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A STUDY ON NEWBORN CARE PRACTICES AMONG THE MOTHERS RESIDING IN SLUMS OF KANPUR NAGAR

Seema Nigam¹, Ankita Bajpai², Tanu Midha³, Pankaj Awasthi⁴

¹Professor and Head, ²Resident, ³Associate Professor, Deptt. of Community Medicine, GSVM Medical College, Kanpur, ⁴Lecturer, Deptt. Of Medicine, GSVM Medical College, Kanpur.

ABSTRACT

Introduction: Despite efforts by government and other agencies, neonatal mortality is still high in our country. Among all other reasons, lack of proper newborn care practices is one of the major contributors for such high rates of mortality. This study was undertaken to assess newborn care practices among mothers residing in slum areas.

Material & Methods: A cross sectional study was carried out among 360 mothers of infants in slums of Kanpur. A pre designed and pre tested questionnaire was used. Percentages, chi-square & Fischer's exact test was used to analyse data using SPSS.

Results: Nearly 23.05% deliveries were conducted at home, mostly by untrained dais. Bathing the baby after birth was practiced in 44.45% of home deliveries. In case of home deliveries, eyes were cleaned in 69.95% cases, weight was taken in 29.02% newborns and cord was cut with unsterile blade in 19.2% cases. Turmeric powder with oil or ghee was applied on cord in 94% of home deliveries and in 17.3% of hospital deliveries after the child was brought home. A significant difference was seen in cord care practices in home and hospital deliveries. Early initiation of breast feeding and colostrum was given by 35.5% and prelacteal feed was given by 63.9%.

Conclusion: Awareness regarding newborn care practices was good among mothers who delivered their babies in institutions, as depicted by various healthy practices followed by them which were significantly associated with institutional deliveries.

Key words: Newborn; Essential NewBorn Care; Institutional delivery; hypothermia; Kanpur; Slums

Correspondence: Dr. Ankita Bajpai Email: dr.ankitabajpai@gmail.com

INTRODUCTION

Each year, an estimated 4 million babies die before they reach the age of one month, and 4 million more are stillborn.^[1] Nearly 98% of these newborn deaths take place in developing countries, and, for the most part, these newborns die at home, in the absence of any skilled health care.^[2] We can save many newborn lives through existing health care interventions that are both practical and affordable, even in communities that lack modern health care facilities.^[3] India is home to almost one-third of world's underweight children with an estimated prevalence of underweight, stunting, and wasting being 40%, 45%, and 23% respectively among under-three children.^[4] Malnutrition has been estimated to be an underlying cause of up to 50-60% of under-five deaths. Over two-thirds of these deaths are associated with inappropriate feeding practices.^[5]

^{7]} Traditional attitudes and practices dominate newborn care and are often hazardous. Neonatal danger signs are commonly not recognized. For newborn infants in India, perinatal illness usually begins and ends at home. The reasons for this are economic, geographical, and cultural and institutional. Neonatal survival is influenced much by care provided by the family before, during and after delivery, which in turn is influenced not only by mother's beliefs, but also perceptions of her family, which are context specific. Essential newborn care (ENC) practices that protect against newborn morbidity and mortality include clean cord care, thermal care and initiation of breastfeeding within the first hour of birth. ENC aims at addressing poor care practices immediately following delivery. WHO recommends exclusive breastfeeding of all infants until 6 months of age. In spite of all the efforts

deployed as information, education or training campaigns to promote mother's milk as the best food for the infant, the prevalence of exclusive breastfeeding remains low.^[8] This is because psychosocial and cultural barriers still exists to early breastfeeding.^[9] At present the current neonatal mortality rate of India is 29.^[10] Despite proven cost effective intervention to reduce neonatal mortality, there has been little change in neonatal mortality. For promoting essential newborn care practices in wider programme settings, an understanding of current practices and factors influencing them is crucial. The present neonatal mortality of Uttar Pradesh is 37^[10], much high as compared to national figures. Hence, the present study was undertaken to assess newborn care practices among mothers residing in slum areas of Kanpur.

MATERIAL AND METHODS

This Community based, cross- sectional study has been carried out in the field practice area of urban slums which are served by the urban health and training centre of the Department of Community Medicine, G.S.V.M. Medical College, Kanpur, UP from June 2015 to November 2015. Assuming prevalence of correct new born care practices among the mothers of infants to be 50%, the minimum sample size was calculated as 385 using the formula $(n) = Z^2_{\alpha/2} P Q / d^2$ where, Z = Standard normal variate having value 1.96 at 95% confidence interval and d = allowable error which was taken to be 5%. Line listing of all the families in the slum areas was done; all the mothers of infants up to three months were selected for the study. We found only 360 such mothers, thus all the 360 mothers were included in our study, giving a final sample size of 360. Mothers were interviewed. A semi structured, pre tested questionnaire was used to elicit the requisite information. All participants were informed regarding the purpose of study and their consent was obtained for data collection. Analysis of data was done using percentages, Chi square test and Fischer's exact test (where the value of any cell in the contingency table was <5). Value of $p < 0.05$ was considered significant. The Statistical data was recorded and analyzed using by the SPSS Software version 20. Approval for the study was taken from the Institute's ethical committee.

RESULTS

Out of the total 360 infants studied 53.6% were males and 46.4% were females. Majority (81.1%) of study subjects were Hindus. 55% of the study subjects were SC/ST. Majority (69.1%) were living in nuclear families. And social class V contained majority (42.5%) study subjects. **(Table 1)** Mothers of 51.9% of the study subjects were illiterate.

Table1: Biosocial characteristics of the study subjects

Characteristics	Numbers	Percentages
Sex		
Male	193	53.6
Female	167	46.4
Religion		
Hindu	292	81.1
Muslim	54	15
Others	14	3.8
Caste		
General	62	17.2
OBC	100	27.7
SC/ST	198	55
Type of family		
Nuclear	249	69.1
Joint	69	19.1
Extended	42	11.6
Social class*		
II	46	12.7
III	63	17.5
IV	94	26.1
V	153	42.5

*According to modified B G Prasad socio-economic classification

Out of the 360 study subjects there were 76.94% of cases of institutional deliveries and 23.05% cases of home deliveries. A large proportion of mothers who delivered in the institutions were unaware of the various newborn care practices provided to their newborns. Hence, observations for these were not included in our tables. Most of the newborn care practices were properly followed in case of institutional deliveries as compared to home deliveries and there was a statistically significant association between the two. 86.1% cases the newborn was not bathed but wiped with a clean cloth within 24 hrs. Among the home deliveries in 62.6% cases finger was used for cleaning the airways, in 30.1% eyes were not cleaned, in 71.1% cases birth weight was not taken. Immunization coverage was very poor (between 5% -15%) in case of home deliveries. Rooming in was practiced in 85.5% of the newborns and correct way of wrapping was present in 35.5% of the newborns. **(Table 2)**

Table 2: Distribution of Newborn According to Care given

Care given	Home (n=83)	Institutional (n=277)	Total (n=360)	Statistical significance	
				χ^2	P value
Bathing the baby within 24 hr of birth	37(44.5)	13 (4.7)	5 (13.9)	81.64	<0.0001
Not bathed but wiped with cloth	46(55.4)	264(95.3)	310(86.1)		
Cleaning the airway					
With finger	52(62.6)	NA	NA	NA	NA
With mucous extractor	0 (0.0)	NA	NA		
Not known	31(37.3)	NA	NA		
Eye care					
Cleaned	58(69.8)	NA	NA	NA	NA
Not cleaned	25(30.1)	NA	NA		
Birth Weight taken					
Yes	24(28.9)	277(100)	301(83.6)	NA	<0.0001
No	59(71.1)	0(0.0)	59 (16.4)		
Immunization					
BCG	7 (8.4)	273(98.5)	280(77.8)	NA	<0.0001
OPV	10(12.1)	275(99.2)	285(79.2)	NA	<0.0001
Hep.B	4 (4.8)	271(97.8)	275(76.4)	NA	<0.0001
Rooming in					
Present	79(95.1)	229(82.6)	308(85.5)	NA	<0.0001
Absent	4 (4.8)	48 (17.3)	52 (14.4)		
Way of wrapping					
Correct	11(13.2)	117(42.2)	128(35.5)	22.168	<0.0001
Incorrect	72(86.7)	160(57.7)	232(64.4)		

In case of home deliveries new blade was used to cut the cord in 80.7% newborns, while the mothers of newborn born in institution were unaware of the current practice. Cord tie used in institutional deliveries was sterile thread/clip/band in case of 100% newborns while in case of home deliveries it was only 27.7% and there was a significant difference between the two ($p<0.05$). No cord applicant was used in majority (82.6%) cases of hospital deliveries. (Table 3)

Table 3: Distribution of Newborn According to Cord Care

Cord care	Home (n=83)	Institutional (n=277)	Total (n=360)	Statistical significance	
				χ^2	P value
Instrument used to cut cord					
New blade	67(80.7)	NA	NA	NA	NA
Old blade	16(19.2)	NA	NA		
Cord tie used					
Sterile thread/clip/band	23(27.7)	277 (100.0)	300(83.3)	NA	<0.0001
Unsterile thread	60(72.2)	0	60 (16.6)		
Cord applicant used					
Nothing	5 (6.0)	229 (82.6)	234(65.0)	161.57	<0.0001
Turmeric powder with oil or ghee/others	78(94.0)	48 (17.3)	126(35.0)		

Time of initiation of breast feeding was <1hr in case 43.3% of institutional deliveries and 9.6% cases of home deliveries. And there was

statistically significant difference between the two ($p < 0.05$). Prelacteals were given in cases of 89.2% of home deliveries and 56.3% of hospital deliveries. (Table 4)

Table 4: Distribution of Newborn according to Breast Feeding Practices

Breast feeding practices	Home (n=83)	Institutional (n=277)	Total (n=360)	Statistical significance	
				χ^2	P value
Time of initiation of breast feeding					
<1 hr	8 (9.6)	120(43.3)	128 (35.5)	NA	<0.0001
>1 hr	75 (90.3)	157(56.6)	232 (64.4)		
Prelacteal Given	74 (89.2)	156(56.3)	230 (63.9)	28.	<0.0001
Not given	9 (10.8)	121(43.7)	130 (36.1)	445	

DISCUSSION

One of the biggest challenges faced by our country today is to improve child survival and reduce infant mortality rate. Though many programmes have been undertaken in this regard but still we lag far behind the targets of Millenium Developmental Goals. The present study showed that out of the 360 newborns studied 53.6% were males and 46.4% were females. A similar result is corroborated in the study of Grover P *et al* [11] where the percentage of males was 56% and those of females were 44%. There were 81.1% Hindus in our study similar to the findings of Gupta P *et al* [12] and Ahmad S *et al* [13] where there were 70.6% and 60.72% Hindus respectively. General and OBC study subjects constituted 17.2% and 27.7% of study subjects, similar to the findings of Gupta P *et al* [12] where general and OBC candidates were found to be 10.7% and 33.6% respectively. Distribution of the study subjects in our study was similar to that found in the study of Ahmad S *et al* [13] with none of the study subjects belonging to social class I. In our study 76.94% newborns were born via institutional deliveries while 23.05% via home deliveries. Similar to the findings of Kumar V *et al* [14] where percentage of institutional deliveries was also high. Such high percentage of institutional deliveries as compared to those found out in studies of Grover P *et al* [11] (32%) and Ahmad S *et al* [13] (16.08%) shows the increased level of awareness and the positive impact of JSY programme in our society. In our study 13.9% of the newborns were immediately bathed after birth within 24 hrs while 86.1% of the newborns were not bathed but wiped with cloth.

These results are contrary to the findings of Rahi M *et al* ^[15], Gupta P *et al* ^[14] and Ahmad S *et al* ^[13] where 82.6%, 79.75% and 76.6% newborns were bathed just after birth. These results show increasing inclination towards healthy newborn care practices and increasing literacy levels of the parents. Eyes were cleaned in case of 69.8% of newborns, as was found in the studies of Grover P *et al* ^[13] (76%) and Rahi M *et al* ^[15] (45.7%). Birth weight taken for 83.6% newborns was again similar to the findings of Rahi M *et al* ^[15], where it was taken in 65.8% newborns. BCG, OPV and Hep.B immunization was present in most cases (98.5%, 99.2% and 97.8% respectively) of institutional deliveries, but in very few cases of home deliveries (8.4%, 12.1% and 4.8% respectively). Considering the immunization status of both, institutional and home deliveries together it was very high as compared to the studies of Ahmad S *et al* ^[13] and Rahi M *et al* ^[15]. Rooming in was present in 85.5% of newborns, almost similar to the findings of Grover P *et al* ^[11] where it was found in 78% newborn. In case of cord care, new and sterilised blade was used to cut the cord in 80.7% cases, which was similar to the results of Saaka M *et al* ^[16], Hoque M *et al* ^[17] and Devkota M *et al* ^[18] where also new blade was used to cut the cord in 90.8%, 85% and 67.6% newborns. Also no applicant is applied to the cord stump in case of 61.57% newborns, similar to the findings of Devkota M *et al* ^[18]. These results show increased level of awareness among the parents. In case of time of initiation of breast feeding, it was initiated within 1hr of birth in case of 35.5% newborns. Similar results are corroborated in the study of Ahmad S *et al* ^[13] where breast feeding was initiated within an hour of birth in case of 37.5% cases. In our study prelacteals were given in 63.9% newborns, similar to the findings of Rahi M *et al* ^[15] and Grover P *et al* ^[11] where prelacteals were given to 67.1% and 52% newborns.

CONCLUSION

Majority of infants were delivered in institutions, showing an increased level of awareness among the mothers regarding proper newborn care practices. Most of the new born care practices were followed by mothers of the babies born in institution. Proper care of cord and proper breastfeeding practice were significantly associated with institutional deliveries.

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