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Original Research Article

A study to assess the knowledge regarding the care of newborns among postnatal mothers at AIIMS Jodhpur, Rajasthan

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ABSTRACT

Background: The health of future children depends on the nurturing practice in the initial years of life. Knowledge about the care of newborns among mothers plays a major role in reducing neonatal morbidities and mortalities. Therefore, the objective of the study was to assess the knowledge among postnatal mothers about newborn care.
Methods: A descriptive study was done among 60 purposively selected post-natal mothers admitted at AIIMS, Jodhpur. Data was collected through self-structured questionnaires. The reliability of the self-structured knowledge questionnaire was determined by the KR-20 method and found reliable (0.81). Data collected was analyzed for frequency, mean, and standard deviation. Both descriptive and inferential statistics were used to compute the data. The Chi-square (Fisher's Exact Test) was used to determine the relationship between selected socio-demographic variables and knowledge scores of post-natal mothers.
Results: Findings showed that most (73%) of the respondents were from the age group 20-27 years. The mean knowledge score was 26.783±3.9234. Most of the respondents (60%) had excellent knowledge, whereas 28.33% had good knowledge levels. None of the participants was in the range of poor knowledge. Knowledge of participants about newborn care was found to have a significant association with the level of education, area of living and occupation.
Conclusions: The result of this study provided information that postnatal mothers have adequate knowledge of newborn care. Some socio-demographic factors like occupation, literacy and area of residence were found to be associated with the knowledge of the mothers.

Keywords: New born care, Post-natal mothers, Knowledge

INTRODUCTION

A newborn infant, or neonate, is a child under 28 days of age. A Newborn infant for the first 28 days of life has the highest risk of dying.[1] The vast majority of newborn deaths take place in developing countries like India, because of highly costly healthcare services.[2] According to WHO, In 2018, an estimated 0.6 million newborns died in India due to preterm birth, neonatal infections, intrapartum-related complications/ birth asphyxia and congenital malformations. Eighty per cent of these deaths were preventable.[1,3,4] As per data given by the Ministry of Health and Family Welfare, India achieved a significant reduction in neonatal mortality rate from 26 in 2014 to 20

in 2020.[5] In 2019, 47% of all under-5 deaths occurred in the newborn period and three fourth of this death occurs within the first week of life. Although global newborn deaths declined from 5 million in 1990 to 2.4 million in 2019.[2] It has been seen that in the majority of cases, children who die within the first 28 days of birth suffer a lack of quality care immediately after birth or in the initial days of life.[2] Ensuring good quality care for newborns requires strong health services, skilled birth attendants, high coverage of quality antenatal care, and good hospital emergency services along with early essential newborn care that includes immediate and prolonged skin-to-skin contact and early and exclusive breastfeeding, to improve chances of survival among neonates.[6] In low and middle-income countries few women and newborns stay in the health care facility for the recommended 24 hours after birth, which is the most critical time when complications can present. In addition, too many newborns die at home because of early discharge from the hospital, barriers to access and delays in seeking care.[7,8] Essential newborn care is the care required by all neonates in the first 28 days of life. Newborn care includes appropriate preventive care, routine care, transition and care of sick and small babies. To ensure good newborn care mothers should be educated about thermal protection, hygienic umbilical cord and skin care, early and exclusive breastfeeding, danger sign and preventive treatment. Evidence demonstrates that improving education is the most effective and proven strategy to improve neonatal survival, as it improves preventive behaviours and increases the utilization of maternal and neonatal healthcare services.[9] Weaknesses in the implementation of policies in primary care at the beginning of children's lives can have negative consequences on growth and development. These consequences include developmental delays, poor school performance, depression, violent behaviour, and high rates of chronic disease that interrupt the child's development into a healthy and economically active adult.[10] Neonatal care is not accessible to most neonates in developing countries because of high hospital costs, so there is a need for home-based delivery and neonatal care to enrich the mothers regarding newborn care become essential.[8]

Neonatal care needs even more special attention in developing countries because births take place at home, in unhygienic conditions, due to ignorance, poverty and illiteracy among rural women. WHO stated for an integrated approach, good feeding practices, immunization, improved hygiene and the healthy development of children will help to reduce newborn mortality rates. Therefore, the investigator strongly feels the need to conduct a study to assess the knowledge of mothers on the prevention of newborn hypothermia, initiation of breastfeeding and neonatal sepsis, so that necessary action can be taken to educate mothers which will help the mothers with better newborn care practice at home after discharge, hence the education places a vital role in reducing newborn mortality to morbidity rates.

METHODS

A descriptive study was conducted to assess the knowledge regarding newborn care among selected 60 postnatal mothers who were admitted to AIIMS, Jodhpur in the post-natal ward. The objectives of the study were to assess the knowledge of postnatal mothers regarding newborn care. Participants were selected by purposive sampling method. Inclusion criteria were: post-natal mothers who were having infants in the age group of 0-28 days, post-natal mothers who can read/understand the Hindi /English language, were admitted to the post-natal ward following delivery (caesarean/ normal vaginal delivery) were included. Mothers currently suffering from severe mental illnesses and mothers with the sick baby were excluded from the study. Mothers fulfilling the inclusion criteria were informed regarding the purpose of the study and their consent was obtained for data collection. Each selected respondent has explained the purpose and possible benefits of the study and assurance of confidentiality. Written informed consent was obtained from each subject after an oral explanation of the study. The study was carried out in the month of January 2019. Structured questionnaires were prepared by the researcher based on an extensive review of the literature and consultation with various experts. Pre-testing was done to collect actual data. It consisted of two parts, viz. Part-I that helped to collect the socio-demographic variables of participants like age, residence, occupation, parity etc. and Part-II that was aimed at assessing the post-natal mother's knowledge regarding newborn care. Knowledge scores were categorized as follows: scores 0-14 poor knowledge; 15-21 average knowledge; 22-26 called good knowledge; >26 called excellent knowledge. Knowledge score ranges from 0-35. Each respondent was given to answer the questionnaire which was noted by the investigators. It took approximately 15-20 minutes to complete the questionnaires. For each correct response, 1 point was and for each incorrect response, 0 points were allotted. Finally, the total score of the mother regarding her knowledge was computed and recorded. The content validity of the tool was established by taking expert opinions. The reliability coefficient for the tool was 0.81.

Sample size

According to burns and groves, the sample size is the number of subjects, events, behaviour or situation that are examined in a study. The selected sample size for this study was sixty postnatal mothers of newborns up to 28 days at AIIMS Jodhpur.

Statistical analysis

The data was collected and coded in master datasheets. Statistical analysis was done using SPSS version 20 software. Both inferential and descriptive statistics were used for the analysis. As a descriptive statistic, mean, standard deviation, frequency, and percentage were used. The Chi-square (Fisher's Exact Test) was used to

determine the relationship between selected socio-demographic variables and scores of post-natal mothers.

RESULTS

A total of 60 post-natal mothers participated in the study. The mean age of the participants was 25.7+8.38 years.

Table 1: Frequency (N) and percentage (%) distribution of socio-demographic data (n=60).

Demographic variables	Coding	N (%)
Age (years)		
Below 20	1	7 (11.76)
20-27	2	44 (73.33)
28-34	3	6 (10)
35 and above	4	3 (5)
Residence		
Urban	1	31 (51.67)
Rural	2	29 (48.33)
Religion		
Hindu	1	57 (95)
Muslim	2	3 (5)
Christian	3	0 (0)
Others	4	0 (0)
Literacy status		
Illiterate	1	11 (18.33)
Primary education	2	16 (26.67)
Secondary education	3	8 (13.67)
High secondary	4	17 (28.33)
Others	5	8 (13.67)
Occupation		
Private job	1	13 (21.67)
Government job	2	3 (5)
Agriculture	3	9 (15)
Housewives	4	35 (58.33)
Parity		
Primiparous	1	35 (58.33)
Multiparous	2	25 (41.67)
Monthly family income		
Less than 15,000	1	16
15,000 to 30,000	2	29
30,000 to 60,000	3	8
More than 60,000	4	7
Type of family		
Nuclear	1	15 (25)
Joint	2	45 (75)

The majority 73.33% were in the age group of 20-27 years. The majority of post-natal mothers belonged to urban areas (51.67) from the Hindu religion (95%). The majority were primiparous (58.33%) women and belonged to a joint family (75%). Only 13.67% of women had secondary education, the majority 28.33% of post-natal mothers were having education up to higher secondary, and 13.67% had above qualifications like graduation and post-graduation. The socio-demographic characteristics of the participants are presented in (Table 1). The responses of the participants are depicted in (Table 2).

Table 2: Frequency (N) distribution of knowledge scores with mean and SD.

Level of knowledge	N (%)	Mean	SD
Excellent	36 (60)		
Good	17 (28.33)	26.783	3.9234
Average	7 (11.67)		

The knowledge scores were categorized as average, good and excellent and can be noticed that 60 % of participants having excellent knowledge, 28.33% were having good knowledge and 11.67% had average knowledge regarding newborn care. It was found that none of the participants were having poor knowledge which is a score of less than 15 (Table 2). The Mean and Standard Deviation of the Knowledge Scores were computed and given in (Table 2). A significant association were found between sociodemographic variables, residence, literacy status, occupation and level of knowledge (Table 3). It was reported that knowledge regarding the care of newborns among postnatal mothers was dependent on the residence, literacy status, occupation and independent of age, religion, parity, monthly family income and type of family.

DISCUSSION

With better knowledge, a mother can formulate a more effective strategy to safeguard the health of her child. For reducing neonatal morbidity and mortality, mothers need to be informed about essential newborn care. Although the study result showed that 60% of participants had excellent knowledge scores and were dependent on sociodemographic variables like residence, occupation and literacy rate. A study done by Ghosh et al.[11] reported that 91.5% had satisfactory knowledge about newborn care and higher education level was found to be associated with more adequate knowledge (p=0.046) similar result was also found in the present study in which higher education was significantly associated with knowledge score. A study done by Jiji et al has also reported a significant association between knowledge and education similar to the present study.[12] The present study also found that community factors like place of residence were significantly associated with knowledge score and post-natal mothers who were residing in urban areas were having high knowledge as compared to rural population mothers, sima similar result was also reported by Mehta et al found that the place of residence was associated with knowledge regarding newborns.[13]

Table 3: Association of knowledge score of newborn with selected sociodemographic variables.

Variables	Knowledge Level			χ^2	df	P value
	Average	Good	Excellent			
Age (years)						
Below 20	1	3	3	0.613	6	Not Significant
20-27	6	11	27			
28-34	0	3	3			
35 and above	0	0	3			
Residence						
Urban	1	7	23	0.029	2	Significant
Rural	6	10	13			
Religion						
Hindu	7	16	34	1.00	2	Not Significant
Muslim	0	1	2			
Christian	0	0	0			
Others	0	0	0			
Literacy status						
Illiterate	6	2	3	0.002	8	Significant
Primary education	1	7	8			
Secondary school	0	4	4			
High school	0	3	14			
Others	0	1	7			
Occupation						
Private job	2	0	11	0.020	6	Significant
Government job	0	1	2			
Agriculture	3	2	4			
Others	2	14	19			
Parity				0.552	2	Not Significant
Primiparous	3	8	24			
Multiparous	4	9	12			
Monthly family income						
Less than 15,000	3	6		0.729	6	Not Significant
15,000 to 30,000	4	7				
30,000 to 60,000	0	2				
More than 60,000	0	2				
Type of family						
Nuclear	1	2		0.234	2	Not Significant
Joint	6	15				

The present study found no significant association between the age of mothers and knowledge regarding newborn care, in contrast with the present study by Padiyath et al reported about the age of mothers was found associated with better knowledge whereas Sharafi et al found less age to be associated with higher knowledge.[14,15] In the present study working women were having higher knowledge, and similar results were also reported by Mandal and Ghosh.[11] A study done by Bhattarai et al reported that the majority of the postnatal mother (60.7%) had good knowledge like the present study.[16] Bhattarai et al also reported that in multigravida mothers, the majority (61.9%) had good knowledge of neonatal care, whereas, among primigravida mothers, the majority (54.2%) had good knowledge, this study's findings were in contrast with the present study in which majority were primiparous (58.33%) and were having higher knowledge as compare to primiparous.[16]

Although in the present study, there was no significant association found between knowledge and parity. A study done by Ahmed et al reported a significant association between post-natal mother's occupation and education level with knowledge score regarding newborn care, a similar result was also reported by the present study.[17] Ahmed et al also reported moderate to poor knowledge among post-natal mothers, this study was inconsistent with the present study in which 60% were having excellent knowledge with a mean of 26.783 with a standard deviation of 3.9324.

Limitations

Limitation of current study were; the study was confined to a small sample size and shortage of time for data collection.

CONCLUSION

Maternal knowledge and practice about newborn care play pivotal roles in the prevention of neonatal death. Some socio-demographic factors may associate with the knowledge of the mothers. Health professionals should overcome the language and communication barrier to educating mothers. In addition, policy-makers should target relevant demographic factors (e.g., education, residence and occupation). Furthermore, nurses working in clinics or the community should be properly trained to educate and counsel postnatal mothers. Healthcare professionals should be given opportunities to update their knowledge of essential newborn care so they can disseminate adequate knowledge to mothers.

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