



## Knowledge and Practice of Postnatal Mother in Newborn Care

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### ABSTRACT

**Introduction:** Neonatal mortality has continued to increase as a percentage (>60%) of overall infant mortality. Any further reduction in infant mortality is dependent on saving more newborn lives. It is possible if their mothers are knowledgeable and provide proper newborn care. Therefore, the objective of the study was to find out knowledge and practice of the postnatal mothers about newborn care.

**Methods:** A descriptive study was done among 100 purposively selected post natal mothers admitted in Teaching Hospital. Newborn care practice was observed among 20 mothers and comparison was done between knowledge and practice. Semi-structured interview questionnaire and observation checklist was used to collect the data. The descriptive statistics was used.

**Results:** Respondents' mean knowledge was on keeping newborn warm 44.2, on newborn care 47.2, on immunization 67.33, on danger signs 35.63. All (100%) respondents had have knowledge and practice to feed colostrums and exclusive breast feeding, 70 (70%) knew about early initiation of breastfeeding. Mean knowledge and practice of respondents was on measures to keep warm 8.5 and 17. Although 60 (60%) had knowledge to wash hands before breastfeeding, and after diaper care, only 10 (10%) followed it in practice. Mean practice of successful breast feeding was 37.5, 12 (60%) applied nothing kept cord dry.

**Conclusion:** Postnatal mothers have adequate knowledge on areas like early, exclusive breast feeding, colostrums feeding, they have not much satisfactory knowledge in areas like hand washing, danger signs etc. While comparing knowledge with practice regarding newborn care, practice looks better in many areas.

**Keywords:** *knowledge; newborn care; practice; postnatal mother.*

### INTRODUCTION

Globally 4 million newborns die every year before they reach the age of one month. Out of them 1.5 millions newborns die in four countries of south Asia including Nepal.<sup>1</sup> Although childhood and infant mortality in Asia has reduced substantially, the rate of neonatal mortality is still high.<sup>2</sup> In Nepal also the gain in neonatal mortality reduction has not been reflected in similar trend with infant and under five mortality rate. At the present,

neonatal mortality rate is 33/1000 live births (66% of Infant mortality rate) indicating the requirement of focus action.<sup>3</sup>

Newborn survival has become an important issue to improve the child health status and for achieving the millennium developmental goals. Neonatal health and

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survival is enhanced by providing essential newborn care such as cleanliness, thermal protection, initiation of breathing, early and exclusive breastfeeding, eye care, immunization, and management of newborn illness. Mothers are the key person for providing newborn care in Nepal.<sup>4</sup> Care provided by the mothers to their newborn depends on knowledge and practice of the mothers regarding newborn care and determines the newborn's health status. So study was conducted to explore the knowledge and practice of postnatal mothers regarding newborn

## METHODS

A descriptive study was conducted in postnatal ward of the TU Teaching Hospital from May 2010 to September 2010. The study used descriptive exploratory design. Postnatal mothers admitted in postnatal ward at least after 24 hours of delivery were included in the study. Non-probability purposive sampling technique was used to select the 100 respondents. Both primi and multi gravid post natal mothers were included in the study to assess newborn care knowledge whereas practice was observed in 20 respondents. Post natal mothers with sick baby were excluded from the study.

Knowledge related information was collected by the face to face interview using semi-structured interview questionnaire. Similarly, observation checklist was used to assess the practice of mothers regarding newborn care. Researcher themselves involved in data collection. Pre-tested respondents at TUTH were excluded from study population. Descriptive statistics like number, percentage, mean was used to analyze the data. SPSS version 17 was used to analyze the data.

Regarding ethical consideration, official permission letter was taken from university grants commission. The permission for data collection was obtained from authority at TUTH. Informed consent was taken from respondents after clarification of the objectives of the study. The environment was maintained free from any kind of pressure and biasness. Respondents were assured that the information they provide will be maintained confidential.

## RESULTS

Among the 100 postnatal mothers, 53 (53%) belonged to age group 20-25 years, regarding the education of respondents, 49 (49%) were above SLC, 29 (29%) secondary level, 11 (11%) primary level, three (3%) got informal education and only 8% were illiterate. In regard to occupation, 66 (66%) were homemaker.

**Table 1. Knowledge regarding Newborn Care.**

New Born Care*	n = 100 (%)
Keep newborn warm	76 (76)
Eye care	34 (34)
Umbilical care	31 (31)
Newborn bath/cleaning	50 (50)
Immunization	45 (45)
Mean	47.2

\*Multiple responses

Majority, 76 (76%) of postnatal mothers responded newborn care as keeping the newborn warm, 50 (50%) as bathing and cleaning, 45 (45%) as immunization, 34 (34%) said eye care and 31 (31%) as umbilical care. Mean knowledge regarding the newborn care was 47.2.

**Table 2. Knowledge on Immunization.**

Knowledge on Immunization*	n = 101 (%)
Immunization schedule	72 (72)
Reason for immunization	82 (82)
First immunization	48 (48)
Mean	67.33

\*Multiple Responses

Regarding the knowledge on immunization, 72 (72%), 82 (82%), 48 (48%) mothers were knowledgeable about immunization schedule, its reason the first immunization of the newborns respectively. Respondents' mean knowledge on immunization was 67.33 (Table 2).

**Table 3. Knowledge on Danger Signs of Newborn.**

Danger Signs*	n=100 (%)
Lethargy	26 (26)
Abdominal distension	37 (37)
Hyperthermia	46 (46)
Hypothermia	26 (46)
Eye infection	26 (26)
Cord infection	35 (35)
Convulsion	15 (15)
Vomiting	47 (47)
Diarrhea	52 (52)
Rashes /pustules on skin	61 (61)
Jaundice	21 (21)
Mean	35.63

\* Multiple Responses

Regarding postnatal mothers' knowledge on danger signs, that 61 (61%) answered as rashes/pustules, 52 (52%) as diarrhea, 47 (47%) as vomiting, 46 (46%) as hyperthermia, 37 (37%) as abdominal distension, 35 (35%) as cord infection, 26 (26%) as lethargy, hypothermia, eye infection, 21 (21%) as jaundice and 15 (15%) as convulsion. Mean knowledge on danger signs of newborn was 35.63 (Table 3).

Table 4. Knowledge on Keeping the Newborn Warm.		
Keeping Newborn Warm*	n=100 (%)	
Wrap with warm clothes	82	(82)
Attach with mother	58	(58)
Keep the room warm	28	(28)
Delay bathing	9	(9)
Mean	44.25	

\* Multiple Responses

Majority 82 (82%) of respondents said wrapping with warm clothes, 58 (58%) said attaching with mother, 28 (28%) keeping the room warm, and nine (9%) delay bathing to keep newborn warm. Mean knowledge on keeping the baby warm was 44.25 (Table 4).

Table 5. Knowledge and Practice on Keeping the Newborn Warm.		
Measures to Keep Warm*	Knowledge n=20 (%)	Practice n=20 (%)
Keep newborn attached to mother	13 (65)	20 (100)
Wrap the newborn with warm clothes	11 (55)	18 (90)
Keep room warm	9 (45)	18 (90)
Delay bath	1 (5)	12 (60)
Mean	8.5	17

\* Multiple responses

In comparison of knowledge and practice to keep the newborn 13 (65%) responded to keep the newborn attached to mother while 20 (100%) did in practice, 11 (55%) responded to wrap the newborn with warm clothes and 18 (90%) did in practice, nine (45%) responded to keep the room warm and 18 (90%) did in practice and one (5%) responded and 60% delayed

bath. Mean knowledge of respondents on measures to keep warm was 8.5 where as mean practice was increased up to 17. Postnatal mothers' have good practice than knowledge may be due to hospital setting (Table 5).

Table 6. Knowledge on Breast feeding.	
Knowledge on BF*	n=100 (%)
Initiation of BF within one hour	48 (48)
Knowledge on colostrums feeding	82 (82)
Demand feeding	9 (9)
Breast feeding one breast at a time	31 (31)
Keep newborn in lateral position after BF	67 (67)

\*Multiple responses

Postnatal mothers' knowledge on breast feeding shows that 48 (48%), 82 (82%), nine (9%), 31 (31%) and 67 (67%) respondents answered to initiate breast feed within one hour of birth, colostrums feeding, demand feeding, feeding one breast at a time and to keep newborn in lateral position after breast feeding (Table 6).

Table 7. Knowledge and Practice on Breast feeding.		
Knowledge and Practice on BF*	Knowledge n=20 (%)	Practice n=20 (%)
Initiation of BF within one hour	14 (70%)	18 (90%)
Knowledge on colostrums feeding	20 (100%)	20 (100%)
Exclusive BF	20 (100%)	20 (100%)
BF two hourly	17 (85)	15 (75)
Breast feeding one breast at a time	5 (25%)	4 (20%)
Keep newborn in lateral position after BF	9 (45%)	6 (30%)

\*Multiple responses

Respondent's knowledge and practice to initiate breast feeding within one hour were 70% and 90% respectively. All 100% respondents have had knowledge and practice for colostrums feeding and exclusive breast feeding. Majority (85%) respondents answered that newborn should be breast fed within two hours, and 75% practiced it. Only 25% respondents have knowledge to breast feed

one at a time, and 20% practiced it. Similarly, 45% respondents answered to keep the newborn lateral position after breast feeding and 30% followed it in practice (Table 7).

Hygienic care*	n = 100 (%)
Hand washing before breast feeding	58 (58)
Hand washing after diaper care	56 (56)
Clean the cord with	
Warm water and cotton	59 (59)
Oil	17 (17)
Keeping nothing	6 (6)
Keep newborn clean by	
Oil massage	48 (48)
sponge bath	26 (26)
Whole bath	36 (36)
Eye care of newborn	57 (57)

\* Multiple responses

Postnatal mothers' knowledgeable on hand washing reveals that 58% and 56% knew to hand wash before breast feeding and after diaper care. Regarding cord cleaning practice, 59% said to clean with warm water and cotton, 6% keeping nothing. Similarly, 48% told to maintain hygiene of the newborn by oil massage, and 57% said that they practice eye care of newborn.

Newborn's Hygienic Care*	Knowledge (n = 20)	Practice (n = 20)
<b>Hand washing</b>		
Before breast feeding	12 (60)	-
After diaper care	12 (60)	2(10)
<b>Cleaning the cord</b>		
Warm water and cotton	9 (45)	4 (20)
Oil	6 (30)	4 (20)
Application nothing	5 (25)	12 (60)
<b>Keep newborn clean</b>		
Full bath	6 (30)	
Sponge bath	7 (35)	5 (25)
Oil massage	7 (35)	11 (55)

\*Multiple responses

Although 12 (60%) respondents answered to wash hands before breast feeding and after diaper care and only two (10%) practiced it. Among 20 respondents, five (25%) said keep nothing in the cord, and 12 (60%)

practiced it. Similarly, six (30%) postnatal mothers responded to full bath, seven (35%) to sponge bath and oil massage to keep the newborn clean and 11 (55%) had oil massaged to their newborn.

Breast Feeding Practice*	n = 20 (%)
Comfortable position of post-natal mother	11 (55)
Newborn in well supported position	9 (45)
Attachment of the newborn to the breast	7 (35)
Burping Practice after feeding	3 (15)
Mean practice	7.5

\*Multiple responses

Breast feeding practice of the respondents reveals that 11 (55%) respondents maintained comfortable position during breast feeding, nine (45%) newborns were in well supported position, seven (35%) newborns were well attached to the breast and minority three (15%) mothers had did burping after breast feeding (Table 10). Mean breast feeding practice was 7.5. This study shows that breast feeding practice is not much good for successful breast feeding.

## DISCUSSION

About the knowledge of a postnatal mothers on the care of newborn, majority 76 (76%) answered as keeping the newborn warm, 50 (50%) said bathing and cleaning, 45 (45%) responded as immunization, 34 (34%) said eye care and 31 (31%) as umbilical care. Mean knowledge regarding the newborn care was 47.2.

Majority 72 (72%), 82 (82%), and 48 (48%) knew about immunization schedule, its reason and the first immunization respectively. Respondents' mean knowledge on immunization was 67.3. Khan and Khan (2006) compared the newborn care practice among the hospital deliveries and home based deliveries. In both of this group immunization practice was 100%.<sup>5</sup>

Regarding postnatal mothers' knowledge on danger signs of newborn; 61 (61%) responded as rashes/pustules on skin, 52 (52%) responded as diarrhea, 47 (47%) as vomiting, 46 (46%) as hyperthermia, 37 (37%) as abdominal distension, (35%) as cord infection, 26 (26%) as lethargy, hypothermia, eye infection, 21 (21%) as jaundice and 15 (15%) as convulsion. Mean knowledge on danger signs of newborn was 35.63, which is very low. A study of Community Management of Sick Newborns in Kailali District shows that 14 (35%) of mothers described difficulty in breast feeding, 13 (32%) described fever, and five (12%) described

vomiting are newborn danger signs.<sup>2</sup>

Fifty four percentage postnatal mothers' knew to bath after 24 hours of birth. David, Osrrin, Kirti, Tumbahamphe et al (2002) stated that 4992 (92%) had been bathed within the first hour of birth.<sup>8</sup> Baseline Survey Report in 24 VDCs of Kailali district shows that 70.3% of the mothers reported that their babies had bath within an hour of delivery.<sup>7</sup>

Postnatal mothers' practice on keeping the newborn warm, seems better than knowledge level as mean knowledge was 8.5 where as practice increased up to 17. It may be due to hospital setting. Thirteen (65%) respondents responded to keep the newborn attached to post-natal mother while 20 (100%) did in practice, 11 (55%) respondents responded to wrap the newborn with warm clothes and 18 (90%) did in practice, nine (45%) responded to keep the room warm and 18 (90%) did in practice. According to Khan and Khan (2006) the newborn care practice among the hospital deliveries and home based deliveries shows that in hospital, thermal protection was maintained by 83.3%, and in home based deliveries, thermal protection was maintained by 100%.<sup>7</sup> Baseline Survey Report in 24 VDCs of Kailali district shows that 37% mother reported that the babies were wrapped in cloth before placenta delivery.<sup>7</sup>

Knowledge of postnatal mothers on initiation of breast feeding shows that 48% answered to initiate breast feed within one hour of birth, majority and only 9% answered demand feeding. Similarly 69% postnatal mothers fed both breast at a time, (67%) said that the newborn should be kept in lateral position after breast feeding.

Regarding knowledge and practice of post-natal mother to initiate breast feeding, majority (70%) possessed knowledge to breastfeed within one hour while 90% respondents followed it in practice. It shows that in hospital, health personnel especially nursing persons have played significant role to start first breast feeding within one hour. Facilitating factors for early initiation included delivery in a health facility, where the staff encouraged early breast-feeding.<sup>8</sup> David, Osrrin, Kirti, Tumbahane et. al (2002) stated that 5362 (99%) babies were breast fed in first hour, 4939 (91%) within 6 hours of birth.<sup>6</sup> Khan and Khan (2006) compared the newborn care practice among the hospital deliveries and home based deliveries. Among the hospital deliveries; breast feeding initiation within an hour was noted in 66.6% and among home based deliveries; breast feeding within

an hour was noted in 14%.<sup>5</sup>

All (100%) postnatal mothers have knowledge and practice to feed colostrums to their newborns and had have knowledge and practiced of exclusive breast feeding. Baseline Survey Report in 24 VDCs of Kailali district shows that 90% gave colostrums to their babies.<sup>7</sup>

Finding shows that, postnatal mothers had have inadequate knowledge and practice related to concept of demand feeding practice as 85% and 75% of them answered and practiced two hourly feeding to newborn. Mother should breastfeed one breast at a time so that the newborn can get both hind milk and foremilk. It is especially important to get more nutritious hind milk from mother's milk. The finding of the study shows that they have inadequate knowledge (25%) and practice (20%) regarding breast feeding one at a time.

Although 60% postnatal mothers have knowledge to wash hands before breastfeeding, and after diaper care, only 10% washed their hands after diaper care. Similarly 60% postnatal mothers had kept the cord clean and dry, not kept anything in the cord. Near similar percentage (30, 35 and 35%) answered that they maintained hygiene by full bath, sponge bath, and oil massage, respectively, 55% practiced oil massage. Their practice to delay bath may be related to hospital setting.

In the observation of newborn general and cord hygiene condition, almost (95%) newborns' cords were clean and dry and 90% newborns' hygiene was were well maintained.

## CONCLUSIONS

The postnatal mothers have more satisfactory practice than their knowledge regarding neonatal care except some practice like hand washing. It is hospital based study, therefore a larger community based study would revealed true picture of the society in Nepal.

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