Awareness on Neonatal Care Among Rural Mothers of Reproductive Age Group Admitted in a Tertiary Level Hospital at Mymensingh

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ABSTRACT

Background: In Bangladesh the neonatal mortality rate is unacceptably high, at 48.4 per 1,000 live births and it is higher in rural areas while the neonatal mortality rate in Asia is 41 per 1,000 live-births, compared to 7 per 1,000 live-births in developed countries.

Materials & Methods: This descriptive type of cross sectional study was carried out among 180 rural mothers of reproductive age in Mymensingh Medical College Hospital, Mymensingh from October 2013 to January 2014. Data were collected on a pretested questionnaire by face to face interview.

Results: The study revealed that 50.6% of the respondents were housewife & education wise 42.2% had primary education with mean age 26.28±5.50 years. 61% respondents knew that cord should be cut by sterile blade and 65% respondents mentioned that cord should be cut immediate after delivery. Among them 44.4% knew about initiation of breast feeding within 1st hour of delivery, 71.1% believed the importance of colostrums feeding. Only 30% of the respondents knew about frequency of breast feeding to the baby should be 8-10 times in a day and 58% had knowledge on exclusive breast feeding. Of the respondents 52.2% went for exclusive breast feeding but others did not. 67% respondents immunized their baby whereas 33% did not. More than half of the respondents (59%) cleaned their breast before feeding and 80.6% respondents washed their hands before handling their newborn. A significant association was found between education and knowledge on immunization of newborn (P=0.000), education and exclusive breast feeding (P=0.003).

Conclusion: The current study may boost up the awareness among rural mothers of reproductive age group on neonatal care which will further encourage them to be educated and thus neonatal morbidity & mortality may decline in some extent.

Key Words: Neonatal mortality and morbidity rate, Reproductive age, Neonatal care

Introduction

A newborn infant, or neonate, is a child under 28 days of age. During these first 28 days of life, the child is at highest risk of dying.1 During the first 30 days, most of the birth (congenital) defects are discovered.2 When a baby enters the world, many body systems change dramatically from the way they functioned during fetal life. So babies need an essential care in neonatal period.3 Human infants have a primal need to be carried close to their mother’s body.4

As early as the 17th and 18th centuries, there were scholarly papers published that attempted to share knowledge of interventions. It was not until 1922, however, that hospitals started grouping the newborn infants into one area, now called the Neonatal Intensive Care Unit (NICU). One in nine babies born in the UK will spend at least a few days in a neonatal unit which specializes in looking after preterm, small and sick babies.5

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Date of submission: 21.11.2017, Date of acceptance: 23.12.2017
Preterm birth, intra partum-related complications (birth asphyxia or lack of breathing at birth), and infections cause most neonatal deaths. Malnutrition is the underlying contributing factor in about 45% of all child deaths, making children more vulnerable to severe diseases. The first week of life is the most critical time for a newborn; three in four newborn deaths occur within the first week, almost 50 percent of them within 24 hours. An estimated 3.7 million neonatal deaths occur worldwide every year, 98% of which are in developing countries. In Bangladesh, the neonatal mortality rate (NMR) declined from 63 per 1000 live births in 1985-89 to 34 per 1000 in 2002-06. Improving the health and nutrition of mothers with providing quality reproductive health services are pivotal to addressing many underlying causes of child mortality.

In Bangladesh, the capital alone has 3.4 million people living in the slums, where the maternal health status is very poor. Although women living proximity of facilities with skilled medical care, 70% of them in the urban slums give birth at home with untrained traditional birth attendants. Whereas in Nepal most of the deliveries (91.5%) took place at home which were mostly conducted by relatives (29.6%) or family members (35.2%) or self (8.5%). Nearly two third of the respondents (64.8%) did not use clean home delivery kit (CHDK) and more than one fourth (26.8%) used "blade" for cord cutting. In Bangladesh, the perinatal (stillbirths and early neonatal) and late neonatal mortality scenario reflects a dreadful picture. Ninety nine percent (99 %), of maternal and newborn mortality occurs in the developing world, where more than 50 % of women still deliver without the assistance of skilled health personnel. This is a powerful statement about inequity and access to quality care. Few studies have looked into neonatal morbidity in the community in Bangladesh, and apart from maternal tetanus immunization there are virtually no other programs directed specifically for the neonates.

Neonatal morbidity and mortality rates in Ethiopia are among the highest in the world and stem from a range of socio-economic, political and demographic factors. Many of these deaths are preventable. Around 120,000 newborns die every year and the neonatal mortality rate is 37 per 1000 live births. Globally, over one million newborn infants could be saved each year by initiating breastfeeding within the first hour of life. In many parts of the world, the rates of early initiation of breastfeeding are extremely low: 17% in Eastern Europe and Central Asian countries, and 33% in Asia-Pacific. The highest rates (about 50%) are in Latin America, the Caribbean, East and North Africa. The World Health Organization guidelines from 1998 recommend that postnatal care for all newborns should include immediate and exclusive breastfeeding, warming of the infant, hygienic care of the umbilical cord, and timely identification of danger signs with referral and treatment. Countries worldwide are striving towards achieving Millennium Development Goal 4, which deals with the reduction of neonatal deaths. Provision of immediate newborn care and postnatal care are essential in promoting neonatal health. Malawi is making efforts to reduce intra partum related deaths as a way of achieving Millennium Development Goal 4. In Malawi, the prenatal mortality rate is estimated at 40 deaths per 1,000 births and the neonatal mortality rate is 31 per 1,000 live births, with 71% skilled attendance for deliveries. South-Asian and sub-Saharan African regions account for two thirds of the global burden of neonatal deaths annually. High infant and maternal mortality rates are one of the biggest health issues in Pakistan. Pakistan's Millennium Development Goals (MDG) aspire to decrease IMR and CMR to 40 and 45 (MDG 4) and MMR to 140 (MDG 5) by 2015.

Universal access to reproductive health and rights was designated as a developmental goal at the 1994 International Conference on Population and Development (ICPD) (UNFPA). This universal access is essential to achieve the millennium development goals for maternal and neonatal health (MDGs 4 and 5) which are to reduce maternal and neonatal mortality to one-third of current levels by 2015. The present study was aimed to determine the knowledge on neonatal care among rural mothers of reproductive age group admitted in a tertiary level hospital at Mymensingh.
that during delivery umbilical cord should be cut by sterile blade while 39% by sterile scissor and more than half of the respondents (65%) replied that umbilical cord should be cut immediate after delivery. (Figure-1, 2)

Regarding initiation of breast feeding after delivery only 44.4% of the respondents knew within 1st hr of delivery and others (55.6%) did not mention about it. Of the respondents 31.1% opined that bathing of newborn should be done minimum 3 days after birth and others (68.9%) did not mention appropriately. 71.1% respondents had knowledge on colostrums feeding and 28.9% did not know. Among the respondents only 30% knew about frequency of breast feeding to the baby should be 8-10 times in a day and 58% respondents had knowledge on exclusive breast feeding and a significant association was found between education and knowledge on exclusive breast feeding, (P=0.003). (Table-2)

It was also found from the study that 59% of the respondents clean their breast before feeding to their baby whereas 41% did not clean and majority of the respondents (80.6%) washed their hands before handling their baby. Among the respondents 61.7% feed colostrums to their baby and 38.3% did not. Another two key findings were 52.2% respondents had practiced exclusive breast feeding while rest (47.8%) did not practice it and 67% immunized their baby after birth whereas 33% did not. (Table-3)

### Table-1: Distribution of respondents by Socio-demographic characteristics. n= 180

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>15-25:56%, 26-35:40%, 36-45:4%; Mean age (±SD) = 26.28 ± 5.50</td>
</tr>
<tr>
<td>Education</td>
<td>Illiterate:20%, Primary:40.2%, Secondary:13.3%, Higher secondary:9.4%, Graduation:15%</td>
</tr>
<tr>
<td>Occupation</td>
<td>Government job:14.4%, Private job:20%, Business:6.7%, House wife:50.6%, Day labour:8.3%</td>
</tr>
<tr>
<td>Monthly Income(TK)</td>
<td>5000-15000:91.6%, 15001-25000:7.8%, 25001-35000:0.6%</td>
</tr>
<tr>
<td>Number of children</td>
<td>1:55%, 2:31%, 3-9:4.4%, 10-4:0.6%</td>
</tr>
</tbody>
</table>
Discussion

The descriptive type of cross sectional study was conducted to find out the awareness on neonatal care among rural mothers of reproductive age group in Bangladesh and to find out the associated factors related with neonatal care in Bangladesh. It was revealed that most of the respondents (56%) were in age group 15-25 years & rests (40% & 4.4%) were in 26-35 & 36-45 years of age group respectively. It was found from the study 50.6% of the respondents were housewife while 20%, 14.4%, 8.3% and 6.7% were involved in private job, government job, day labor and business respectively. A study was carried out in a rural community of Baitadi district of Nepal in 2010 and it was seen that most of the respondents (62.0%) belonged to the age group 20 to 30 years with the mean age of 24.5 ± 2.9 years. Agriculture was the major occupation (91.5%) of the mothers. These findings showed that this study were closer to the current study in age, but different in occupation due to socio-cultural difference between two countries.

Among the respondents 42.2% were primary passed, 20% were illiterate, followed by 13.3%, 9.4% & 15% were secondary, higher secondary passed and completed their graduation. A study done in the Kassena-Nankana District (KND) of the Upper East region of Northern Ghana in the year 2009 and it was explored that More than 90% of mothers had either no formal education or education that ended after primary or junior secondary school. The findings revealed that there were no similarities with the present study. It may be due to difference of social status between two countries.

The study explored that more than half of the respondents (55%) had one children, followed by 31% had two children, 9.4% had three, 4% had four children and 0.6% had more than four children respectively. A study was conducted in the Southern region of Malawi in the Chiradzulu district. It revealed parity of the participants ranged from one to seven and the majority of the participants had given birth between two to four times. The findings showed that it has some dissimilarity with the presents study may be due to inappropriate knowledge on family planning among the Africans.

It was also seen that 61% of the respondents know that cord should be cut by sterile blade & 39% by sterile scissor.

**Figure-1:** Distribution of respondents by knowledge on type of cord cutting instruments.

It is found from the figure-1 that 61% of the respondents knew that cord should be cut by sterile blade & 39% by sterile scissor.

**Figure-2:** Distribution of the respondents by knowledge on time of cord cutting after delivery

Figure-2 shows that more than half of the respondents (65%) replied that umbilical cord should be cut immediate after delivery and others 35% could not mention accurately.

**Table-2:** Distribution of the respondents by association between education and knowledge on exclusive breast feeding

<table>
<thead>
<tr>
<th>Knowledge on exclusive breast feeding</th>
<th>Illiterate</th>
<th>Primary</th>
<th>Secondary</th>
<th>Higher secondary</th>
<th>Graduation and above</th>
<th>Total</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4</td>
<td>46</td>
<td>19</td>
<td>10</td>
<td>26</td>
<td>105</td>
<td>.000</td>
</tr>
<tr>
<td>No</td>
<td>32</td>
<td>30</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>76</td>
<td>24</td>
<td>17</td>
<td>27</td>
<td>180</td>
<td></td>
</tr>
</tbody>
</table>

**Table-3:** Distribution of the respondents by practice related variables. (n=180)

<table>
<thead>
<tr>
<th>Practices</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning of breast before feeding</td>
<td>Yes:59%,  No:41%</td>
</tr>
<tr>
<td>Washing hand before handling newborn</td>
<td>Yes:80.6%, No:19.4%</td>
</tr>
<tr>
<td>Feeding colostrums to newborn</td>
<td>Yes:61.7%, No:38.3%</td>
</tr>
<tr>
<td>Exclusive breast feeding</td>
<td>Yes:52.2%, No:47.8%</td>
</tr>
<tr>
<td>Immunized their baby</td>
<td>Yes:67%, No:33%</td>
</tr>
</tbody>
</table>
Knowledge on exclusive breastfeeding whereas 42% did not and more than half of the (59%) respondents clean their breast before feeding and 41% did not clean. Regarding hands washing before handling baby 80.6% wash their hands and 19.4% did not wash. Another finding was 52.2% respondents had practiced exclusive breastfeeding and rest (47.8%) did not practice it. A cohort study was designed according to breastfeeding status in infants from birth to six months of age.26 The data showed that only 38% of children aged 2-3 months are exclusively breastfed and 23% of children are given complementary foods before the sixth month. It was seen that the improvement was in exclusive breastfeeding of the mother compared to the present study due to increasing knowledge of the mother. A significant association was found between education and knowledge on immunization of newborn (P=0.000), education and exclusive breastfeeding (P=0.003).

Conclusion
The population of our country is increasing in an alarming rate. The growth rate of our population creates problem in every sphere of our life. Poor neonatal care is a serious public health problem. Still the neonatal & infant mortality rate is high in Bangladesh. Unless the neonatal care is proper, probability remains of frequent infections in infancy causing in poor brain development and consequently resulting is an increased health burden for the state. The study revealed the gaps in different vital areas for neonatal care like ignorance about exclusive breastfeeding, usefulness of colostrums, initiation of breastfeeding, minimum time period for breastfeeding which are not good parameters for proper neonatal care. Unless neonatal care is proper increases mortality & morbidity rate will add to the existing public health problem. So this problem should be given adequate attention to address this burning issue of public health of this country. So that people must be made conscious through education.

Recommendations
- Health education should be strengthened through mass media and health services to educate the mothers for nursing of their neonates.
Awareness should be created by effective training program about the impact of good health of children.

 Mothers should be educated about breast feeding and weaning.

 Awareness should be created among mothers for the necessity of timely immunization.

Conflict of interest: None

References

1. WHO. Health topics on infants, neonate. 2006 [Serial online] [cited 5 Oct 2013]; Available from: URL:http://www.who.int/topics/infant_newborn/en/


