to draw the significance between the dependent and independent variables.

### Validity and reliability

**Validity:** Validity of study was maintained by development of questions based on objective of studies, extensive review of study, continuous guidance of research advisor and department of public health of the college having adequate knowledge in developing such instrument.

**Reliability:** Reliability of study was maintained by reviewing published literatures. Moreover, reliability and consistency was checked by conduction of a pilot study among same characteristics group (few mothers having less than 2 years of children). After pilot study, the necessary corrections in the tools were made

carefully. The research methodology guidelines and feedback from the supervisor were strictly followed.

Study among same characteristics group (few mothers having less than 2 years of children). After pilot study, the necessary corrections in the tools were made carefully. The research methodology guidelines and feedback from the supervisor were strictly followed.

### Inclusion and exclusion criteria

**Inclusion criteria:** All the interested mothers having children below two Year was included in the study.

**Exclusion criteria:** The study excluded the mothers having no children.

### Operational definitions

**Utilization:** Complete three postnatal & neonatal care service received by mothers as per recommended by Government of Nepal

**Postnatal care services:** A postnatal care service includes systematic examination of mother and baby and appropriate advice given to the mother during post-partum period.

- 1<sup>st</sup> PNC visit within 24 hours
- 2<sup>nd</sup> PNC visit on the 3<sup>rd</sup> day
- 3<sup>rd</sup> PNC visit on the 7<sup>th</sup> day

**Neonatal Care Service:** Neonatal Care service included systematic examination of new born baby within first 28 days of life.

## Results

### Socio-Demographic Information of the Respondents

Table 1 shows that, among the total respondent (n=157) participated in the study, about two- third i.e. 61.79% were of 21-26 years age group. The mean age of the respondents was 27.58 years with standard deviation 3.872. Out of total respondents, most of the respondent 93.63% and most of their husband (95.54%) were illiterate. Similarly, their father and mother in laws were all illiterate (100%). Majority of respondent (70.7%) were living in joint family. Half of the respondents i.e. 52.2% had only one child followed by 43.3% of respondent with two children.

**Table 1: Socio-Demographic Information of the Respondents**

**n=157**

| Variables                                       | Frequency | Percentage |
|-------------------------------------------------|-----------|------------|
| <b>Age group of respondents (Years)</b>         |           |            |
| 15-20                                           | 16        | 10.19      |
| 21-26                                           | 97        | 61.79      |
| 37-32                                           | 40        | 25.47      |
| 33-38                                           | 4         | 2.54       |
| <b>Educational Qualification of respondents</b> |           |            |
| Illiterate                                      | 146       | 93.63      |
| Primary level                                   | 11        | 6.36       |

| Educational Qualification of husband       |     |       |
|--------------------------------------------|-----|-------|
| Illiterate                                 | 150 | 95.54 |
| Primary level                              | 5   | 3.18  |
| Higher secondary                           | 1   | 0.63  |
| Bachelor and above                         | 1   | 0.63  |
| Educational Qualification of mother in Law |     |       |
| Illiterate                                 | 157 | 100   |
| Educational Qualification of father in law |     |       |
| Illiterate                                 | 157 | 100   |
| Type of family                             |     |       |
| Nuclear                                    | 46  | 29.3  |
| Joint                                      | 111 | 70.7  |
| Number of children in respondent           |     |       |
| One                                        | 82  | 52.2  |
| Two                                        | 68  | 43.3  |
| Three                                      | 7   | 4.5   |

### Economic status of respondents

The research study (table 2) shows that 84.7% of the respondents were house wife whereas only 2.5% involved in business and agriculture respectively. The major occupation of

husband of respondents was private service (47.1%) The monthly income of respondents was very low among the respondents. Among them 75.80% had monthly income between Rs. 10000-20000. Very few (3.82%) had income more than Rs. 30000 per month.

| Table 2: Economic status of respondents |           | n=157      |
|-----------------------------------------|-----------|------------|
| Variables                               | Frequency | Percentage |
| Occupation of respondents               |           |            |
| Housewife                               | 133       | 84.7       |
| Government serviced                     | 8         | 5.1        |
| Private serviced                        | 8         | 5.1        |
| Business                                | 4         | 2.5        |
| Agriculture                             | 4         | 2.5        |
| Occupation of husband                   |           |            |
| Government serviced                     | 7         | 4.5        |
| Agriculture                             | 30        | 19.1       |
| Private serviced                        | 74        | 47.1       |
| Business                                | 23        | 14.6       |

|                                            |     |       |
|--------------------------------------------|-----|-------|
| Foreign employment                         | 18  | 11.5  |
| Others                                     | 5   | 3.2   |
| <b>Average monthly income of household</b> |     |       |
| <Rs.10000                                  | 9   | 5.72  |
| Rs.10000 to Rs.20000                       | 119 | 75.80 |
| Rs.20000 to Rs.30000                       | 23  | 14.70 |
| >Rs.30000                                  | 6   | 3.82  |

### Information Education and Communication related information of respondents

Table 3 presents information, education and communication related information of respondents. The study shows that out of total respondents, about three-fourth (73.9%) of the respondents heard about postnatal care services. Among those who heard about

postnatal care services, significant percentage i.e. 93.1% heard from health worker followed by radio /TV (31%). Only (20.4%) had participated in interaction with health worker whereas few of them (12.5%) had participated in interaction with health workers whereas few of them (12.5%) had participated in rally for PNC services.

**Table 3: Information Education and Communication related information of respondents** n=157

| Variables                                                    | Frequency | Percentage |
|--------------------------------------------------------------|-----------|------------|
| <b>Heard about PNC and Neonatal services by respondents</b>  |           |            |
| Yes                                                          | 116       | 73.9       |
| No                                                           | 41        | 26.1       |
| <b>If yes, Heard about PNC and Neonatal services through</b> |           |            |
| Radio/TV Friends/NeighborsNewspaper                          | 36        | 31.0       |
| Health worker                                                | 32        | 27.6       |
| Others                                                       | 12        | 10.3       |
|                                                              | 108       | 93.1       |
|                                                              | 4         | 3.4        |
| <b>Ever participated in PNC and Neonatal related program</b> |           |            |
| Yes                                                          | 32        | 20.4       |
| No                                                           | 125       | 79.6       |
| <b>If yes, types of program</b>                              |           |            |
| Rally for PNC services Interaction with health workers       | 4         | 12.5       |
| Workshop on PNC checkup and visit                            | 20        | 62.5       |
|                                                              | 8         | 25.0       |

### Service Related Information of Respondents

Table 4 presents postnatal and neonatal services related information of respondents. Findings of the study shows that only 56.1% of respondents had attended postnatal care services during

last pregnancy. Among those who utilized PNC services, majority of them (64.8%) received from hospital while only 5.7% received from PHC. According to the respondents, they were examined by doctors 90.9% while 9.1% were attended by nurse Out of 43.9% of

respondents utilized PNC services, 40.9% had complete PNC visit (3 or more visit) followed by just once (31.8%). Significant percentage (95.45%) of respondents had their first PNC checkup within 24 hours of delivery. Majority of respondents i.e. 95.5% had received Counseling and breastfeeding service followed by Examination of mother and newborn (72.7%) among the various types of PNC services. Almost 95.5% of respondent were satisfied with PNC services provided in health institutions. Nearly all of the respondent (94.3%) said that friendly behavior was showed by health worker whereas 5.7% said unfriendly behavior showed in health institutions. About 89.8% of respondent had known about free health care services provided by the government during PNC

service among which 79.5% said free counseling, 67.4% said free checkup where as 55.7% said free medicine while 27.3% said free family planning services. Majority of respondents (72.7%) had paid money for PNC services. The reason behind not utilizing postnatal services was didn't know about its importance with 46.4% according to the respondents who didn't utilized PNC services.

In contrast, 43.9% of respondents didn't receive any postnatal service. Among them 46.4% were not aware about its importance where as 23.2% through they were completely healthy.

**Table 4: Service Related Information of Respondents**

| <b>Variables</b>                                                              | <b>Frequency</b> | <b>Percentage</b> |
|-------------------------------------------------------------------------------|------------------|-------------------|
| <b>Utilization of PNC and Neonatal services during last Pregnancy (n=157)</b> |                  |                   |
| Yes                                                                           | 88               | 56.1              |
| No                                                                            | 69               | 43.9              |
| <b>Health center from where PNC and Neonatal services utilized (n=88)</b>     |                  |                   |
| PHC                                                                           | 5                | 5.7               |
| Health post                                                                   | 11               | 12.5              |
| Hospital Private hospital                                                     | 57               | 64.8              |
|                                                                               | 15               | 17.0              |
| <b>Included in PNC care services (n=88)</b>                                   |                  |                   |
| Vitamin A                                                                     | 88               | 100               |
| Health Examination                                                            | 88               | 100               |
| <b>Included in neonatal care service (n=88)</b>                               |                  |                   |
| Immediate Breast Feeding                                                      | 49               | 55.68             |
| Keep baby warm                                                                | 10               | 11.36             |
| Bath after birth                                                              | 4                | 4.54              |
| Skin to skin contact                                                          | 19               | 21.59             |
| <b>Start Breastfeeding after delivery (n=88)</b>                              |                  |                   |
| After one day                                                                 | 27               | 30.68             |
| Other                                                                         | 61               | 69.31             |
| <b>How long exclusive breastfeeding (n=88)</b>                                |                  |                   |
| Up to six month                                                               | 63               | 71.59             |
| 2 year                                                                        | 25               | 28.40             |

| Person who provided PNC and Neonatal services in health center (n=88)               |    |       |
|-------------------------------------------------------------------------------------|----|-------|
| Nurse                                                                               | 8  | 9.1   |
| Doctor                                                                              | 80 | 90.9  |
| Times of visited health institution for PNC and services (n=88)                     |    |       |
| Complete (3 or more visit)Visiting 2 times                                          | 36 | 40.9  |
| Just once                                                                           | 24 | 27.27 |
|                                                                                     | 28 | 31.8  |
| Get first PNC checkup (n=88)                                                        |    |       |
| Within 24 hours of delivery                                                         | 84 | 95.45 |
| 2 <sup>nd</sup> day                                                                 | 4  | 4.65  |
| Types of PNC and Neonatal care services that had been utilized by respondents(n=88) |    |       |
| Examination of mother and new born                                                  | 64 | 72.7  |
| Counseling and breastfeeding                                                        | 84 | 95.5  |
| Education on maternal nutrition                                                     | 40 | 45.5  |
| Supplementation                                                                     |    |       |
| Immunization of newborn                                                             | 36 | 40.9  |
| Counseling in FP and birth spacing                                                  | 32 | 36.4  |
| Satisfied with PNC and Neonatal services provided in health institutions (n=88)     |    |       |
| Yes                                                                                 | 84 | 95.5  |
| No                                                                                  | 4  | 4.5   |
| Behavior showed by service provider (n=88)                                          |    |       |
| Friendly                                                                            | 83 | 94.3  |
| Unfriendly                                                                          | 5  | 5.7   |
| Heard about free health care services provided by government by respondents(n=88)   |    |       |
| Yes                                                                                 | 79 | 89.8  |
| No                                                                                  | 9  | 10.2  |
| If yes, types of free services (n=79)                                               |    |       |
| Free checkup                                                                        | 54 | 67.4  |
| Free counseling                                                                     | 70 | 79.5  |
| Free medicine                                                                       | 49 | 55.7  |
| Free supplementation of nutrition                                                   | 28 | 31.8  |
| Free family planning services                                                       | 24 | 27.3  |

| <b>Pay money for PNC and Neonatal care services (n=88)</b>         |    |      |
|--------------------------------------------------------------------|----|------|
| Yes                                                                | 64 | 72.7 |
| No                                                                 | 24 | 27.3 |
| <b>Reasons behind not utilizing PNC services (n=69)</b>            |    |      |
| I didn't know about its importance I feel like it is waste of time | 32 | 46.4 |
|                                                                    | 10 | 14.5 |
| Baby and I were completely healthy                                 | 16 | 23.2 |
| Service center is very far                                         | 11 | 15.9 |

#### Information on barrier for utilization of PNC services

The study shows that, out of total participants 157, more than half of the participants required less than 30 minutes to reached nearby health center whereas about two-third of participants said they there

is no proper transportation facility to visit health center. Majority of respondents i.e. 80.9% had received support from family during PNC period while minority didn't received support from family due to work burden with 60% and cultural barrier with 33.3%.

**Table 5: Information on barrier for utilization of PNC services** **n=157**

| <b>Variables</b>                                             | <b>Frequency</b> | <b>Percentage</b> |
|--------------------------------------------------------------|------------------|-------------------|
| <b>Required time to reach nearby health Center</b>           |                  |                   |
| Less than 30 Min                                             | 103              | 65.6              |
| Within Hour                                                  | 36               | 22.9              |
| 1 hour and above                                             | 18               | 11.5              |
| <b>Proper transportation facility to visit health center</b> |                  |                   |
| Yes                                                          | 56               | 35.7              |
| No                                                           | 101              | 64.3              |
| <b>Received support from family during PNC Period</b>        |                  |                   |
| Yes                                                          | 127              | 80.9              |
| No                                                           | 30               | 19.1              |
| <b>If no, why</b>                                            |                  |                   |
| Due to cultural barrier                                      | 10               | 33.3              |
| Due to male dominating society                               | 2                | 6.7               |
| Due to work burden                                           | 18               | 60.0              |

#### Association between dependent and independent variables

Different factors were examined in order to identify whether independent variables were associated to the utilization of postnatal care services among mothers having two years of children by using Chi-square test which was showed in Table 6. Bivariate analysis has showed that there was significant relationship between utilization of postnatal care services by mothers and their educational qualification ( $p=0.003$ ), husband's educational qualification ( $p=0.001$ ), educational qualification of mother in law

( $p=0.001$ ) and availability of proper transportation facility to visit health center ( $p=0.002$ ) in this study. However, type of family of respondent ( $p=0.529$ ), occupation of respondents ( $p=0.40$ ), occupation of husband ( $p=0.477$ ), number of children of respondent ( $p=0.788$ ) and time required to reached nearby health center to respondent ( $p=0.12$ ) were not significantly associated with the utilization of postnatal care services by mothers.

Table 6: Association between dependent and independent variables

| Variables                                                                    | Utilized | Not utilized | Chi-square | P-value |
|------------------------------------------------------------------------------|----------|--------------|------------|---------|
| <b>Educational Qualification of Respondents</b>                              |          |              |            |         |
| Illiterate                                                                   | 78       | 12           | 16.02      | 0.003*  |
| Literate                                                                     | 10       | 14           |            |         |
| <b>Educational Qualification of Husband</b>                                  |          |              |            |         |
| Illiterate                                                                   | 80       | 6            | 18.17      | 0.001*  |
| Literate                                                                     | 8        | 63           |            |         |
| <b>Educational Qualification of mother in law</b>                            |          |              |            |         |
| Illiterate                                                                   | 88       | 69           | 14.27      | 0.001*  |
| <b>Type of family</b>                                                        |          |              |            |         |
| Nuclear                                                                      | 24       | 22           | 0.397      | 0.529   |
| Joint                                                                        | 64       | 47           |            |         |
| <b>Occupation of respondents</b>                                             |          |              |            |         |
| Housewife                                                                    | 72       | 61           | 4.025      | 0.40    |
| Others                                                                       | 14       | 10           |            |         |
| <b>Occupation of husband</b>                                                 |          |              |            |         |
| Government serviced Agriculture                                              | 7        | 5            | 4.52       | 0.477   |
| Private serviced Business                                                    | 18       | 12           |            |         |
| Foreign employment                                                           | 40       | 34           |            |         |
|                                                                              | 13       | 10           |            |         |
|                                                                              | 10       | 8            |            |         |
| <b>Required time to reach nearby health center</b>                           |          |              |            |         |
| Less than 30 min                                                             | 49       | 38           | 5.66       | 0.12    |
| Within hour                                                                  | 13       | 19           |            |         |
| 1hour and above                                                              | 36       | 12           |            |         |
| <b>Availability of proper transportation facility to visit health center</b> |          |              |            |         |
| Yes                                                                          | 71       | 9.3          | 0.002*     |         |
| No                                                                           | 86       |              |            |         |

## Discussion

The study had found that about 61.79% of the respondents were the age-group of 24- 29 similar study done by Paudel IS in Eastern Nepal showed 11.5% of child birth less than 20 years and only 4.7% after 35 years old (2). This study did not find any association between type of family of respondent and the utilization of postnatal care services by the mothers. This finding is consistent with the similar study done in Nepal which indicated that women living in a joint family are more likely to use maternal health services than those living in a nuclear family. It was found that the mothers who had fewer children (less than two) and had received antenatal care were more likely to use post-natal care as found in the study in Massachusetts but in this study there was no any significant relationship between the number of children and the utilization of postnatal services by mothers having under two years of children (2).

This study showed that the percentage of utilization of postnatal care services among the mother having under two years of children was 56.1% whereas about 95.45% of the mothers who had attended postnatal care services had within 24 hours of delivery. Similarly the study of Nepal Demographic Health Survey showed less than half (43.2%) of the mothers had attended at least one postnatal care visit, with two in five women and 95% of mothers reporting immediate postnatal care within 24 hours of delivery. The results of these two studies were seen as similar (3).

The postnatal care services were provided with the majority by the doctors (90.9%) and nurses (9.1%) in hospital, health post etc. according to this study which indicate the service attended from skilled birth attendants. This study results was contradiction with the study conducted by National Demographic Health Survey in 2006 which analyzed the type of PNC care provider. Only 27% of women received PNC from an SBA. Other PNC providers were health assistants (HA) auxiliary health workers (AHW), maternal child health workers (MCHW) or village health workers (VHW), who were not qualified as SBAs according to WHO categories (4).

In this study, mothers having proper transportation services to visit health center were more likely to attend postnatal within 42 days after delivery and immediate postnatal care. This finding can be explained by the fact that in the mountainous and rural areas of Nepal there has less access to public services, such as roads, transport and health services. As a result, urban and Terai residents are likely to have more access to transportation and healthcare services. A higher physical accessibility has been previously found to increase maternal health service utilization in Nepal and Ghana. This finding suggests there is a need to provide postnatal care through alternative means and there must be accessibility of postnatal services through the development of different infrastructures. It is necessary to establish a dedicated national health system and policies ensuring that all women have universal access to services for increasing maternal health service utilization in Nepal (5).

Majority of the respondents (95.5%) were satisfied with the postnatal services provided in health institution and the behavior shown by health workers in this study. A study conducted on women's satisfaction on maternity care in Nepal shows that the percentages of clients satisfied with individual elements of quality of care. Among which most of them were satisfied with (very satisfied and satisfied) care received at the facility (86%),

provider's skills (85%), politeness of staff (83%), waiting time (80%), involvement in decision making (77%), cleanliness (70%), information received (69%), and assured confidentiality (67%). So, in these two studies findings related to the satisfaction of services in contrast (4).

This study shows that the reason behind the not utilizing the postnatal care services was lack of awareness about the importance of the postnatal care services to the mothers and baby. This result of the study support by the one of the study conducted in western part of Nepal. So, in such condition upgrading the skills of the community health workers and raising awareness about the availability and importance of postnatal care through outreach clinics to the mothers could also be a feasible option to bring about an increase in postnatal care uptake, even in a short time period.

## Conclusion

As the utilization of postnatal and neonatal care services is very vital for the health of mother and children, the study found that till one-fourth of the mothers didn't heard about postnatal care services and less than half of the respondent (mothers) had attended postnatal care services. About two-third of the respondent get PNC services from hospital Postnatal care was provided by either doctor or nurse in the health institutions. Furthermore, less than half of the respondent had complete PNC visit and higher percentage of them had first postnatal care within 24 hours of delivery.

Since, most of the respondents were satisfied with PNC services provided in health institution and know about free health care services provided by the government. Lack of the awareness about the importance of postnatal care services is the main reason behind not utilizing PNC services. Similarly, about one-third of respondent had no proper transportation facility to visit health center which can be another major barrier for the utilization of postnatal care services. The current study found that even about one-fifth of respondent did not receive support from family during postnatal period.

## Ethical Approval and Consent to Participate

Ethical approval for this study was obtained from the Institutional Review Committee of National Academy For Health Sciences. Written informed consent was obtained from all participants prior to data collection. Participation was voluntary, and confidentiality was assured throughout the study.

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**Conflict of Interest:** The authors declare no conflict of interest related to this study.

## Author Contributions

- **Conceptualization:** Champak Kumar Singh
- **Data Collection:** Navin Kumar Sah
- **Formal Analysis:** Dr. Ram Bahadur Shrestha and Shirjana Shrestha
- **Writing – Original Draft Preparation:** Navin Kumar Sah

- **Writing – Review and Editing:** Hemank KC

#### Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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