INNSPUB

International Journal of Biosciences | IJB |
ISSN: 2220-6655 (Print) 2222-5234 (Online)
http://www.innspub.net
Vol. 25, No. 4, p. 290-296, 2024

RESEARCH PAPER OPEN ACCESS

Knowledge and practices of rural mother about neonatal care

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Key words: Knowledge, Practice, Rural mother, Neonatal care, Bangladesh

http://dx.doi.org/10.12692/ijb/25.4.290-296 Article published on October 17, 2024

Abstract

Care of the newborn baby had always been traditionally done by mothers. Knowledge of mothers on neonatal care could help in bringing down the neonatal mortality. A descriptive cross sectional study was conducted with aim to assess the level of knowledge and practices of rural mother about neonatal care at Mithapukur Upazila of Rangpur District in Bangladesh. The study was conducted from January to December 2017. A total of 412 respondents were enrolled with at least one child aged less than two years. Purposive sampling technique was followed for data collection by face to face interview with the semi structured questionnaire, and analyzed by SPSS-23. Out of 412 respondents, more than half 55.6% were found in the age group between 21-30 years (Mean=28.75, SD±5.805). Nearly half (44.4%) of the respondents had completed high school education. Most of the respondents (88.8) were house-wife and half (50.78%) of the respondents monthly income was between 5000-10000 taka. Among them, 86.9% had knowledge about feeding breast milk to their newborn baby and 99.3% respondents had good knowledge about the colostrum milk. Majority (60.9%) had knowledge about six vaccines, 59.2% of the respondents had good 23.1% had average and 17.7 % had poor knowledge about the neonatal care. However, majority (81.3%) of the respondent had average, (10.4%) had good and (8.3%) of the respondents had poor practices about the neonatal care. In this study, mother's knowledge and practices regarding the improvement newborn care was adequate therefore formal maternal education helps to enhance the knowledge.

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Introduction

Today's children are tomorrow's nation. Globally 4 million babies die every year and out of them 1.5 million newborns die in four countries of South Asia including Nepal before they reach the age of one month. Neonatal mortality contributes to more than 60% of the infant mortality and about 40% of the under-five mortality rate in several countries of South-East Asia region (Nepal and Thapa, 2017). For achieving the millennium developmental goals newborn survival has become an important issue to improve the child health status (JSI L10K, 2014). Child birth and the neonatal period are culturally important and there is strong adherence to traditional practices (Hadush *et al.,* 2016) by scaling up evidence based available interventions such as giving tetanus toxoid to mothers, clean and skilled care at delivery, newborn resuscitation, exclusive breastfeeding, clean umbilical cord care and early management of infections in newborns up to 70% of newborn deaths can be prevented (Lassi *et al.*, 2010). Millions of newborn die every year tragically when their deaths were easily preventable. with simple, low cost tools that already exist such as antibiotics for pneumonia and sepsis, sterile blades to cut the umbilical cords using knit caps and kangaroo care to keep babies warm almost 75% of neonatal deaths could be avoided (You *et al.,* 2015).

Newborns need more attention and care as they are a vulnerable group. The welfare of a child and his future are totally dependent upon the care and attention bestowed upon him before and after birth (Castalino *et al.*, 2014).

Assessment of mothers' knowledge is necessary who are going to take care of newborn babies because for newborns, most frequent caretaker are their own mothers and mothers knowledge and practices shapes the future of the new born (Callaghan-Koru *et al.,* 2015). Mothers' Knowledge on neonatal care and proper practice of that knowledge can help in bringing down the neonatal mortality. However, many studies have shown that it will affect the well-being of their children, if the mothers do not possess adequate knowledge pertaining to dangers signs, hygienic practices, immunization schedules, kangaroo mother care, feeding, weaning, health and nutrition of children (Punitha *et al.,* 2016).

Therefore, this study is important to describe the knowledge and practice of newborn care among postnatal mothers in a rural setting of Bangladesh. Through such study, gaps between knowledge and practice among newborn care can be identified and help in the conduction of health program to fulfill those gaps. This study also helps to determine the associated factors related to knowledge and practices of newborn care and finally helps in maintenance of better newborn care.

Materials and methods

This was a cross sectional type of study, conducted with the aim to assess the level of knowledge and practices of rural mother about neonatal care at Mithapukur Upazila in Rangpur District, Bangladesh from January to December, 2017. After developing the questionnaire, data collection data processing and analysis was performed. The study population comprised of rural mothers who have at least one child with age 2 years. The sample was selected by purposive sampling technique that fulfilled the selection criteria. The respondent was asked to ensure the following information about them: age, parity, and age of the youngest child, religion, occupation, level of education, knowledge and practices about the neonatal care.

Results

This chapter presents the findings of the study from 412 respondents with tables and figures as follows:

Table 1. Distribution of the respondents about knowledge of neonatal care received during pregnancy

Information	Frequency	Percent
Breast feeding	345	83.7
Cord care	95	23.1
Eye care	97	23.5
Thermal regulation	97	23.5
Immunization	146	35.4

Table 1 shows that majority of the respondents received breast feeding information during pregnancy 83.7%. There was 35.4% of the respondents received immunization information during pregnancy.

Table 2. Distribution of the respondents according to type of neonatal feeding given to their newborn baby just after birth

Type of feeding	Frequency	Percent
Breast milk	358	86.9
Honey	52	12.6
Formula milk	2	0.5
Total	412	100.0

Table 2 shows that the 86.9% of the respondents feeding breast milk to their newborn baby just after birth. The lowest data were found in the Formula milk feeding, it was 0.5% of the total.

Table 3. Distribution of the respondents' knowledge about colostrum helpful for the baby

Knowledge of colostrum	Frequency	Percent
Not sure	1	0.2
No	2	0.5
Yes	409	99.3
Total	412	100.0

Table 3 shows that majority of the respondents (99.3%) had knowledge that colostrum is helpful for the newborn baby.

Table 4. Distribution of the respondents according to knowledge of about exclusive breast feeding

Knowledge of about exclusive breast feeding	Frequency	Percent
Not sure	1	0.2
No	9	2.2
Yes	402	97.6
Total	412	100.0

Table 4 shows that the knowledge of exclusive breast feeding of the newborn baby. There were 97.6% of the respondents had knowledge about the exclusive breast feeding and there were 2.2% of the respondents had no knowledge about the exclusive breast feeding.

Table 5 shows that the vaccination of the baby, there were 98.3% respondents had knowledge of vaccination after baby birth and 1.5% of the respondents had no knowledge of vaccination.

Table 5. Distribution of the respondents according to knowledge of vaccination of the baby after birth

Knowledge of vaccination	Frequency	Percent
Not sure	1	0.2
No	6	1.5
Yes	405	98.3
Total	412	100.0

Table 6 shows that the received types of vaccine were 82.3% respondents received BCG vaccine after baby birth and there were 4.4% of the respondents received Pentavalent vaccine after baby birth.

Table 6. Distribution of the respondents according to receiving of vaccine to their baby after birth

Name of vaccine	Frequency	Percent
Not sure	19	4.6
BCG	339	82.3
Pentavalent vaccine	18	4.4
OPV	36	8.7
Total	412	100.0

Table 7 shows that most 86.4% respondents reply that the EPI vaccination completed within 15 months. Only one respondent had no knowledge about EPI vaccination.

Table 7. Distribution of the respondents according to knowledge about the proper age of the baby to complete the EPI vaccination

Answer of the mother	Frequency	Percent
Not sure	1	.2
Within 1 year	55	13.3
Within 15 months	356	86.4
Total	412	100.0

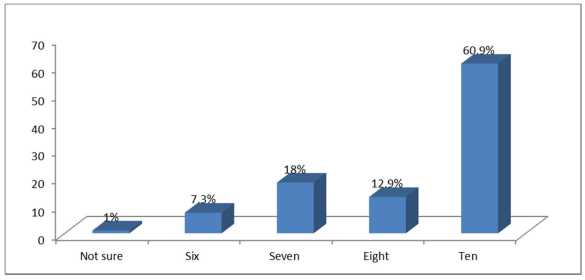

Fig. 1. Simple bar chart showing of the respondents according to number vaccine to be given of the children

In Fig. 1 shows that majority of the respondents had knowledge 60.9% the ten vaccines should be completed after baby birth.

Table 8 shows that most of the respondents had knowledge of umbilical cord care, 87.4% that umbilical to be clean of newborn baby. Only 0.5% respondent had no knowledge about the umbilical cord care.

Table 8. Distribution of the respondents according to knowledge about umbilical cord care

Knowledge about umbilical cord care	Frequency	Percent
To clean cord	360	87.4
Open the cord	18	4.4
Don't use powder or oil	5	1.2
Observe the color of cord	1	0.2
To use powder	23	5.6
To use oil	3	0.7
Not sure	2	0.5
Total	412	100.0

Table 9 shows that the knowledge of low birth weight, most of the respondents 91.5% replies that the means of low birth weight less than 2.5 kg weight. Only 2.9% of the respondents had no knowledge about the low birth weight.

Table 9. Distribution of the respondents according to knowledge about low birth weight

Knowledge about low birth weight	Frequency	Percent
Not sure	4	1.0
Less than 2.5kg wt	377	91.5
Less than 3kg wt	19	4.6
No knowledge	12	2.9
Total	412	100.0

In the table 10 we found the most of the respondent says that the jaundice not affected their children, there were 87.1% of the respondents say jaundice not affected their children and only 12.9% of the respondents say that jaundice affected their children.

Table 10. Distribution of the respondents according to jaundice of the baby after birth

Jaundice of the baby	Frequency	Percent
Jaundice not affected	359	87.1
Jaundice affected	53	12.9
Total	412	100.0

Table 11 shows that there were 0.5 % of the children affected the jaundices with birth, there were 2.7 % of the children affected the jaundices after two days of birth, there were 6.6 % of the children affected the jaundices after three days of birth, there were 3.2 % of the children affected the jaundices after four days of birth and 87.1% of the child were not affected the jaundices.

Table 11. Distribution of the respondents according to jaundice affected days after birth of the baby

Jaundice affected days	Frequency	Percent
With birth	2	.5
Two days after	11	2.7
Three days after	27	6.6
Four days after	13	3.2
Not affected	359	87.1
Total	412	100.0

In the Table 12 the practices of the respondents, there 100% of the respondents taking all vaccine according to EPI rules, feeding regularly breast milk, feeding the breast milk after the baby born and breast and hand cleaning before breastfeeding the baby. There were 95.5% of the respondents feeding the breast milk till six months of age, there were 91.5% of the respondents give extra food to the baby after six months of age and 100% of the respondents care for the baby's navel after the baby's birth.

Table 12. Distribution of the respondents according to Practices in different works after baby birth

Variable related to practices	Frequency	Percent
Taking all vaccine according to EPI schedules	412	100
Feeding the breast milk	412	100.0
Feeding the breast milk after the baby born	412	100.0
Breast and hand cleaning before breastfeeding the baby	412	100.0
Feeding the breast milk till six months of age	393	95.4
Give extra food to the baby after six months of age	377	91.5
Cared for the baby's navel after the baby's birth	412	100.0

Table 13 shows that the knowledge of the respondents about neonatal care, there were 59.2% of the respondents had good knowledge about the neonatal care and there were 23.1% of the respondents had average knowledge about neonatal care. Only 17.7 %

of the respondents had poor knowledge about the neonatal care.

Table 13. Distribution of the respondents according to knowledge of respondent regarding neonatal care

Knowledge	Frequency	Percent
Good knowledge	244	59.2
Average knowledge	95	23.1
Poor knowledge	73	17.7
Total	412	100.0

Table 14 shows that there were 10.4% of the respondents had good practices and 8.3% of the respondents had poor practices about the neonatal care. Majority 81.3% of the respondent had average practices.

Table 14. Distribution of the respondents according to practices of respondents regarding neonatal care

Practices	Frequency	Percent
Good practices	43	10.4
Average practices	335	81.3
Poor practices	34	8.3
Total	412	100.0

Discussion

It was found that together with a lack of contemporary neonatal health knowledge, cultural influences, competing pressures and perceptions of hereditary influences, are the main factors affecting neonatal health. There were 23.1% of the respondents received cord care information and 35.4% of the respondents received immunization information during pregnancy. Mother's knowledge and practices help in formulation of more effective strategies to benefit neonates. There were 86.9% of the respondents fed breast milk to their newborn baby just after birth and 99.3% have knowledge that the colostrum is helpful for the newborn baby. The similar data was found at (Nepal and Thapa, 2017). The knowledge of exclusive breast feeding of the newborn baby, there were 97.6% of the respondents had knowledge about the exclusive breast feeding. It was found that world vision (NGO) trained them regularly about the newborn baby and under five children of mothers. Nearly 98.3% of the respondents had knowledge of vaccination after baby birth. Vaccines are recommended for very young children because their immune systems are not yet fully mature and also because their stomachs produce less acid, making it easier for ingested bacteria and viruses to multiply.

These factors leave them the most vulnerable to the devastating effects of these serious diseases. In this study there it was found that 82.3% respondents received BCG vaccine according to current EPI schedule and there were 4.4% of the respondents received Pentavalent vaccine after baby birth. The similar data was also found at (Monebenimp *et al.,* 2013).

More than 90% of newborns had BCG and Oral Polio Vaccines administered. Most of the respondents had 86.4% reply that the EPI vaccination may complete within 15 months and only one respondent had no knowledge about EPI vaccination. Majority of the respondents had knowledge 60.9% the ten vaccines should be completed after baby birth. The umbilical cord, which connects baby to the placenta, contains three vessels: two arteries, which carry blood from the baby to the placenta, and one vein, which carries blood back to the baby. Umbilical cord is cut down just after delivery of baby. There is a chance of getting infection through the cut or ligated match. Therefore aseptic precaution is very much essential. In this study 87.4% of mothers had adequate knowledge about umbilical cord care that umbilical to be clean of newborn baby which is against 85.17% observed in a study (Shahin *et al.,* 2015).

Majority 91.5% of the respondents reply that the means of low birth weight less than 2.5 kg weight. The knowledge of low birth weight majority of the respondents had knowledge about the low birth weight of baby. Babies with low birth weight look much smaller than other babies of normal birth weight. A low birth weight baby's head may appear to be bigger than the rest of the body. About the care of low birth weight baby, there were 80.3% had knowledge that breast feeding of new born was the way to take care low birth weight baby. Newborn jaundice occurs when a baby has a high level of

bilirubin in the blood. Bilirubin is a yellow substance that the body creates when it replaces old red blood cells. A high level of bilirubin makes a baby's skin and whites of the eyes look yellow. The present study majority 87.1% of the respondents says jaundice not affected their children. Another study regarding jaundice in a neonate 34% of the mother's considered it to be always abnormal 33 % considered it to be always normal while 26% of the mothers considered it to be sometimes abnormal and sometimes normal (Asif and Ekambaram, 2010). And 6.6% of the respondents say their children affected the jaundices after three days of birth. The practices of the respondents, there 100% of the respondent taking all vaccine according to EPI schedules, feeding regularly breast milk, feeding the breast milk after the baby born and breast and hand cleaning before breastfeeding the baby. There were 59.2% of the respondents had good knowledge about the neonatal care and there were 23.1% of the respondents had average knowledge about neonatal care, only 17.7 % of the respondents had poor knowledge about the neonatal care. The percentage of level of knowledge of postnatal mothers regarding newborn care 2(4%) had moderately adequate, 2(4%) had inadequate knowledge and 46 (92%) had adequate knowledge. There were 10.4% of the respondents had good knowledge and 8.3% of the respondent had poor knowledge about the neonatal care. Majority 81.3 % of the respondents were average practices. The similar study was found at (Rajkumari, 2015). The percentage of level of practice of postnatal mothers regarding newborn care moderately adequate practice was seen in 10% and adequate level of practice was seen in 90% of postnatal mothers. In the study (Begum and Khan, 2009) found the respondents (23.5%) kept neonates attached to mother with head covering. Neonates can easily loose body temperature and among them, about one fifth of the temperature is lost through head.

Conclusion

The knowledge and practices of Neonatal Care has been seen to empower women, taking responsibility for their child health. Therefore, Neonatal Care is recommended for raising awareness among children at risk. This study showed that more than half of the respondents had good knowledge and majority of the respondents had good practice about newborn care. In order to achieve better targets in infant and under-five mortality and morbidity the knowledge among mothers regarding newborn care need to be enhanced. It is universally agreed that the mothers have a predominant role in the care of their newborn babies. So it becomes imperative to educate the mothers for neonatal care. Hence effective strategies should be planned for increasing the knowledge of mothers in neonatal care which will have a direct impact on the reduction in neonatal mortality. It can be concluded that, mother's knowledge regarding newborn care was good thus formal education helps to enhance the knowledge and the practices regarding newborn care was average. The health planners and policy makers should give emphasis on this important issue.

Recommendation(s)

If can be recommended that mothers should get continuous health education on newborn care by health care providers. They should be educated about the cord care, eye care, Cleanness and Thermal regulation of the newborn baby. Mother should be educated about the Immunization and EPI Vaccination for further improvement. community based study should be carried out to increase the knowledge in a larger scale about feeding Breast milk and taking care of baby after delivery. On this areas of essential newborn care to identify the knowledge gaps further researches should be conducted in a bigger scale.

Acknowledgements

We are thankful to our college authority and the participants in this study for providing required information to conduct this study.

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