

Assessment Of Knowledge On Neonatal Care Among The Pregnant Women

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Abstract:

Background: Neonatal care is a critical aspect of maternal and child healthcare. Pregnant women play a pivotal role in ensuring the well-being and survival of their newborns. Their knowledge and understanding of essential neonatal care practices greatly influence the health outcomes of their infants during the critical neonatal period. In many resource-constrained settings, access to healthcare information and awareness of best practices related to neonatal care can be limited.

Objective: To assess the level of knowledge of pregnant women regarding neonatal care.

Materials and Methods: A descriptive type of cross sectional study was conducted to assess the knowledge on neonatal care among pregnant women in a selected Maternal and Child Health clinic in Mymensingh district, Bangladesh with a sample size of 195. A semi structured questionnaire was developed by researcher to conduct this study and non-randomized purposive sampling technique was used to collect data. Descriptive statistics, including frequencies, percentages, means, and standard deviation was used to describe the sample characteristics. Data was presented by frequency and cross tabulation analysis. The association was found out by using chi-square (χ^2) test and Pearson's Product Moment Correlation Coefficient test.

Results: The study results finds that only 34.3% respondent had good knowledge and 29.7%, 21.2% & 14.8% had moderate knowledge, excellent knowledge & poor knowledge respectively. The study results also find that only 29.7% of the respondents knew that hands should be washed with soap and water before feeding while 29.7% respondents said that no need to wash hands before feeding and near half of the respondent 49.7% had any idea about the first birth of a newborn. The study result also reveals that among the respondents 42.5 % had no knowledge on proper position during breast feeding. There was significant association was found between age and level of knowledge, ($p = 0.000$) and between level of knowledge and colostrum feeding, ($p=0 .000$).

Conclusion: The rapid population growth in our country is causing widespread issues, including a significant problem with poor neonatal care. While the neonatal mortality rate is gradually decreasing, inadequate neonatal care can lead to frequent infections in infancy, poor brain development, and increased healthcare burdens. The study highlights crucial gaps in areas like exclusive breastfeeding, colostrum utilization, and the initiation and duration of breastfeeding. These gaps contribute to the ongoing public health challenges. To address this critical issue, there's a pressing need to raise awareness and educate the population on proper neonatal care.

Key Word: Knowledge on neonatal care, pregnant women

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I. Introduction

The newly born baby age up to the first four weeks or 28 days after delivery is called the neonatal period and the baby is called neonate. The neonatal period (birth to 28 days) can be divided into two distinct phases: the first seven days –early neonatal period & the remaining three weeks –late neonatal period. Globally, about three fourth of all neonatal deaths occur during the early neonatal period. The Millennium Development Goal target to reduce child mortality (MDG4) and maternal mortality (MDG5) Mortality is very high in the first 24 hours after death, particularly in the early neonatal period. A large proportion of deaths due to infections asphyxia and complications of premature birth occur in this period while a majority of deaths due to infections and tetanus take place during the late neonatal period.¹

The major causes of neonatal death include asphyxia, sepsis, pneumonia and prematurity. The major causes of maternal deaths include postpartum hemorrhage, sepsis and prolong labor .Most of the neonatal and maternal deaths are preventable. WHO estimates that 40% to 60 % of neonatal deaths are preventable. It is possible to save 1 to 2 million babies through basic intervention. Similarly, 50% of the maternal deaths over 250,000 lives can be prevented using basic principles of safe motherhood and mother – baby package.²

II. Material And Methods

A descriptive type of cross sectional study was conducted to assess the knowledge on neonatal care among pregnant women in a selected MCH clinic in Mymensingh district, Bangladesh with a sample size of 195.

Study Design: A Descriptive type of cross sectional study.

Study Location: The study was conducted in a Maternal and Child Health clinic in Mymensingh Medical College Hospital, Mymensingh. Above 50 pregnant women had visited every day here.

Study Duration: January 2016 to April 2016.

Sample size: 195 pregnant women.

Sample size calculation: The sampling size was determined by the following formula. $n = \frac{z^2 pq}{d^2}$ Where,

n = required sample size, z = standard normal deviation with 95% CI which is set as 1.96, p = Prevalence of neonatal mortality was 45% $36 = 0.45$.35, q = 1-p so, 1-0.45 = 0.55, d = Acceptable error = 0.05.

Inclusion criteria:

1. All pregnant women who was willing to attend this study
2. Mentally sound health
3. Respondent who take care and advice from MCH clinic.
4. Respondents who cooperate both verbally and informational with me.

Exclusion criteria:

1. Respondents who refused to provide informed consent
2. Respondent with major psychiatric problem
3. Rigid to provide information
4. Respondent with termination of pregnancy

Procedure methodology

Data was collected after obtaining permission from the Director of Mymensingh Medical College Hospital. After obtaining permission from the Director, the researcher met the nursing superintendent and briefly explain the purpose of the study. Written consent obtained from each respondents after explaining the objectives, benefits, and method of data collection. A semi-structured questionnaire was used to collect data and time for each respondents was not be more than 20-23 minutes. The participant was informed that they can withdraw from this study at any time without negative consequence. To protect human subjects, confidentiality and anonymity was strictly maintained by using numerical codes in the questionnaires instead of respondent's names.

Statistical analysis

Data was analyzed using SPSS. Descriptive statistics, including frequencies, percentages, means, and standard deviations were used to describe the sample characteristics. Data was presented by frequency and cross tabulation analysis. The association was find out by using chi-square (χ^2) test and Pearson's Product Moment Correlation Coefficient test

III. Result

Significant association was found between age and level of knowledge, (p = 0.000) and between Level of knowledge and Colostrum feeding, (p=0 .000).

Table 1: Distribution of socio-demographic characteristics of the respondents, (N=195)

Variables	Categories	n	(%)	Mean ± SD
Mother Age (years)	<20	10	5.1	28.96±8.115
	20-25	68	34.9	
	26-30	72	36.9	
	31-35	14	7.2	
	>35	31	15.9	
Religion	Islam	133	66.7	
	Hindu	62	31.8	
	Buddhist	1	.5	
	Christian	2	1	
Educational qualification respondents	Illiterate	55	28.2	
	Primary	42	21.5	
	SSC	35	17.9	
	HSC	25	12.8	

Educational qualification of husband	Graduate & Above	38	19.5	
	Illiterate	35	17.9	
	Primary	35	17.9	
	SSC	14	7.2	
	HSC	56	28.7	
Respondent Occupation	Graduate & Above	55	28.2	
	Service holder	39	20	
	Housewife	125	64.1	
	Businessman	24	12.3	
	Day laborer	7	3.6	
Respondent husband Occupation	Service holder	87	44.6	
	Farmer	21	10.8	
	Businessman	78	40	
	Day laborer	9	4.6	
Type of family	Nuclear family	138	70.8	
	Joint family	57	29.2	
Number of children	One child	92	47.2	2.29±1.537
	Two child	40	20.5	
	Three child	8	4.1	
	Four and more child	24	12.3	
	No child	31	15.9	
Monthly family income (in taka)	Low Income	21	10.8	21625.64±9507.369
	Moderate Income	106	54.4	
	Fair income	32	16.4	
	Good Income	36	18.4	

The study revealed that 36.9% respondents were in age group 26-30 years. Among the respondents 66.7% was Muslim and 70.76% were belonged to joint family. The study also revealed 64.10% of the respondents were house wife while only 21.5% had Primary education and rest 19.4%, 17.9% & 12.8% had Graduate & Above degree, SSC and HSC respectively. The study explored that 47.1% of the respondents had one children and more than half of the respondents (54.35%) were in the moderate income group.

Figure no-1: Distribution of respondents by knowledge on how to wash hand before breast feeding (n=195)

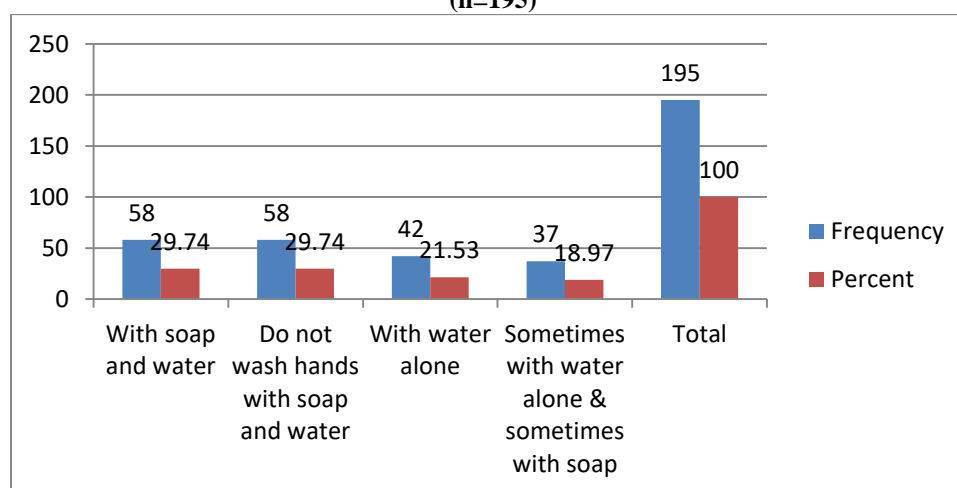


Figure no 1 indicates that 29.7% of the respondents knew that hands should be washed with soap and water, followed by 21.5% and 18.9% mentioned with water alone and sometimes with water alone & sometimes with soap. But 29.7% said that no need to wash hands before feeding.

Table-2: Distribution of respondents by level of knowledge (n=195)

Level of Knowledge	Frequency	Percent
Poor knowledge	29	14.8
Moderate knowledge	58	29.7
Good knowledge	67	34.3
Excellent knowledge	41	21.2
Total	195	100

Table no 2 reveals that 34.3% respondent had good knowledge, 29.7%, 21.2% & 14.8% had moderate knowledge, excellent knowledge & poor knowledge respectively.

Table-3: Distribution of respondents by association between age and level of knowledge

Age	Level of knowledge				Total	P-Value
	Poor knowledge	Moderate knowledge	Good knowledge	Excellent knowledge		
<20	2	1	7	0	10	0.000
20-25	16	23	24	5	68	
26-30	11	11	24	26	72	
31-35	0	3	7	4	14	
>35	0	20	5	6	31	
	29	58	67	41	195	

Table no 3 finds that there is a significant association between age and level of knowledge, (p = 0.000). it is seen that those who are younger in age i.e. <20 years had low level of knowledge than others respondents.

Table-4: Distribution of respondents by association between Level of knowledge and knowledge on Colostrum feeding

Level of knowledge	Knowledge on Colostrum feeding		Total	p-value
	Yes	No		
Poor knowledge	3	26	29	0.000
Moderate knowledge	34	24	58	
Good knowledge	60	7	67	
Excellent knowledge	41	0	41	
Total	138	57	195	

Table no 4 it was found that there is a significant association between level of knowledge and colostrum feeding, (p=0 .000). It is found that those who score good knowledge know about colostrum feeding.

Table 5 Relationship between socio-demographic characteristics of the respondents and knowledge level

Variable	Knowledge level	Age	Income	Educational qualification of the respondent	Respondent husband's educational qualification	Occupation of the respondent	Respondent husband's Occupation	Family type of the respondent	Number of children
Knowledge level	1								
Age	.133	1							
Income	.224**	.086	1						
Educational qualification of the respondent	.538**	-.078	.605**	1					
Respondent husband's educational qualification	.442**	-.145*	.602**	.788**	1				
Occupation of the respondent	-.318**	.020	-.458**	-.570**	-.568**	1			
Respondent husband's Occupation	-.406**	-.074	-.510**	-.563**	-.597**	.600**	1		
Family type of the respondent	-.382**	.015	-.115	-.253**	-.241**	.219**	.182*	1	
Number of children	-.113	.291**	.175*	-.093	-.123	.080	.051	.083	1

Table 5 shows that knowledge level has strong positive correlation with income, respondent educational qualification and respondent husband's educational qualification and moderate negative correlation with occupation of the respondent, respondent husband's occupation and family type of the respondent

IV. Discussion

This descriptive type of cross sectional study was conducted to assess the level of knowledge on neonatal care among the Pregnant Women Visiting a Selected MCH Clinic in Mymensingh district and to find out the associated factors related with neonatal care in Bangladesh. The study revealed that majority of mothers (36.9%) were in age group 26-30 years Among the respondents 70.76% were belonged to joint family and rest

29.23% nuclear family. Among the respondents 64.10% of the respondents were house wife while 20%, 12.30%, and 3.58% were involved in Service, Business and day labour. A study was carried out in a rural community of Baitadi district of Nepal in 2011 and they revealed 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 All the respondents were Hindu and there was dominance of joint family (64.8%) and agriculture was the major occupation (91.5%) of mothers. 36 Except occupation and religion these two studies are quite similar. The observed variations are possibly as Nepal is a Hindu country so most of their populations are Hindu and mostly they lived on agriculture.

It is found that 40.6% respondent did not know which instrument was used for umbilical cord cutting. The study also shows that more than half of the respondents (61.21%) replied that they don't know the time of cord cutting. The study revealed that 56.3 % respondents used nothing for cleaning the umbilical cord and near half (49.7%) of the respondents had no idea about the first birth of a newborn. A Community based descriptive cross sectional study was conducted in Siddheshwar, Siddhapur and Gujar VDCs of Baitadi district of Nepal in 2011. That revealed nearly two third of the respondents (64.8%) did not use clean home delivery kit (CHDK) and more than one fourth (26.8%) used "used blade" for cord cutting. About 86.0% of the respondents did not use any substance on the stump, and one third (33.8%) did not wipe their babies. Most of the respondents (84.4%) burnt firewood for heating the room. More than two third (38%) of the respondents bathed their babies within one hour and only 18.3% of respondents bathed their babies after 24 hours. Only 7.0% of the respondents' breast fed their babies within one hour, though all babies were breast fed. Nearly one third (29.6%) of the respondents discarded the first milk (colostrum). Most of the respondents (87.3%) did not give pre lacteals to their newborns and more than two third (70.4%) did not seek any health services for their newborns. More than one third (35.2%) did not vaccinate their babies.³⁴ These two findings are quite dissimilar except umbilical cord cutting instrument possible cause for these awareness between the rural mothers were comparatively increased.

V. 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. Though neonatal mortality rate is decreasing day by day, 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 colostrum, initiation of breast feeding, 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.

References

- [1]. World Health Organization. Neonatal And Perinatal Mortality: Country, Regional And Global Estimates. 2006 [Cited 2008 Feb 10]; Available From: URL: [Http://Whqlibdoc.Who.Int/Publications/2007/9789241596145_Eng.Pdf](http://Whqlibdoc.Who.Int/Publications/2007/9789241596145_Eng.Pdf).
- [2]. World Health Organization. Essential Newborn Care. Report Of A Technical Working Group 1994 April 25-29 [Cited 2008Feb 13]; Available From:URL: [Http://Www.Umbicut.Com/Article3.Htm](http://Www.Umbicut.Com/Article3.Htm) Accessed On 12-7-2015.
- [3]. Declaration Of Alma-Ata. International Conference On Primary Health Care.1978 September 6-12 [Cited 2008 Feb 13]; Available From:
URL:[Http://Www.Palgravejournals.Com/Development/Journal/N2/Abs/1100047a.47.Html](http://Www.Palgravejournals.Com/Development/Journal/N2/Abs/1100047a.47.Html) Accessed On 07-7-2015
- [4]. United Nations Children's Fund. Trend In Childhood Mortality In The Developing World. 1999 [Cited 2008 Feb 15]; Available From:
URL: [Http://Www.Popline.Org/Docs/1376/158086.Htm1](http://Www.Popline.Org/Docs/1376/158086.Htm1) Accessed On 12-7-2015.
- [5]. Bhave S. Perinatal And Neonatal Mortality And Morbidity In India. 1989 [Cited 2008 Feb 20]; Available From:
URL: [Http://Www.Ncbi.Nlm.Nih.Gov/Pubmed/2630467](http://Www.Ncbi.Nlm.Nih.Gov/Pubmed/2630467) Accessed On 11-7-2015.
- [6]. World Health Organization. Make Every Mother And Child Count. 2005 [Cited 2008 Feb 27]; Available From:
URL: [Http://Saudiannals.Net/Pdfs/V25i6bookreview.Pdf](http://Saudiannals.Net/Pdfs/V25i6bookreview.Pdf) Accessed On 12-7-2015.
- [7]. Newborn Care In South - East Asia Region (WHO/SEAR). Report Of Regional Expert Group Meeting. 2002 [Cited 2008 March 02]; 22:[513-515]. Available From: URL: [Http://Www.Nature.Com/Jp/Journal/V22/N7/Full/7210797a.Htm1](http://Www.Nature.Com/Jp/Journal/V22/N7/Full/7210797a.Htm1) Accessed On 12-7-2015.
- [8]. Fikree FF, Ali TS, Durocher JM, Rahbar MH. Newborn Care Practices In Low Socio-Economic Settlements Of Karachi, Pakistan. [Cited 2008 March 05] Available From:URL: [Http://Www.Popline.Org/Docs/1532/279511.Htm1](http://Www.Popline.Org/Docs/1532/279511.Htm1) Accessed On 11-7-2015.
- [9]. Thapa N, Chongsuvivatwong V, Geater AF, Ulstein M, Bechtel GA. Infant Death Rates And Animal-Shed Delivery In Remote Rural Areas Of Nepal. [Serial Online] 2000 [Cited 2008 March 17]; 51(10): 1447-56. Available From:
URL: [Http://Www.Ncbi.Nlm.Nih.Gov/Pubmed/11077949](http://Www.Ncbi.Nlm.Nih.Gov/Pubmed/11077949) Accessed On 12015.
- [10]. Ministry Of Health. Family Health Division. Maternal Mortality And Morbidity Study. [Serial Online] 2006 [Cited 2008 March 05] Available From:URL:[Http://Www.Geocities.Com/Agnihotrimed/Paper04_Jul-Dec2006.Htm](http://Www.Geocities.Com/Agnihotrimed/Paper04_Jul-Dec2006.Htm) Accessed On 12-7-2015.
- [11]. Population Reference Bureau. World Population Data Sheet. [Serial Online] 2007 [Cited 2008 March 12] Available From:
URL: [Http://Www.Prb.Org/Pdf07/07WPDS_Eng.Pdf](http://Www.Prb.Org/Pdf07/07WPDS_Eng.Pdf) Accessed On 22-7-2015.
- [12].

- [18]. Bolam A, Manandhar DS Shrestha P, Ellis M, Malla K, Costello AM. Factors Affecting Home Delivery In The Kathmandu Vally, Nepal. Health Policy Plan. [Serial Online] 1998 [Cited 2008 April 15]; 13(2):152-8. Available From: URL:[Http://Www.Ncbi.Nlm.Nih.Gov/Pubmed/10180403](http://www.ncbi.nlm.nih.gov/pubmed/10180403) Accessed On 12-7-2015.
- [19]. Thapa N, Chongsuvivatwong V, Geater AF, Ulstein M. High-Risk Childbirth Practices In Remote Nepal And Their Determinants. [Serial Online] Available From:URL: [Http://Www.Ncbi.Nlm.Nih.Gov/Pubmed/11310813](http://www.ncbi.nlm.nih.gov/pubmed/11310813) Accessed On 12-7-2015.
- [20]. Mekonnen Y, Tensou B, Telake S D, Degefie T, Bekele A. Neonatal Mortality In Ethiopia: Trends And Determinants.[Cited 2012 August 6] Available From URL: [Http://Bmcpublihealth.Biomedcentral.Com/Articles/10.1186/1471-2458-13-483](http://bmcpublihealth.biomedcentral.com/articles/10.1186/1471-2458-13-483) Accessed On 8 May 2013.
- [21]. World Health Organization. Newborn Death And Illness. Available From URL:[Http://Www.Who.Int/...Materials/...Newborndhealth.../E](http://www.who.int/...Materials/...Newborndhealth.../E)
- [22]. Kesterton J (2009) Cleland John. Neonatal Care In Rural Karnataka Healthy And Harmful Practices. BMC Preg And Childbirth . 9, 506-13
- [23]. URL: [Http://Www.Ncbi.Nlm.Nih.Gov/Pmc/Articles/PMC4148396/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4148396/)
- [24]. Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, De Bernis L. Evidence-Based, Cost-Effective Interventions: How Many Newborn Babies Can We Save? [Serial Online] 2005 March 3 [Cited 2008 May 23]. Available From: URL:[Http://Www.Who.Int/Child_Adolescent_Health/Document/Pdfs/Lancet_Neonatal_Survival_Paper_2.Pdf](http://www.who.int/child_adolescent_health/document/pdfs/Lancet_Neonatal_Survival_Paper_2.Pdf) Accessed On 12-4-2016.
- [25]. World Health Organization. Perinatal Mortality-A Listing Of Available Information. Geneva: Maternal Health And Safe Motherhood Programme. 1996 [Cited 2008 May 25]. Available From:URL: [Http://Www.Popline.Org/Docs/1458/116661.Html](http://www.popline.org/docs/1458/116661.html) Accessed On 12-6-2015.
- [26]. The Task Force For Child Survival. Protecting The World Children. [Serial Online] 1988 [Cited 2008 May 28]. Available From: URL: [Http://Www.Jama.Amaassn.Org/Cgi/Reprint/281/16/1481.Pdf](http://www.jama.amaassn.org/cgi/reprint/281/16/1481.pdf) Accessed On 12-6-2015.
- [27]. URL: [Http://Www.Ncbi.Nlm.Nih.Gov/Pmc/Articles/PMC4148396/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4148396/)
- [28]. Issler, H. (Jan. 2001). Knowledge Of Newborn Healthcare Among Pregnant Women: Basis For Promotional And Educational Programs On Breastfeeding. Sao Paulo Med. J;119(1):1-2. URL: [Http://Www.Ncbi.Nlm.Nih.Gov/Pmc/Articles/PMC4148396/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4148396/)
- [29]. Ministry Of Health And Population, New ERA And ORC Macro (2006).Nepal Demographic And Health Survey [Serial Online]2006[Cited 2008 May 23]. Available From: URL: [Http://Pdf.Usaid.Gov/Pdf_Docs/PNADJ206.PDF](http://pdf.usaid.gov/pdf_docs/PNADJ206.PDF).