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Original Research Article

CROSS SECTIONAL STUDY ON POSTNATAL MOTHERS AND NEWBORN CARE PRACTICESIN RURAL AREA OF RAMANAGARA DISTRICT KARNATAKA

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ABSTRACT

Background: The care during postnatal period of the mother and newborns determines the survival, morbidity and mortality rates among mother and infants in any country. Innumerable cultural practices are adopted worldwide on this issue and some are likely to benefit the health of the women and infants. This study was done with an objective to know the care and practice of postnatal mothers and neonates in rural areas of southern Karnataka. **Materials and Methods**: A descriptive, cross sectional and community based study done at rural areas of Ramanagara district of Karnataka among 550 subjects. Mothers with less than two years old children were the subjects. Information was collected by using pre tested questionnaire by interviewing them at their door steps of the subjects.The information included age of the mother and children, place and type of delivery, gender and birth weight of newborns, high risk conditions, breast feeding initiation and prelacteal feeding, dietary practice, cultural habits on neonatal care etc by verbal interview. The data entered in MS EXCEL and analysed in SPSS software. **Result:** Majority of the mothers delivered at government hospital (94.4%) and vaginal delivery was 74% among 550 subjects. The prevalence of high risk conditions was 17.1%. The mean duration of hospitalisation as4.4±2.3 days and 57.1% of mothers reported to duty after mean187.2±58.4 days of childbirth.There were 273 and 277 male and female babies with their mean birth weight of2741±321 and 2695±344 Grams respectively.The breast feeding was initiated within an hour after childbirth among 306 and prevalence of prelacteal feeding was 21.1%.There was no practice of avoiding any food items among 107 mothers in the postnatal period and22% of mothers used combination of clothes and disposable type of sanitary pads during post-partum period. First bathing to neonates was given after mean 5.6±2.4 days after birth. **Conclusion:** The care during postnatal period for mothers and practice of caring neonates are not harmful in this study, which are attributable to the better health care by the health staff at village level and active participation of the community.

INTRODUCTION

The practice of caring post natal mothers and newborns in societies are unique to their own beliefs, cultures, and traditions in the world. Some practices are either beneficial or harmful to mother, newborn or both. Many determining factors including socio demographic beliefs in the community also pay an important role. Lack of proper diet, inadequate food intake, restriction of water intake orcertain foods rich in nutrients by the post natal mothers are common practice n any Asian countries.[1,2,3]WHO recommends seven out of ten women do not receive care in the event of compilations after birth.[4,5]

Adequate rest with proper diet will make mother to resume their pre pregnancy functional health status by the end of six weeks after childbirth. Few practices during post natal period in the women may lead to longer complications or consequences such prolapsed, urethrocele, chronic urinary tract infections, hernia, including chances of infertility.[4,5,6]

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Chronic malnutrition or stunting will become evidence when newborns were not adequately fed or improper care during infancy. It could be lack of breast feeding, improper weaning, prematurity, lowbirth weight, gender of the baby, birth order, type of delivery, place of delivery etc. will play great role in survival of the newborn as well as the adequate growth and development in the later period of life.[1,6,7]The practices during postnatal period in women and care of newborn will help us to understand the policies of the government in prioritizing the health of the vulnerable group which reflects in form of mortality rate in mashers and infants. This study is carried out with an objective to know care and practices in rural area of Ramanagara among postnatal mothers and newborns.

MATERIALS AND METHODS

It is a descriptive, cross sectional and community based study conducted in rural community of Ramanagara district of Karnataka in the year 2016 among the sample of550 by purposive sampling. Inclusion criteria for selection of subjects was mother who is having a child aged less than twoyears and the youngest child in case of more than one child to the mother. Exclusion criteria were mother not available at the time of interview orwho is not willing to share the required information.

The pre tested, semi open ended questionnaire was used for data collection from mothers or care takers of subjects at their door steps in non biased manner. The questionnaire was in English language. The contents of the questionnaire includes socio demographic information of the family, age, occupation and literacy of the subject, type of family, care taker in the post partum period, place and type of delivery, hospitalisation days, high risk conditions, child birth orders, birth weight, age and sex of the eligible child, breast feeding initiation, duration of rest before going for work, diet preferences and restrictions, types of sanitary napkins used after delivery, etc.Data was entered in MS excel sheet and analysed using SPSS software version 23. The necessary cross tables were prepared with independent and dependent variables and analysed using appropriate statistical tests such as difference between means, proportions and ANOVA test.

Meaning of the terms: Birthing/ Childbirth order: Selection of birthing order of the subjects were done irrespective of the previous birthing orders children were alive or dead. Previous history of abortions in the mother was excluded for birthing order consideration. The study considered only childbirth orders not pregnancy orders. The relevant details of the materials ad methods of this study is available.[8]

RESULTS

Table 1 shows the mean age of the mothers was 24.4+3.6 years and their childbirth order was 1.5+0.7 (Median 1). The mean birth interval after first childbirth among 222 mothers was 26.4+12.9 (Median 26) months. The prevalence of high risk conditions was seenamong 94 mothers accounting to 17.1% . The total number of mothers had high risk conditions were in the child birth order of 1.6+0.7. The breast feeding was initiated by mothers within 1 hour after delivery was 22.7% (0.8+ 0.3hours). The average duration of initiation of breast feeding by all mothers was 1.76+2.5 hours. The prevalence of early breast feeding within an hour after birth was 74%. More than 90% of themothers and babies were in hospital for less than 7 days (3.8+1.5).The mean duration of hospital stayafter delivery for the total subjects was4.4+2.3 (Median 3) days. Mothers started working from 91 days afterdelivery was 57.1% corresponds to an average of 187.2 days (Median 180).However, the average duration of rest for the total subjects as 133.9+75.6 days. The total number of mothers underwent Tubectomy after childbirths was 14.7%.Nearly 20 percent of the mothers did not avoided any food items during post natal period and78 % of mothers used either disposable only or clothes only during the post partum period. The difference between means of different variables were statistically highly significant ($p<0.001$) except for high risk conditions and use of different types of sanitary pads among mothers in post partum period.

Table 2 showing the 519 number of childbirths took place in Government hospitals and one childbirth at home. There were 273 and 277 male and female child births respectively. The average birth weight of 2717 ± 332.6Grams for the total newborns and the male babies were weighing slightly more than female babies. The prevalence of practicing prelacteal feeding was 21.1%.The newborns were given first bathing after 5.5+2.7(Median 5) days. Similarly, oil massage the babieswas initiated from 17.2+28.9 (Median 8) days in this study. However, the babies born by caesarean section were given first bathing on 7.4+3.2 (Median 7) dayssimilarlythe practice of oil massage initiated little late for caesarean section born babies and babies of mothers who were having high risk conditions. The differences between means / proportions of different variables were not statistically significant ($p>0.05$) except for place of childbirth and first bathing of neonates among different types of deliveries.

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Table1: Distribution of factors influencing the post natal care of the mothers

Variables		No(%)N=550	Mean ± SD	Median	P-Value
Age of the mother		550(100)	24.4 ± 3.6	24	
Childbirth Order		550(100)	1.5 ± 0.7	1	
Birth Interval in months against Birth Order	Birth Order1	328(59.6)	0.0 ±0.0	0	0.016
	2	174(31.6)	27.7 ± 12.9	24.5	
	3	41(7.5)	22.6 ± 14.3	20	
	4+	7(1.3)	17.6 ± 4.4	20	
	Total*	222(40.4)	26.4 ± 12.9	26	
High risk conditions and birth orders	Yes	94(17.1)	1.6 ± 0.7	1	1.000
	No	456(82.9)	1.5 ± 0.7	1	
Breastfeeding initiation in hours	<=1	306(55.6)	0.8 ± 0.25	0.5	0.0001
	>1	244(44.4)	3.45 ± 4.8	2	
	Total	550(100)	1.76 ±2.5	1	
Hospitalisation in days	<=7	501(91.1)	3.8 ± 1.5	3	0.0001
	>7	49(8.9)	9.9 ± 2.4	9.5	
	Total	550(100)	4.4 ± 2.3	3	
Rest before resuming work in days	<30	94(17.2)	1.6 ± 0.7	1	0.0001
	31-90	202(36.7)	71.5 ± 19.2	60.5	
	>91	314(57.1)	187.2 ± 58.4	180	
	Total	550(100)	133.9 ± 75.8	120	
Tubectomyafter number of children	Nil	469(85.3)	0.0 ± 0.0	0	0.0001
	<=2	62(11.2)	1.95 ± 0.3	2	
	>2	19(3.5)	3.2 ± 0.4	3	
	Total	81(14.7)	2.24 ± 0.32	2	
No. of Food items avoided	Nil	107(19.5)	0.0 ± 0.0	0	0.0001
	1	203(36.2)	1.0 ± 0.0	1	
	>1	240(43.3)	2.3 ± 0.52	2	
	Total	550(100)	1.39 ± 0.97	1	
Sanitary pads used and birth order	Disposable pads orCloths	429(78)	1.5 ± 0.68	1	0.1498
	Combined	121(22)	1.6 ± 0.65	1	

It was estimated after excluding first childbirth order

Table 2: Distribution of factors influencing the care of neonates

Variables		No(%)N=550	Mean ± SD	Median	P-Value
Place of childbirth	Government sector	519(94.4)	1.5 ± 0.7	1	0.0208
	Private Sector	31(5.6)	1.8 ± 0.7	2	
Birth weight in grams	Male	273(49.6)	2741 ± 321	2800	0.1056
	Female	277(50.4)	2695 ± 344	2750	
	Total	**550(100)**	**2717 ± 332.6**	**2800**	
Prelacteal feeding	Yes	116(21.1)	1.5 ± 0.7	1	1.000
	No	434(78.9)	1.5 ± 0.7	1	
First bathing in days	Male	273(49.6)	5.7± 2.2	5	0.6263
	Female	2779(50.4)	5.6± 2.6	5	
	Sub - total	**550(100)**	**5.6 ± 2.4**	**5**	
	Vaginal delivery	407(74)	5.1± 2.4	4	0.0001
	C-section	143(26)	7.4± 3.2	7	
	Sub - total	**550(100)**	**5.7 ± 2.02**	**4**	
	High Risk Conditions	94(17.1)	7.1 ± 3.0	7	
First Oil massagein days	Male	273(49.6)	17.4± 30.0	8	0.9062
	Female	277(50.4)	17.7± 29.7	8	
	Sub - total	**550(100)**	**17.6 ± 29.8**	**8**	
	Vaginal delivery	407(74)	17.5± 30.2	7	0.9725
	C-section	143(26)	17.6± 28.9	10	
	Sub - total	**550(100)**	**17.5 ± 29.9**	**7**	
	High Risk Conditions	87(15.8)	18.5 ± 33.5	10	

DISCUSSION

Generally most of the women will become pregnant within a year after marriage in India especially in rural society. Most of the marriages in India happen before the age of 19 years and many women will complete their childbirths between 26 to 30 years of age irrespective of number of childbirths.In the present study the mother age was 20 to 34 years and the average age was 24.4 ± 3.6years (24 as median).This type of reproductive behaviour are observed in most of the studies in India.[3,9,10]

The duration of stay in hospital after delivery was varying from 2 to 17 days in this study. However, the difference between means of duration of hospital stay for different categories were statistically significant (<0.001). The length of stay among government hospital care was 4 days and 5 in private hospital care set up. The childbirth in government hospital was 91% in this study. Total hospital stay days was 4.4 ± 2.3 for all subjects. However, the length of stay was longer among the mothers who gave birth by caesarean section.

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It is a common practice that women in rural areas and economically weaker sections are likely to have less number of hospitalization days in spite availability of Janani Suraksha Yojana (JSS).A comparative study on length of stay after childbirth in India showed that 3.4 days as average after delivery and vaginal delivery and caesarean section were 2.1 and 8.6 days respectively.[1,4,5,6]In this study hospitalization days was 3 and 7 days for vaginal delivery and Caesarean section respectively.

More than 90 percent of the mothers started working or reporting for their respective occupation 31 days after childbirth irrespective of type of child birth order, gender of the baby, type and place of delivery, and literacy status.The proportion was increased from 27.4+6.7 to 187.2+58.4 days among mothers who took rest before their working.The total mean duration of rest before assuming their occupation or work was 133.9+75.6 (Median 120) days. The differences between means of duration of rest and different categories were statistically highly significant (<0.0001). Most of the mothers returned to their pre-pregnancy functional status at the end of 6 weeks after delivery as observed in the study at Bhubaneswar.[11]The duration of rest is satisfactory for mother as well as baby's health point of view which will promote adequate breastfeeding practice and optimum growth of the newborns.

Nearly three fourth of the mothers started breastfeeding their babies within one hour after the childbirth, andtheaverage hours was 2.3+3.1 hours (Median 2) among 425 subjects. The differences between initiations of breast feeding mean times were statistically significant. This study observed a good practice by the mothers to initiate breastfeeding within one hour after childbirth. This can be attributable to the good cultural practice, literacy rate among females, awareness by the family members as well as care takers and medical staff on importance of early breast feeding initiation. The role of ASHA workers in promoting breastfeeding cannot be ignored.

The prevalence of mothers avoiding any food items were 80.6% and the mean number of food items avoided was 2.3+0.5 among subjects who avoided more than one food item and the differences in the three categories were statistically significant. It is a common traditional practice of avoiding food items or restricting the intake during post partum period or during one year of childbirth

High risk conditions prevalence was 32.6% among mothers and babies was observed in Cuttack, Odisha.[6]In the present study , total number of mothers had high risk conditions was less in comparison to the studies from other parts of India.[7] The presence of high risk conditionswasin1.6 ± 0.7 child birth orders in this study. The differences between high risk conditions in different childbirth orders was not statistically significant (p>0.05). This study did not analyse the number of high risk factors present in each high risk mother. NFHS -5 note high risk pregnancieswas 49.4% with single high risk factors as 33% and multiple risk factors as 16.4%.[1,7] Manipur and Meghalaya states has recorded more than 6% a high risk pregnancy conditions.[7] The prevalence high risk was 30.4% and it was high with increase in age and parity.[12]

Birth weight is a key predictor of newborn outcome and also an indicator of health trend of a child. Average birth weight of Indian babies is believed to be 2.8 to 3.0 kg. The mean birth weight was 3.07+0.5 Kg in Mangalore, Karnataka where male and female babies were 3.09+0.4 kg and 3.03+0.4 Kg respectively which ranges from 1.9 to 4.4 kg.[12] This study finding shows the mean birth weight of the total newborns was 2717 ± 332.6 Grams as shown in Table 2,which is in limits of the Indian national average. The differences in mean birth weight among male and female newborns was found to be statistically no significant (p>0.05).

One of the pillars of safe motherhood and reproductive health of women is family planning, which is also influenced by socio demographic factor including religions. The adoption of Tubectomy among subjects in the present study is less than 15 percent among the total mothers after average childbirth order of 2.24 ± 0.32 as shown in Table 1. However, the prevalence has changed from 15% to 36.5% for mothers accepting Tubectomy after second childbirth order. There are differences in adopting Tubectomy after 3rd child births was 44.55 and immediately after second child birth was 31.2% in a study.[13,14,15]Howeverthedifferences in mean childbirth orders for adopting Tubectomy was statistically significant(p<0.05).

There is direct relationship between use of hygienic material and increase risk of infection during post partum period. This riskcarries as acute reproductive tract infections to the long term complicationsrisk of uterus prolapsed, fistula and hemorrhoids.[6,16,17]The available literature of use of sanitarynapkins with different kinds are very limited. Most of the mothers in rural and urban areas are practicing reusable cotton clothes.

CONCLUSION

The care and practices followed in each community are unique and special based on cultural, socio demographic factors on mother and children. Majority preferred hospital delivery, low prevalence of high risk conditions, accepting Tubectomy and early initiation of breast feeding.In this study, care during postnatal period for mothers and practice of caring neonates werenot harmful, and they are attributable to the better health care by the health staff at village level and active participation of the community.

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