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Original Research Article

Knowledge on essential newborn care among antenatal mothers attending tertiary care hospital

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ABSTRACT

Background: Globally 4 million newborn die every year before they reach the age of one month. To achieve the millennium developmental goals newborn survival is essential. Aim of the study was to assess the level of knowledge of antenatal women on essential new born care and danger signs during neonatal period, to find the association of sociodemographic and obstetric characteristics with maternal knowledge level. Settings and design included descriptive cross-sectional study was conducted in a tertiary care hospital.
Methods: The study enrolled 439 antenatal women by convenient sampling technique. A pretested semi structured questionnaire was used to assess the knowledge. Statistical package for the social sciences (SPSS) 21 version was used to analysis the data. Chi square was calculated to find the association. P value of <0.05 was considered statistically significant.
Results: The study shows that 16.7% respondents had adequate knowledge about danger signs during neonatal period. The maternal age, parity, socioeconomic status, parity had significantly associated with the maternal knowledge regarding new-born care ($p<0.05$).
Conclusions: Majority of the ante natal mother had poor knowledge on new born care.

Keywords: New born danger signs, New born, Essential new born care

INTRODUCTION

Every year around 7.7 million under 5-year children die around the world. Out of this, neonatal deaths constitute around 3.1 million.[1] Due to high rates of unhygienic cord care practices, cord infections are prevalent in many developing countries.[2] Infections like sepsis, pneumonia, tetanus, diarrhoea lead to 36% of neonatal deaths, whereas 28% are preterm deaths and 23% results from birth asphyxia.[3,4] In order to reduce neonatal morbidity and mortality world health organisation has recommended clean cord care, thermal care and initially breast feeding immediately or within the first hour after birth as essential new-born care practices.[5]

By practising essential new-born care, new-born deaths due to sepsis/pneumonia, preterm birth and tetanus can be reduced significantly in the developing countries.[6]

Reducing neonatal mortality and morbidity by practicing essential new born care depends more on knowledge attitude and practice of the mothers.[7] From various previous studies it was observed that postnatal mother lacks awareness towards neonatal care. It was also found that this can be improved by providing health education on essential new born care for antenatal mothers.[8] Hence this study was undertaken to assess the knowledge on essential new born care among antenatal mothers and its association with various sociodemographic and obstetric characteristics.

METHODS

A hospital based descriptive cross-sectional study was conducted for a period of six months from March to September 2019 among pregnant women in a government tertiary care hospital, Sivagangai district. Study population were selected by convenient sampling technique. All antenatal mothers attending the antenatal clinic for follow up visit irrespective of their period of gestation were taken as study population. Those with severe illness and who did not consent for the study were excluded from the study. After obtaining verbal consent from the study participants' data was collected.

A pretested, semi structured questionnaire was used to collect data from the study participants. Questions included identification details, details on sociodemographic profile, maternal knowledge on danger signs during neonatal period and knowledge on the four components of essential new born care.

Those respondents who were able to mention more than four out of the nine serious danger signs during neonatal period were considered to have adequate knowledge. With respect to essential new born care, respondents who were able to identify at least two out of the four components, dry and wrap, cord care, eye care and exclusive breast feeding were considered knowledgeable.

Questionnaire was checked for completeness daily by the primary investigator. Data was entered in Microsoft excel, statistical package for social science windows version 21.0 was used for analysis.

Univariate analysis was done using descriptive techniques and bivariate analysis using Chi square test for independence. Factors with p value <0.05 were considered to have statistically significant association with maternal knowledge.

RESULTS

A total of 439 pregnant women who fulfilled the inclusion criteria were enrolled in the study. The mean age of the mothers was 24.2 years (SD±3.35).

Only 26% of the mothers correctly answered that poor feeding is a danger sign. almost 44.6% of mothers recognized yellow skin/eye as sign of severe illness but only 29.4% recognised fast breathing as a danger sign. Of the study participants only 72 (16.7%) were able to mention at least four signs of the total nine danger signs.

According to Table 3, the knowledge score was statistically different among various age groups (p<0.001). The independent variables socioeconomic status and parity were significantly associated with maternal knowledge with chi square value 59.616 (p<0.001), 34.875 (p<0.001) respectively. However, there was no significant influence of religion, gestational period and previous history of still birth on maternal knowledge.

Similarly, Chi square test was applied to test the factors associated with knowledge on new born danger signs. Maternal age, socioeconomic status, history of stillbirth and parity of mother were found to have statistically significant association with p value <0.05.

Table 1: Sociodemographic and obstetric characteristics of study participants (n=439).

Variables	Frequency (N)	Percentage (%)
Age group (in years)		
<20	53	12.1
20-25	238	54.2
25-30	131	29.8
30-35	17	3.9
Religion		
Hindu	373	85
Christian	37	8.4
Muslim	29	6.6
Socioeconomic status		
Upper middle	76	17.3
Lower middle	199	45.3
Upper lower	164	37.4
Gestational age		
First trimester	22	5.0
Second trimester	118	26.9
Third trimester	299	68.5
Parity		
Primi	302	68.8
Multi	137	31.2
History of still birth		
Yes	69	15.7
No	379	84.3

Table 2: Knowledge on new born danger signs among study participants (n=439).

New born danger sign	Aware (frequency)	Percentage (%)
Difficulty / fast breathing	129	29.4
Yellow skin/eye	196	44.6
Poor feeding	114	26
Pus/bleeding/discharge from around umblical cord	98	22.3
Small for date	150	34.2
Skin lesion/blisters	14	3.2
Convulsions	7	1.6
Lethargy/ unconscious	32	7.3
Red/swollen eyes	13	3.0

Table 3: Factors associated with maternal knowledge on essential newborn care.

Factors	Knowledge		Chi-square	P value
	Adequate (>2)	Inadequate (<2)		
Age group (in years)				
<20	53	0	47.143	<0.001**
20-25	185	53		
25-30	71	60		
30-35	10	7		
Socioeconomic status				
Upper middle	29	47	59.616	<0.001**
Lower middle	150	49		
Upper lower	140	29		
Religion				
Hindu	270	103	0.166	0.92
Christian	27	10		
Muslim	22	7		
Gestational age				
First trimester	18	4	0.2996	0.224
Second trimester	91	27		
Third trimester	210	89		
Parity				
Primi	245	57	34.875	<0.001**
Multi	74	63		
History of still birth				
Present	50	19	0.002	0.977
Absent	269	101		

DISCUSSION

In the present study only about 120 (27.3%) had adequate knowledge on essential new born care. This was inconsistent with the study conducted by Sharafi et al in Iran which revealed a 78% and 18% of mothers to have moderate and good knowledge on essential new born care.[9] However, King and Mann et al in their study in rural Guinea Bissaeu found poor knowledge and practice.

In the current study majority of the mothers were unaware of the general danger signs of new born. This study revealed mothers to consider yellow skin/eyes, small for date, difficulty/fast breathing and poor feeding as danger signs with a response rate of 44.6%, 34.2%, 29.4% and 26% respectively.

In a similar study conducted by Yadav et al almost 50% of mothers considered fever, vomiting and jaundice as danger signs.[10] Whereas, Aswathi et al found fever and excessive cry as to be the serious danger signs.[11]

It was observed that 72 (16.7%) of the respondents had adequate knowledge in neonatal danger signs. Similar study conducted by Rama and Gopalakrishnan et al in Kancheepuram highlighted that the percentage of their study participants who had adequate knowledge was 33%.[12] In contrast, a study carried out by Anu et al in Mangalore found that 62% of mothers had good knowledge regarding newborn illness.[13]

The current study identified a statistically significant association of maternal knowledge on essential new born care with maternal age, socioeconomic status and parity. It is consistent with other studies which have proven that higher levels of education and income have a significant impact on the level of knowledge about danger signs and their health behaviour.[14-16] The findings of the current study revealed a huge gap in the knowledge on essential new born care. Though Tamilnadu is one among the few states with highest number of institutional deliveries, this lacuna might hinder the success of MCH. This could be improved by providing health education for antenatal mothers at primary health centre level.

Limitations

The determination of causal relationship may not be possible but only to test associations due to the nature of the present study. Some respondents may have been reluctant to disclose information since this is a hospital-based study.

CONCLUSION

The knowledge of essential new born care among the study population was found to be low. Knowledge gap was found to exist towards feeding practices, cord care and neonatal

infections. Maternal knowledge was found to be significantly associated with few sociodemographic factors.

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