Sociodemographic Factors Affecting Knowledge of Postnatal Mothers on Safe Newborn Care

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Abstract

Background:
There is lacunae regarding safe newborn care practices by postnatal mothers in Bangladesh. This is often attributed to sociodemographic factors affecting knowledge of mothers. This study was aimed to determine the association between sociodemographic factors and knowledge of postnatal mothers regarding newborn care.

Methods:
This cross-sectional observational study was carried out among 150 mentally stable and eligible postnatal mothers of 0-28 day- old baby in the department of Paediatrics, Rangpur Medical College Hospital from July, 2018 to January, 2019. Knowledge score was measured at individual level with each question carrying a correct answer score of 1.Main outcome variables were sociodemographic factors and knowledge of postnatal mothers. $p<0.05$ was used as the minimal level of significance.

Results:
Most of the respondent postnatal mothers (72/150,48%) achieved primary education ($p<0.001$). As per place of inhabitants, rural mothers (99/150,66%) comprised the highest ($p<0.001$). As occupation, housewife (113/150,75.3%) belonged to the majority ($p<0.001$). Among the respondents having primary education, (6/8,75%) mothers had good knowledge regarding newborn care than mothers with higher education revealing no significant association between hierarchies of education and level of knowledge ($p=0.587$). Type of inhabitants and socioeconomic status had nonsignificant association with level of knowledge of postnatal mothers regarding neonatal care.

Conclusion:
This study concluded that sociodemographic characteristics did not significantly affect knowledge of postnatal mothers regarding newborn care. among the respondents having primary education, most mothers had good knowledge regarding safe newborn care. Type of inhabitants and socioeconomic status had nonsignificant association with level of knowledge of postnatal mothers regarding neonatal care.

Key words: Newborn care, Sociodemographic factors, Postnatal mothers, Maternal knowledge.

Introduction:

Child health is one of the basic needs of a society. It is the cornerstone on which a healthy community and nation are built. One of the essential components of child health is newborn carewhich refers to issues pertaining to mother and baby from birth upto 6 weeks.[1] It isthe essential care provided to the newborn baby by the mother or caregiver.The components include breastfeeding, maintaining body temperature, cord care, eye care, immunization,prevention of infection, recognition of danger signs and common illnesses.[2]

Gaps in knowledge and practices among mothers regarding newborn care are attributed to ignorance and deep rooted cultural and traditional beliefs.[3] Since maternal knowledgeplay a pivotal role in prevention of neonatal mortality,it is pertinent that educating postnatal mothers will facilitate mothers 'understanding to identify issues and illnesses common to the newborn.[4]

Despite the progress towards reduction of under-five mortality globally, newborn deaths are declining at a slower rate.[5,6] Approximately 75% neonatal deaths occur during the first week of life and between 25% to 45% occurs within first 24 hours of birth.[4,5,7,8] In Bangladesh, neonatal mortality rate declined from 93/1000 live births in 1967 to 19 /1000 live births in 2019. Conversely ,neonatal care rate is only 22.4 % at present.[9,10] It is estimated that 75% of the neonatal deaths can be avoided with simple low-cost tools like:antibiotics for pneumonia and sepsis, sterile blades to cut umbilical cords, kangaroo mother care to keep babies warm.This is only possible if mother's knowledge is good enough to make decision to seek health service.Studies that assessed knowledge and practice of postnatal mothers towards newborn care in the country are mainly confined to rural settings. There are limited studies concerning knowledge of postnatal mothers in urban settings. Despite implementation of the Urban Health Extension programme, a significant proportion of urban mothers still lack appropriate knowledge to cater care to newborns. Study findings reveal that level of knowledge can vary significantly across rural and urban settings.[5] Therefore, the purpose of this study was to assess and explore the impact of sociodemographic factors on contemporary knowledge regarding newborn care by postnatal mothers.

Methods:

This cross-sectional observational study was conducted in the department of Paediatrics, Rangpur Medical College Hospital, Rangpur from 8th July, 2018 to 7th January, 2019. After taking informed consent, 150 postnatal mothersattending department of Paediatrics, Rangpur Medical College Hospital were enrolled into this study. Inclusion criteria were mentally capable mothers of 0-28 day- old baby. Exclusion criteria weremothers staying separate from their child and mothersof babies with special care needs due to prematurity, low birth weight, congenitalabnormality.Knowledge score was measured at individual level with each question carrying a correct answer score of 1.Correct answers 60% or more were graded as good knowledge level, Correct answers 30%-59% - average knowledge level and correct answers <30% - poor knowledge level.[3] Main outcome variables were sociodemographic data like age,education, inhabitants, occupation, socioeconomic status and knowledge of postnatal mothers. SPSS version 23.0 for windows was used for the analysis of data. For qualitative variables, Chi-square test and for quantitative variables data were arranged in mean and standard deviation. p<0.05 was used as the minimal level of significance.

Results:

Table-I: Distribution by age of participant mothers of newborn baby (n=150)

Age group (years)	Number	Percentage	Probability
17-20	49	32.6%	
21-30	89	59.3%	P<0.001(S)
31-40	12	8%	
Mean ±SD		23.27 ±3.87	

n : Number
S : Significant
in Chi-square test of significance of difference

Table-I reflects age of majority of postnatal mothers belonging to 21-30 years old group (p<0.001). Mean age of the mothers was 23.27±3.87 years.

Table-II: Distribution of respondent mothers according to sociodemographic characteristics (n=150)

Variable	Number	Percentage	Probability
Level of education			
No formal education	03	2.0%	
Primary	72	48.0%	
Secondary	33	22.0%	p<0.00(S)
Higher secondary	16	10.7%	
Graduate	26	17.3%	
Inhabitants			
Rural	99	66.0%	p=0.83(NS)
Urban	51	34.0%	
Occupation			
Housewife	113	75.3%	
Worker	14	9.3%	
Employed in service	18	12.0%	p<0.00(S)
Business	04	2.7%	
Others	01	0.7%	
Socioeconomic status			
Upper	01	0.7%	
Middle	70	46.7%	p<0.00(S)
Lower	79	52.7%	

n : Number
S : Significant
NS : Nonsignificant
in Chi-square test of significance of difference

Table-II demonstrates that most of the respondent mothers (72/150,48%) achieved primary education (p<0.001). As per place of inhabitants, rural mothers (99/150,66%) comprised the highest (p<0.001). As occupation, housewife (113/150,75.3%) belonged to the majority (p<0.001). More than half of the participants (79/150,52.7%) hailed from poor socioeconomic status (p<0.001).

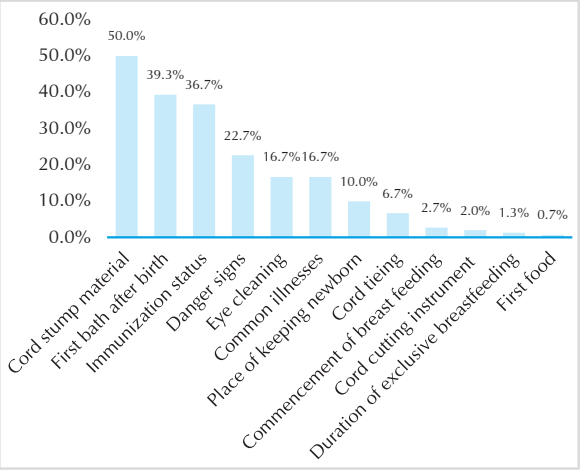


Figure-1: Illustrates the proportion of postnatal mothers with lack of knowledge on various components of neonatal care. (75/150,50%) mothers had no idea on cord stump material, (59/150,39.3%) mothers were unaware about time of first bath. (1/150,0.7%) mother did not know about first food after birth.

Table-III: Association between education and level of knowledge of postnatal mothers regarding neonatal care (n=150)

Level of education	Level of knowledge			Probability
	Good (n=08)	Average (n=122)	Poor (n=20)	
No formal education	0	03(2.5%)	0	
Primary	06 (75%)	58(47.54%)	8(40%)	
Secondary	01(12.5%)	29(23.77%)	3(15%)	0.587(NS)
Higher secondary	0	12(9.83%)	4(20%)	
Graduate	01(12.5%)	20(16.39%)	5(25%)	

n : Number
NS : Nonsignificant
in Chi-square test of significance of difference

Table III Illustrates that majority of the mothers having primary education had average knowledge (58/122, 47.54%) than others with higher education. However, there was no significant association (p=0.587) between hierarchies of education and level of knowledge of postnatal mothers regarding newborn care.

Table-IV: Association between type of inhabitants and level of knowledge of postnatal mothers regarding newborn care (n=150)

Type of inhabitants	Level of knowledge			Probability
	Good (n=08)	Average (n=122)	Poor (n=20)	
Rural	05(62.5%)	83(68.03%)	11(55%)	0.510 (NS)
Urban	03(37.5%)	39(31.97%)	09(45%)	

n : Number
NS : Nonsignificant
in Chi-square test of significance of difference

Table-IV shows association between type of inhabitants and level of knowledge of postnatal mothers regarding newborn care was nonsignificant (p=0.510).

Table-V: Association between socioeconomic status and level of knowledge of postnatal mothers regarding newborn care (n=150)

Socioeconomic status	Level of knowledge			Probability
	Good (n=08)	Average (n=122)	Poor (n=20)	
Upper	0	01(0.82%)	0	
Middle	03(37.5%)	52(42.62%)	15(75%)	0.105(NS)
Lower	05(62.5%)	69(56.56%)	05(25%)	

n : Number
NS : Nonsignificant
in Chi-square test of significance of difference

Table-V reflects association between socioeconomic status and level of knowledge of postnatal mothers regarding neonatal care was nonsignificant (p=0.105).

Discussion:

In this study, nearly half of the respondent mothers (72/150,48%) had achieved primary education. The study revealed significant association

between mothers' primary school education and knowledge regarding newborn care (p<0.001). Study conducted by Missiriya S reported higher percentage (38/60,63.3%) postnatal mothers had achieved primary education.[3] Thenmozhi P et al. also observed similar findings.[11] Findings of the present study differ with that of previous studies. This may be due to different study and geographical variation. Most of the mothers in the current study were rural inhabitants (99/150, 66.0%, p=0.832). It is similar to the study findings conducted by Castalino F et al. who reported more than half of postnatal mothers (17/30, 56.7%) lived in rural areas.[12] However, this finding does not conform to the observation of the study conducted by Beraki G G et al. who showed most of the mothers belonged to urban areas (183/250, 73.2%).[1] This disparity in the type of inhabitants is probably due to difference in study settings. In the present study, (113/150, 75.3%, p<0.001) mothers were housewives by occupation. Study of Beraki G G et al. showed similar finding of (197/250, 80.7%) mothers being housewives.[3] In the current study, (79/150, 52.7%, p<0.001) mothers hailed from low socioeconomic status. However, Mandal M et al. reported higher number of mothers belonging tolow socioeconomic status (139/189, 73.54%).[13]

Education empowers mothers indecision making process and facilitates knowledge on newborn care.[14] In the present study, among the respondents having primary education, (6/8, 75%) mothers had good knowledge, (58/122, 47.54%) average knowledge, (8/20, 40%) poor knowledge. Association between level of education and knowledge on newborn care was nonsignificant (p=0.587). The probable reason for this difference may be explained by easy access of rural mothers to antenatal and postnatal information by various government and nongovernment organizations.[15] This conforms to the findings ofMaharjan M et al. who divulged that knowledge on newborn care was independent of education (p=0.157).[16] Similar observation was reported by Bhandari S D, where the literacy status was statistically insignificant (p=0.702).[8] However, a studyconducted by CastalinoF et al. revealed significant association between knowledge and education (p=0.009).[12]

Type of inhabitants influence the level of knowledge regarding postnatal care. In this study, majority of the respondents hailing from rural area had average knowledge (83/122,68.03%), good knowledge (5/8,62.5%) and poor knowledge (11/20, 55%) on new born care. This is attributed to regular antenatal and postnatal services by health care providers in rural areas. Another explanation is dissemination of importance of newborn care through state run Bangladesh television (BTV) which is widely viewed by rural mothers.[17] Although urban mothers reside within easy access to health care facilities, they get scant health education on newborn care from otherwise busy health care staffs. Nonetheless, the present study revealed no significant association between type of inhabitants and level of knowledge (p=0.51).Similar observations were found in the study conducted by Bhandari SD showingthe proportion of knowledge of respondents-residingin urban and rural area were not significantly different (p=0.21).[8] Contrary to this, observations found in a study conducted by Memon J et al. reported that difference between the residence type and knowledge score was significant (p=0.001).[18]

Current study showed no association between socioeconomic status and knowledge of postnatal mothersregarding newborn care (p=0.105). Majority of the postnatal mothers belonging to low socioeconomic status possessed average knowledge (52/122,42.62%), good knowledge (5/8,62.5%) and poor knowledge (5/20,25%). The possible reason is attributed to the usual trend of patients from low socioeconomic status seeking healthcare in government hospitals. Moreover, different stakeholders strive towards removing myths and wrong practices in the rural community. A study conducted by Bhandari S D showed that there was no significant association between mothers knowledge with monthly income (p=0.232).[8] Whereas, a local study conducted by Majumder S et al. showed significant association between this two variables (p=0.001).[9]

Conclusion:

The study revealedthatsociodemographic characteristics did not significantly affect knowledge of postnatal mothers regarding newborn care.

Recommendation:
Information gained from this study can be used as baseline data of sociodemographic factors impacting neonatal care by postnatal mothers. The study findings may provide insight for developing feasible and sustainable interventions to enhance knowledge and understanding of mothers on safe newborn care.

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