



ASSESSMENT OF NEWBORN PRACTICES BY MOTHERS ADMITTED IN A TERTIARY CARE HOSPITAL

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ABSTRACT **Background:** Despite efforts by the government and other health agencies, neonatal mortality and morbidity continues to remain high in India. Amongst other reasons, newborn care practices are major contributors for such high rates. **Objectives:** To find out newborn care practices including immediate care given after birth and breast feeding practices. **Settings and Design:** The Hospital based, cross-sectional study was carried out at Krishna Hospital, Karad. Materials and **Methods:** A semi-structured, pre-tested questionnaire was used to interview the delivered mothers of newborns in the study. **Results:** The result of study showed that many harmful and un-indicated neonatal practices were prevalent. Only 32% of mothers started to breast-feed within one hour of delivery. 9% of mothers did not feed colostrum due to prohibition by elders. 19% mothers practiced partial breast-feeding and gave cow's milk in addition. 44% of mothers gave pre-lacteal feed. 27% of mothers would like to apply Kajal to clean the eyes of their babies and 17% would pour oil in ears, nose and anus for lubrication. 5% mothers would apply turmeric to the cord stump for early healing. 16% of mothers would start weaning their babies after 4 months of age only. **Conclusion:** Practices regarding newborn care were harmful and knowledge was poor amongst mothers.

KEYWORDS : Newborn care, Colostrum, breast feeding practices

INTRODUCTION

The global burden of neonatal death is estimated to be 5.0 million of which 3.2 million deaths occur during the first week of life^[1]. Each year, 26 million infants are born in India. Of those, nearly 1.2 million die during the neonatal period, before completing four weeks of life, amounting to one quarter of all neonatal deaths in the world^[2]. Neonatal mortality is one of the most neglected health problems. It is estimated that globally 4 million new born die before they reach one month of age and another 4 million are still born every year. Death during the neonatal period (the first 28 days of life) accounts for almost two-thirds of all deaths in the first year of life and 40% of deaths before the age of five^[3]. India, thus contributes 30% of the 3.9 million neonatal deaths worldwide^[4].

A good number of neonatal morbidity and mortality is attributed to new born care practices^[5]. Neonatal care practices depend on the knowledge, attitude and practice of the community as well as the availability and accessibility of the services. Several interventions have been adopted to address the unmet needs for basic Reproductive and Child Health Services, supplies and infrastructures since 1972^[6].

Global under five and infant mortality rates have declined over the past four decades, but high neonatal mortality rates have remained relatively unchanged. There is sufficient evidence to show that most of the basic neonatal care can be delivered at homes through primary care in a highly cost-effective manner. The causes of neonatal mortality, the organization and coverage of essential new born care, exclusive breast feeding and timely immunization are some important areas that have to be addressed. Over the last three decades the annual number of deaths among children less than five years have decreased to almost a third. Although infant mortality has fallen in many developing countries over the past two decades, the rate of fall is slowing. One reason is the contribution of neonatal mortality, which has remained fairly steady over this period.

As neonatal mortality contributes to over 64% of infant deaths in India, interventions to improve child survival must address the neonatal period^[7]. The World Health Organization guidelines for essential new born care encompass cleanliness, thermal protection, exclusive breast feeding, eye care, immunization, management of illness and care of low birth weight infants^[8].

OBJECTIVES

1. To study knowledge and practices of mothers regarding immediate new born care, early initiation of breast feeding, colostrum feeding and immunization.
2. To document positive indigenous practices from mothers of healthy new born which according to them have aided in survival and rehabilitation of their baby.

3. To identify critical behavior, practices and barriers that influences the survival of new born.
4. To improve neonatal survival and decrease neonatal morbidity and mortality.

METHODOLOGY

The Hospital based study was carried out at Krishna Hospital, a part of Krishna Institute of Medical Sciences Deemed University, Karad, Maharashtra, in December 2013. In this study, 100 mothers of new born babies were interviewed.

Tools namely observation, interviews and documentation were employed to collect relevant data. A semi-structured, pre-tested schedule with both open and close ended questions pertaining to socio-economic variables namely identification data, mother's age, family type, educational status, details of antenatal care, care at birth, cord care, breast feeding practices, colostrums feeding and immunization were collected.

A verbal and written consent was taken from the respondent before collecting the information.

RESULTS:

Socio-demographic characteristics-

Table 1: SOCIO-DEMOGRAPHIC PROFILE OF STUDY SUBJECT

Sr.No.	Socio-Demographic Factors	No. (n=100)	% (n=100)
1	Age Distribution (Age in Yrs)		
	18-23	47	47%
	24-29	45	45%
	30-35	8	8%
2	Religion		
	Hindu	86	86%
	Muslim	11	11%
	Others	3	3%
3	Parity		
	Primipara	56	56%
	Multipara	44	44%
4	Type of Family		
	Nuclear	21	21%
	Joint	51	51%
	3-Generation	28	28%
5	Literacy Status		
	Illiterate	5	5%
	Primary	15	15%
	Secondary	46	46%
	Higher Secondary	17	17%

	Graduate & Above	17	17%
6	Socio-Economic Status		
	Class I	23	23%
	Class II	27	27%
	Class III	20	20%
	Class IV	23	23%
	Class V	7	7%
7	Working Status		
	Working	16	16%
	Non-Working	84	84%
8	Sex of Baby		
	Male	44	44%
	Female	56	56%
9	Weight of baby		
	Normal	80	80%
	Low	20	20%

The study population consisted mostly of mothers in age group 18-23yrs (47, 47%), followed by 24-29yrs (45,45%) and above 30yrs were 8% (8). Primipara were 56% (56), whereas multipara were 44% (44). Most of them were Hindus (86, 86%). Joint family system was predominant type (51, 51%) and three generation families accounted for 28% (28). Most of the families belonged to class-II (27,27%) of socio-economic status, followed by class-I and class-IV, accounting to 23%(23) each. Most mothers were educated upto secondary level (46, 46%), followed by graduate and above (17, 17%). Just literate and illiterate constituted 15% (15) and 5% (5) respectively. 84% (84) of mothers were unemployed. 56% (56) babies were female. 80% (80) babies had normal weight whereas 20% (20) fell in low birth weight category.

Antenatal care and past obstetric performance-

Table 2: Distribution of Mothers According to Antenatal Care Practices

Sr.No.	Antenatal Care	No. (n=100)	% (n=100)
1	Antenatal Check-Ups		
	Yes	98	98%
	No	2	2%
2	ANC Visits		
	<2	19	19%
	3 to 4	38	38%
	>5	41	41%
3	Tetanus Toxoid		
	Not Taken	3	3%
	1	5	5%
	2	92	92%
4	IFA Tablets		
	Not Taken	8	8%
	<3 months	28	28%
	>3 months	64	64%
5	Not Taken (Reason)		
	Smell of Tablet	3	37%
	Nausea	4	50%
	Diarrhoea	0	0%
	Gastritis	1	13%

41% (41) of mothers took more than 5 visits, followed by 38% (38) 3-4 visits and 19% (19) less than 2 visits. 2% (2) never visited the doctor. 92% (92) mothers took two doses of tetanus toxoid, 5% (5) took one dose whereas 3% (3) did not take even a single dose. 64% (64) mothers took iron and folic acid tablets for more than 3 months, 28% (28) for less than 3 months and 8% (8) did not take at all. The reason for not taking accounted for nausea in 50% (50) of cases, smell of tablet in 37% (37) and gastritis in 13% (13).

Breast feeding-

Table 3: Distribution of Mothers According to Knowledge of Breast Feeding

Sr.No.	Breast Feeding	No. (n=100)	% (n=100)
1	Time of Initiation		
	Within 1 hr	32	32%
	1- 6 hrs	54	54%
	6-12 hrs	2	2%
	12-24 hrs	6	6%
	>24 hrs	6	6%

2	Reasons for Delay		
	No milk secretion	14	21%
	Didn't know when to start	6	9%
	No specific reasons	4	6%
	Baby's illness	7	10%
	Sex discrimination	5	7%
	Advice by elders	0	0%
	Delivery complications	4	6%
	Baby was in NICU	8	12%
	Caesarean Section	20	29%
3	Colostrum Feeding		
	Fed	91	91%
	Not Fed	9	9%
4	Reason for not Feeding		
	Harmful for Baby	2	22%
	Prohibition by Elders	4	44%
	Lack of awareness	2	22%
	Don't know	1	12%
5	Advantage of Colostrum		
	Makes Baby healthy	86	86%
	Makes Baby weak	1	1%
	Don't know	11	11%
	Others	2	2%

Table 4: Distribution of Mothers According to Breast feeding Practices

Sr.No.	BREAST FEEDING PRACTICES	No. (n=100)	% (n=100)
1	Type of feeding		
	Demand	39	39%
	Scheduled	61	61%
2	Method of feeding		
	Exclusive	81	81%
	Partial	19	19%
3	Partial (Substitute)		
	Goat's Milk	4	4%
	Cow's Milk	13	13%
	Others	2	2%
4	Fed on both breasts at same time		
	Yes	81	81%
	No	19	19%

More than one-third (32, 32%) of mothers initiated breast feeding within one hour of birth, 54% (54) initiated from 1 to 6 hours and only 6% (6) mothers delayed beyond a day. The reason for delay for more than one hour accounted to caesarean section in 17% (17) mothers followed by no milk secretion in 7% (7) and due to baby being in NICU in 5% (5). Lack of knowledge, babies illness, sex discrimination, delivery complications and for no specific reason accounted for 1% each. 91% (91) mothers fed colostrum to the baby and 9% did not. Reason for not feeding colostrum was due to prohibition by elders in 44% (44) cases, followed by harm to baby's health and lack of awareness in 22% (22) each. 86% (86) mothers were of the view that the colostrum makes their baby healthy and 11% (11) had no idea of advantages of feeding colostrum to the baby.

81% (81) of mothers fed babies on both breasts at one time of breast feeding and 19% (19) did not. 61% (61) mothers gave scheduled feeding and 39% fed on demand. Exclusive breast feeding was practiced by 81% (81) mothers. 19% (19) of mothers who practiced partial breast feeding gave cow's milk to 13% babies.

Pre-Lacteal Feeding- Table 5: Distribution of Mothers According to Pre-Lacteal Feeding Practices

Sr.No.	PRE-LACTEAL FEEDING PRACTICES	No. (n=100)	% (n=100)
1	Pre-Lacteal feeds		
	Given	44	44%
	Not-Given	56	56%
2	Type		
	Honey water	16	16%
	Jaggery Water	36	36%
	Sugar water	11	11%
	Goat's Milk	7	7%

Cow's Milk	18	18%
Honey – Ghee	5	5%
Ritual fluid	0	0%
Ghutti	5	5%
Decoctions	2	2%

44% (44) of mothers gave pre-lacteal feed which included jaggery water in 36% (16) cases, cow's milk in 18% (8), honey water in 16% (7) and sugar water in 11% (5).

Hygiene-

Table 6: Distribution of Babies according to Hygiene

Sr.No.	Hygiene	No. (n=100)	% (n=100)
1	Daily Bath		
	Yes	73	73%
	No	27	27%
2	No (After how many days)		
	1 to 2	9	33%
	2 to 3	11	41%
	3 to 5	7	26%
3	Massage before Bath		
	Yes	95	95%
	No	5	5%
4	Yes (Product)		
	Mustard Oil	10	11%
	Coconut Oil	28	29%
	Almond Oil	3	3%
	Commercial Oil	47	50%
	Others	7	7%
5	Oil into Ears, Nose, Anus		
	Yes	17	17%
	No	83	83%
6	Eye Care		
	Kajal	27	27%
	Water	9	9%
	Cotton Cloth	57	57%
	Cotton	7	7%
7	Cord Care		
	Nothing	90	90%
	Oil	2	2%
	Gentian Violet	2	2%
	Turmeric	5	5%
	Others	1	1%

73% (73) mothers were of a view that they will give daily bath to their babies. 27% (27) of those who didn't want to give opted a gap of 2-3days in 41% (11) cases, 1-2 days in 33% (9) cases and 3-5 days in 26% (7) cases. 95% mothers opined to give daily massage to their babies. Out of these, half of the mothers 50% (47) opted for commercial oil, 29% (28) coconut oil, 11% (10) mustard oil and 7% (7) other products. According to 17% (17) of mothers, it is important to put oil in the ears, nose, anal opening while massaging. More than half of mothers (57, 57%) would use a cotton cloth to clean the eyes of the baby and only 27% (27) had an opinion to use kajal. 90% (90) mothers did not apply anything on the cord stump, 5% (5) applied turmeric and 2% applied oil and gentian violet each.

Newborn care-

Table 7: Distribution of Mothers according to Care of Baby

Sr.No.	Baby Care	No.(n=100)	%(n=100)
1	Method to keep Baby Warm		
	Wrapping in clothes	77	77%
	Keeping Baby in Sun	20	20%
	Placing room heater	2	2%
	Nothing	1	1%
	Others	0	0%
2	Importance of Keeping Warm		
	To prevent from cold	40	40%
	To keep baby healthy	20	20%
	To prevent from infection	12	12%
	To improve immunity	1	1%
	Others	27	27%
3	Baby Care (other than Mother)		
	Father	33	33%
	Grandmother	65	65%

Aunt	2	2%	
Uncle	0	0%	
4	Practices before handling the baby		
	Washing hands and feet	61	61%
	Nothing	39	39%
5	Knowledge about Kangaroo Mother Care		
	Yes	19	19%
	No	81	81%
6	Receivers of KMC		
	LBW Babies	16	16%
	Twins	2	2%
	LBW Babies, Twins	1	1%

77% (77) mothers will keep the babies warm by wrapping them in clothes, only 20% (20) will keep the babies in sun and placing room heaters accounted for just 2% (2). 40% (40) of mothers wanted to prevent their babies from cold, 20% (20) of them wanted to keep baby healthy, 12% (12) wanted to prevent from infection and 27% (27) had no reason to keep baby warm. Other than the mother, grandmother and father would take care of the baby in 65% (65) and 33% (33) of cases respectively. 61% (61) mothers would wash their hands and feet before handling the baby, whereas 39% (39) would do nothing. 81% mothers did not know about Kangaroo Mother Care. 19% of those who knew, told it is given to low birth weight babies in 16% (16) cases and to twins in 2% (2) cases.

Immunization-

Table 8: Distribution of Mothers according to Knowledge of Immunization

Sr.No.	Knowledge of Immunization	No.(n=100)	%(n=100)
1	Immunization Required		
	Yes	93	93%
	No	7	7%
2	Prevents Against		
	Polio	27	27%
	T.B., Polio	15	15%
	T.B., Polio, Measles	20	20%
	T.B., Polio, Hepatitis	2	2%
	T.B., Polio, Chicken Pox	2	2%
Others	16	16%	

According to 93% (93) mothers, the baby should be immunized. 27% (27) of mothers believe that it protects from polio, 20% (20) told it protects from T.B., polio, measles and 15% told it protects only from polio and T.B.

Weaning-

Table 9: Distribution of Mothers according to Knowledge of Weaning

Sr.No.	Knowledge of Weaning	No.(n=100)	%(n=100)
1	Initiation of Weaning		
	<6 months	16	16%
	>6 months	84	84%
2	Type of Food		
	Mashed Potatoes	17	17%
	Cow's Milk	20	20%
	Goat's Milk	9	9%
	Soft Cooked Rice	26	26%
	All of the Above	24	24%
	Others	4	4%
3	Continuation of Breast Feeding		
	1 year	49	49%
	2 years	7	7%
	Till baby does not reject	37	37%
	Don't know	7	7%

It was found that 16% (16) of mothers will start weaning their babies after 4 months, on contrary to which 84% (84) will start weaning after 6 months. Soft cooked rice was preferred by 26% (26) of mothers, followed by cow's milk, mashed potatoes, goat's milk 20% (20), 17% (17), 9% (9) respectively. 24% mothers would feed all of these simultaneously. 49% (49) of mothers want to continue to breast feed till 1 year of baby's age whereas 37% (37) would breast feed till the baby doesn't reject.

DISCUSSION:

Improving newborn survival is a major priority in child health today. Specific programs for maternal and child health care have been in place since the early 1950' till date, like the MCH program for immunization, ORS for the control of diarrheal disease, anemia, vitamin A prophylaxis and RCH II.

The present study was carried out in a charitable hospitable. Literacy level of mothers was high (95, 95%) and joint family system was predominant (51, 51%). 20% of newborn had low birth weight and 56% babies were female. Majority (98, 98%) of mothers had gone for ANC check-ups. Most of them (97, 97%) received two doses of tetanus toxoid injections. 64% of them completed the prescribed course of IFA tablets. Reasons cited by mothers for not consuming appropriate number of IFA tablets was the smell of the tablet and nausea after having them. A similar finding was observed in a study on delivery and newborn care practices in urban slums of Ganda community^[10].

32% of mothers initiated breast feeding within 1 hour of birth and 68% started after 1 hour. Reasons for late breast feeding were no milk secretion (14, 14%), other than caesarean section (20, 20%). More than one-third (4, 44%) of mothers didn't feed colostrum due to family customs and belief. The colostrums is rich in vitamins, minerals and immunoglobulins^[11]. A similar result was obtained from a study based on newborn care practices in urban slums of Lucknow city, UP^[12]. 19% of babies were not fed on both breasts at same time, which signifies that foremilk and hind milk is not received by 81% of babies (81) at the same time.

Scheduled feeding was practiced predominantly than demand feeding. 81% of females practiced exclusive breast feeding, which should be continued for 6 months^[13]. It protects the child from malnutrition, infections and helps in overall development of the child.

Pre-lactal feed was not given by most of the mothers but still majority of them gave either jaggery water or honey which makes the child vulnerable to infections^[14,15] and it is largely influenced by relatives^[16].

Three-fourth of mothers were ready to give daily bath, 26% of mothers would give bath to their babies after 3-5 days, which is not good for baby's hygiene and the gap must be reduced to 1-2 days. Nearly all mothers would get their babies massaged by untrained dais. As they are not trained, so this is not good for baby's health and should be discouraged. One-fourth of mothers were in favour of putting oil into ears, nose and anal opening which shouldn't be practiced. A similar observation was found in a study conducted on maternal and new born care practices among the urban poor in Indore, MP^[17].

Unsterile cloth was used in large population of cases to wipe the eyes of the newborn. These unhygienic practices should be discouraged, as these can be a potential source of infection. Nothing was applied on umbilical cord dressing in nearly all babies except for few who applied turmeric. 77% of mothers wrapped babies in clothes for protecting them from cold. A similar observation was found in a study at Washington D.C. named Saving Newborn Lives^[18].

Mostly, all of the mothers believed that their babies should be immunized and it protects from polio followed by T.B. and measles. 19% of mothers knew about kangaroo mother care and also that it is given to low birth weight babies. 16% mothers believed in starting weaning at 4 months of age. The prematurely started weaning may lead development of infections and may have a long term effect on physical growth of the child^[19]. The importance of intervention in form of teaching breast feeding techniques had a positive outcome in the previous studies^[20].

CONCLUSION AND RECOMMENDATION:

In majority of the cases, correct knowledge and correct practices regarding newborn care were lacking in mothers and this should be promoted through improved coverage with existing health services.

In spite of the fact that most of the mothers were literate; harmful newborn care practices were common including applying kajal for the eyes, discarding colostrum, pouring oil in ears, nose and anal opening and giving babies unhealthy pre-lactal feeds.

These must be discussed with healthcare providers in order to prevent them.

There is an urgent need to educate mothers regarding newborn and

early neonatal care. The information regarding the advantages of feeding colostrum and duration of breastfeeding needs to be provided for the community as a whole. Community-based health education program is needed. Early weaning should be discouraged and interventional programs for mothers should be carried out during antenatal visits, as they are more receptive and emotional during this period.

It has been emphasized by the Indian academy of paediatrics and endorsed by the food and nutrition board, the department of women and child development, ministry of human resource development, Government of India; that exclusive breastfeeding should be practised till the age of 6 months and that after a normal delivery, babies should receive their first breastfeed as soon as possible and preferably within 1 hour of birth. Thus, there is a need to disseminate proper information regarding appropriate infant feeding practices too.

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