



## Original Article

# Awareness about Newborn Care among the Mothers in Neonatal Ward of a Tertiary Care Hospital

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### ABSTRACT

*Newborn care is essential to reduce neonatal mortality and morbidity. As mothers are primary caregiver of the neonates, knowledge of mothers regarding neonatal care is very important. Bangladesh successfully reduced child mortality rate but further reduction of child mortality depends on the reduction of neonatal mortality. The aim of this study was to assess awareness of newborn care among the mothers. This cross sectional study was conducted in neonatal ward of Jalalabad Ragib-Rabeya Medical College Hospital, Sylhet from July 2018 to December 2018. Mothers of 150 admitted neonates were purposively selected as sample and interviewed with a pretested semi-structured questionnaire. Three fifths (58%) of the mothers belonged to the age group between 19 to 25 years where mean age was 25.2 years. About half (49.3%) of them did not complete secondary education. Regarding knowledge, only 16% of the mothers knew the baby should not be bathed in first 3 days. Half of the mothers (52.7%) identified 'not feeding well' and a quarter (26%) of the mothers identified 'no cry or continuous cry' as danger signs among the newborns. Half of the mothers (48%) correctly mentioned breastfeeding should be started within one hour of birth. Most of the mothers (83.3%) had knowledge regarding immunization. Among the seventeen knowledge related questions, half of the mothers answered up to 8 questions correctly and termed as having poor knowledge. Two third of the mothers (66.7%) mentioned family member as source of knowledge and only one tenth (8.7%) of the mothers mentioned 'health workers' as source. Only one fifth (18%) mentioned media as a source of information. Half of the mothers did not have good knowledge regarding neonatal care which is very important to avert neonatal mortality and morbidity. So, health education to the expecting mothers is required to improve knowledge and awareness regarding neonatal care. Methods and media should be devised appropriately for effective health education.*

**Keywords:** Awareness, Newborn care, Mothers.

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### INTRODUCTION

Neonatal period refers from birth to 28 days of life. In the first 28 days of life, child is at high risk of dying and is a crucial period of life<sup>1</sup>. Newborn care is essential to

reduce neonatal problem and death as well as to improve the child's chances of survivability<sup>2</sup>. Newborns are completely dependent on their mothers' care. An effective way to cater the needs of the baby includes thorough and immediate drying, cord clamping and cutting after the first minutes after birth, skin to skin contact of newborn with the mother, early initiation of breast feeding, exclusive breast feeding, increasing hand washing of care givers, counseling families on when to take a newborn to health facility and

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immunization<sup>2</sup>.

Globally, the majority of child death occurs at the younger age. In the first five years of life 5.4 million deaths occurred in 2017 and about half (47%) of the under 5 death in 2017 occurred in the first month of life. In 2017, neonatal mortality rate was estimated at 18 deaths per 1000 live births globally<sup>3</sup>. The current under 5 children, infant and neonatal mortality rates in our country being 46, 38, 28 per thousand live births respectively which remain still very high in comparison to developed world and major challenge in health sector is unacceptably high neonatal deaths<sup>4</sup>. Though Bangladesh already achieved the Millennium Development Goal-4 (MDG-4) successfully, now Bangladesh needs to achieve Sustainable Development Goal-3 (SDG-3). SDG-3 calls for an end of preventable death of new born and children under 5 years of age and specifies that all countries should aim to reduce neonatal mortality to at least as low as 12 death per 1000 live births & under five mortality to at least as low as 25 deaths per 1000 live birth by 2030<sup>5</sup>.

The world health organization promotes essential newborn care guidelines which are evidence based measures that can be used to meet SDG-3. They encompass breastfeeding, cord care, eye care, thermo-regulation, recognition of danger sign, immunization and care of the low birth weight infant<sup>6</sup>. Lack of knowledge and strong cultural beliefs influence neonatal survival during the infant is at home with the primary caregiver. Newborn care practices by parents after birth are important determinant of neonatal mortality. The aim of this study was to assess awareness about newborn care among mothers of neonates.

## MATERIALS AND METHODS

This observational cross sectional study was conducted in neonatal ward of Jalalabad Ragib-Rabeya Medical College Hospital (JRRMCH) over a period of six months from July 2018 to December 2018. Admitted neonates in neonatal ward were selected as study population and a total of 150 neonates were selected as sample purposively. Mothers of selected neonates were interviewed at the neonatal ward using semi-structured questionnaires that captured data on socio-demographic characteristics, knowledge towards essential new born care, knowledge regarding feeding practices, knowledge regarding immunization, knowledge regarding danger signs for newborn. Informed consent was taken from the mothers before interviewing. For breast feeding we asked initiation of breast feeding and

exclusive breast feeding. Regarding thermal protection, we asked keeping baby warm by covering the head of the baby and kangaroo mother care and postponing bath for 72 hrs. About umbilical cord care, we asked that the cord stump should be kept dry. For general cleanliness, we asked for hand washing practice before breast feeding and after diaper use. We also asked for schedule and knowledge about immunization for infants. Data entry and analysis were carried out using SPSS version 21. Informed consent was taken from the respondents before being enrolled in the study.

## RESULTS

The result showed that, the mean age of the mother of the neonates were 25.2 years. Among them, 58% belonged to the age group of 19 to 25 years and 49.3% did not complete secondary education. Most of the respondents (97.3%) were housewife and living in a joint family (85.3%) where 63.3% of them came from the families with monthly income of 10000 to 250000 Bangladeshi taka (BDT) (Table-I). Regarding thermal protection, 69.3% of the mothers told providing warm was required for the baby. Only 16% of the mothers knew that, the baby should not be bathed in first 3 days and 28% of the mothers knew that, umbilical cord should be kept dry, where 88.7% of them knew that, breast feeding was important for the babies. Among the mothers, 42.7% admitted hand washing was required before breast feeding and or after changing diaper and 54.7% told keeping the babies away from sick children were important. Only 4% mothers admitted that, measuring weight of babies was a part of care of the babies. Knowledge of the mothers regarding danger signs in newborn babies demonstrated half of the mothers (52.7%) identified not feeding well and similar percentage identified diarrhea or blood in the stool as danger signs in newborns. Most of the mothers (91.3%) identified hypothermia and or fever as danger sign while a quarter (26%) of the mothers identified no cry or continuous cry and convulsion as danger sign among the newborns. Regarding feeding practices about half of the mothers (48%) correctly mentioned breastfeeding should be started as early as possible and preferably within one hour of birth. When asked about duration of exclusive breastfeeding, most (85.3%) of the mothers rightly mentioned 6 months. Regarding preferred food for complimentary feeding more than three quarters (77.3%) mentioned khichury and about one tenth mentioned cereals. Most of the respondents (83.3%) had positive knowledge regarding immunization and 2% respondents perceived

**Table-I:** Socio demographic characteristics of study population (n=150).

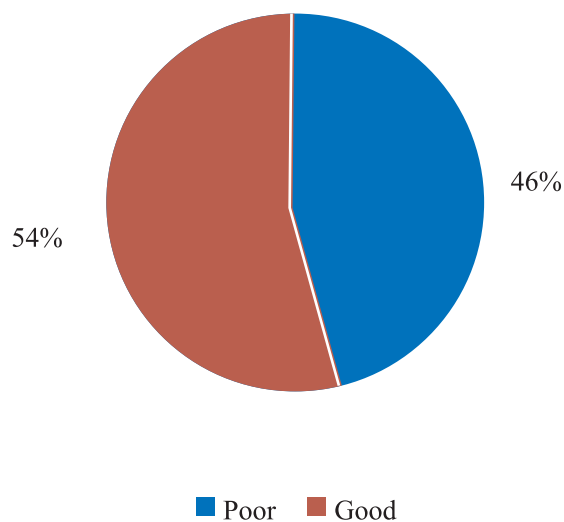
Variables	Frequency	Percentage
Age (In Years)		
Below 19	2	1.3
19-25	87	58
26-30	45	28
31-35	16	12.7
Education		
No education	5	3.3
Below SSC	74	49.3
SSC	37	24.7
Above SSC	34	22.7
Occupation		
Housewife	146	97.3
Service holder	4	2.7
Family Type		
Nuclear	22	14.7
Joint	128	85.3
Socio economic condition		
Low income (<10000 BDT)	36	24
Middle income (10000-25000 BDT)	95	63.3
High income (>25000 BDT)	19	12.7

**Table-II:** Knowledge regarding care of the newborn (n=150).

Variables	Frequency	Percentage
General care		
Thermal protection (Providing warm)	104	69.3
First bath (No bath for first 3 days)	24	16
Cord care (Cord to be kept dry)	42	28
Breast feeding	133	88.7
Cleanliness (Hand washing after diaper change)	64	42.7
Keet away from sick child	82	54.7
Check weight of child	6	4
Danger signs		
Not feeding well	79	52.7
Hypothermia or fever	137	91.3
No cry or continuous cry	39	26
Diarrhea or blood in stool	79	52.7
Convulsion	39	26
Bluish coloration	34	22.7
Feeding practices		
Initiation of breastfeeding (Within 1 hour)	72	48
Exclusive breastfeeding (For 6 months)	128	85.3
Complementary feeding (Khichury)	116	77.3
Immunization		
Essential	125	83.3
Perceived harmful	3	2
Knew nothing about immunization	22	13.3

(More than one variable were considered in one respondent)

Seventeen knowledge related questions were asked among the mothers. Poor knowledge was considered when up to 8 answers were correct. Nine or more correct answers considered as having good knowledge. Less than half (46%) of the mothers had poor knowledge regarding neonatal care whereas more than half (54%) of the mothers had good knowledge (Figure-1). Regarding source of information about newborn care, two third of the mothers (66.7%) mentioned family member as source, whereas a quarter (24.7%) mentioned as past experience as source of information. Only one tenth (8.7%) of the mothers mentioned health workers as source. Regarding media, only one fifth (18%) mentioned media as a source of information (Table-III). Regarding the association of the sociodemographic variables with knowledge scores of the mothers, knowledge score did not differ among the younger and older mothers. Neonatal care knowledge also did not differed among different economic status of the families. Only significant difference of knowledge score was revealed among differences in education (Table-IV). On the topic of the association between knowledge scores and source of knowledge of the mothers, knowledge scores of the mothers differed significantly only among the media exposure (Table-V).



**Figure-1:** The knowledge score of the mothers (n=150).

**Table-III:** Sources of information (n=150).

Characteristics	Frequency	Percentage
Past experience	37	24.7
Health worker	13	8.7
Media	27	18
Peer/neighbor	18	12
Family member	100	66.7

(More than one variable were considered in one respondent)

**Table-IV:** Association between socio-demographic characteristics and knowledge score of the mothers (n=150).

Socio-demographic Characteristics	Variable Frequency (%)	Knowledge Score		Chi-square value	p value
		Poor Frequency (%)	Good Frequency (%)		
Age					
Upto 24 years	74 (49.3)	35 (50.7)	39 (48.1)	0.09	0.75
≥25 years	76 (50.7)	34 (49.3)	42 (51.9)		
Education					
Below SSC	79 (52.7)	45 (65.2)	34 (42)	8.07	0.004
SSC and above	71 (47.3)	24 (34.8)	47 (58)		
Socioeconomic condition					
Low	36 (24)	20 (29)	16 (19.8)	2.09	0.35
Middle	95 (63.3)	42 (60.9)	53 (65.4)		
Higher	19 (12.7)	7 (10.1)	12 (14.8)		

**Table-V:** Association between source of knowledge and knowledge score of the mothers (n=150).

Source of Knowledge	Variable Frequency (%)	Knowledge Score		Chi-square value	p value
		Poor Frequency (%)	Good Frequency (%)		
Family members	100 (67.1)	49 (71)	51 (63.8)	0.89	0.35
Past experience	37 (24.7)	16 (23.2)	21 (25.9)	0.15	0.70
Health worker	13 (8.7)	5 (7.2)	8 (10)	0.35	0.55
Peer/Neighbor	18 (12.1)	6 (8.7)	12 (15)	1.39	0.24
Media	27 (18.1)	7 (10.1)	20 (25)	5.51	0.02

## DISCUSSION

This study was conducted among the post natal mothers in a tertiary care hospital to assess the knowledge of the mothers regarding neonatal care. In our study the mean age of the mothers was 25.2 years. Three fifth of the mothers were in the age group of 19 to 25 years. A study conducted in Dhaka Medical College Hospital by Majumder et al. reported 75% mothers were up to the age of 25 years<sup>7</sup>. Another study conducted in rural area of Narsingdi by Islam et al. reported 83.3% mothers were from similar age group<sup>8</sup>. The mean age of the mothers was 22 years, in the research conducted in Dhaka Shishu Hospital by Hoque et al.<sup>9</sup> Majority of respondents in our study were in age group of 19 to 25 years which was also similar to other studies<sup>7,8,9</sup>. Educational status of mothers in present study showed that, about 3.3% of the mothers had no formal education and majority of mothers (53%) were below SSC that was similar to other studies<sup>8,9,10,11</sup>. Regarding knowledge about neonatal care in present study, more than two third of mothers (69.3%) had knowledge about thermal protection (Providing warm to the neonates). Only 16% of the mothers mentioned in our study that, the baby should not be bathed in first 3 days. This finding differed from other studies where they found that, 28.8% mothers in rural area in Narsingdi<sup>8</sup>, 40% were in Dhaka Shishu Hospital<sup>9</sup> and 30% in Tamil Nadu, India<sup>11</sup>. Regarding knowledge about timing of first bath of baby, only 16% mothers had proper knowledge. This findings was differed from other studies<sup>8,9,11</sup>. The findings of current study suggested lack of knowledge of the mothers in this area. More than a quarter mothers (28%) in our study mentioned that, umbilical cord should be kept dry which was similarly reported in a study in Nepal<sup>10</sup> that was 26%. Most of the mothers of present study knew that, breast feeding is important for the neonates. But less than fifty percents of mothers (42.7%) approached that, hand washing was required before breast feeding and or after changing diaper whereas a Nepalese study<sup>10</sup> reported of 97% mothers which was more than our study.

In present study, more than half (54.7%) of the mothers told that, keeping the babies away from sick child is important to avoid disease and only 4% mothers knew that, measuring weight of baby is part of care of the baby. There were more than half of the mothers (52.7%) identified 'not feeding well' as a danger sign of newborn which was consistent with the findings of the study at Dhaka Shishu Hospital<sup>9</sup> and Dhaka Medical College Hospital<sup>7</sup>. When we asked mothers regarding feeding practices, about half of the mothers

(48%) correctly mentioned that, breastfeeding should be started as early as possible and preferably within one hour of birth which was similarly reported (52%) in Dhaka Shishu Hospital<sup>9</sup> and Tamil Nadu study<sup>11</sup>. When we asked about the duration of exclusive breastfeeding, most (85.3%) of the mothers rightly mentioned that, duration was 6 months which is much higher than the study of Tamil Nadu (33%)<sup>11</sup>. In our study, 77.3% of the mothers preferred khichury as a complimentary food. Regarding immunization, most of the mothers (83.3%) had knowledge about immunization but 2% mothers' perceived immunization as harmful for the babies.

In present study, about neonatal care, mothers received information from different sources. In which two third of the mothers (66.7%) mentioned that, source of information was family members. Only one tenth (8.7%) of the mothers mentioned that, source of information was health workers. While the Tamil Nadu study revealed, 44% of the mothers got information from the health workers<sup>11</sup>. Regarding Media, only one fifth (18%) of mothers mentioned that, media was a source of information. When we analyzed source of information and quality of knowledge (Good or Poor), it was evident that good level of knowledge was associated with media exposure and higher education.

## CONCLUSION

This study concludes that about half of the mothers did not have good knowledge regarding neonatal care which is very important to avert neonatal mortality and morbidity. Health education to the expecting mothers is required to improve knowledge and awareness regarding neonatal care. Methods and media should be devised appropriately for effective health education.

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