

## Research Article

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# Neonatal rearing and breastfeeding practices in Punjab, India

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## ABSTRACT

**Background:** Faulty or lack of intranatal care can lead to a number of morbidities in the neonatal period. Newborn care in any community is influenced by cultural practices prevalent in that area apart from medical and economic causes. In India, morbidity and mortality of mother and child directly or indirectly is governed by the customs prevalent in their society. Infant feeding and rearing practices vary across communities, depending on social customs. This study was planned to give us an insight about the neonatal rearing and feeding practices among mothers and the factors influencing their practices in Punjab.

**Methods:** This facility based one point cross sectional descriptive study was done in Pediatrics wards and postnatal wards of Guru Gobind Singh Medical College, Faridkot. The newborn rearing practices were interviewed from the families accompanying the babies with age less than four weeks using structured questionnaire.

**Results:** 965 babies were enrolled for the study. The mean age of the mother was  $28.3 \pm 3.5$  years and 51% of the mothers practiced exclusive breastfeeding. High proportion of neonates (70%) was given prelacteals feeding, honey being most common. Oil massage to the baby was practiced by 99% of the mothers. Bath after 24 hours of delivery was given to 74% newborns. 89% of the babies were vaccinated after birth.

**Conclusions:** People like to follow their rituals and customs eliminating potentially harmful practices should be tried keeping those in mind. The strengthening of the information, education and the communication to improve the existing neonatal rearing practices is the need of the day.

**Keywords:** Neonatal rearing practices. Breastfeeding practices. Rituals

## INTRODUCTION

In India, around 50-60% of all infant deaths amounting to 1.3 million of children die within first four weeks of life and more than half of these die within a year as per latest family health survey done in India.<sup>1,2</sup> Neonatal mortality accounts for two-thirds of all infants' death. Faulty or lack of intranatal care can lead to a number of morbidities in the neonatal period. Newborn care in any community is influenced by cultural practices prevalent in that area apart from medical and economic causes. In India, morbidity and mortality of mother and child directly or indirectly is governed by the customs prevalent in their society. The most important factor influencing the child

rearing practices in India is the religion along with the socio-economic status of the family. Infant feeding and rearing practices vary across communities, depending on social customs, traditional beliefs and prejudices of the community, literacy and socio-economic status of the family, especially of the mother. These practices at times may not be of any benefit to the new born and rather can prove to be harmful. As the practices in the neonatal period do have a long term effect on the morbidity and nutritional profile in infancy, social pattern and customs influencing the feeding pattern and rearing practices in a community need to be understood. The formulation of health care policies should also account for these prevalent newborn care practices. The associated teaching

hospital of Guru Gobind Singh Medical College caters to patients of more than five nearby districts of Punjab. As it is a common cultural practice in India for pregnant women to come to their parental or in laws' house for the delivery and the grandparents hail from almost all parts of Punjab. So this study was planned to give us an insight about the neonatal rearing and feeding practices among mothers and the factors influencing their practices in Punjab.

## METHODS

### Study design

This facility based one point cross sectional descriptive study was done in Pediatrics wards and postnatal wards of Guru Gobind Singh Medical College, Faridkot.

### Subjects

The newborn rearing practices were interviewed from the families accompanying the babies admitted in the Pediatrics ward and post natal wards of Guru Gobind Singh Medical College, Faridkot. All the mothers having the babies less than four completed weeks were enrolled. The babies admitted in the neonatal intensive care units whose mothers were also present in the hospital were also enrolled in the study. The study was conducted on 965 mother baby pairs.

### Exclusion criteria

The parents or guardians who refused to participate in the study were not enrolled. Babies admitted to our hospital by the orphanages and abandoned babies admitted to our hospital were also not included. The babies admitted to the neonatal intensive care unit without accompanying mother were also excluded from the study. One of the babies from the multiple pregnancies was taken for the study.

### Method

This study was approved by the hospital ethical committee and research advisory committee of the institute. Information on the study variables was collected using a pretested, semi-structured questionnaire consisting of socio-demographic details and questions on neonatal feeding and rearing practices. The mothers of neonates were identified from the wards and the objective of the study was explained to them. The age, sex, birth order, birth weight and religion of the newborn was noted. Information regarding education, occupation, monthly income of the family was taken. Information regarding various aspects of antenatal, natal and postnatal care was also taken. Information related to registered antenatal case (female had paid at least 3 antenatal visits); immunization against tetanus in antenatal period, intake of iron supplementation was collected. The place of registration along with place of delivery and whether the

delivery was spontaneous or assisted was noted. Newborn rearing practices pertaining to thermal care, breast feeding, feeding practices, prelacteals, bathing, and cord care along with immunization at birth was also explored. The occurrence of any postnatal complications in the baby and health seeking behaviour for this was also asked. The decision making authority and major source of guidance to the mothers was also noted. Mothers were enquired about the awareness about danger signs in baby, following of hand washing practices and hygiene of umbilical stump. The cultural beliefs like exposure to sun for jaundice, dietary restraints to the mother, belief in bad omens, threading the baby, piercing the body parts, branding the baby for illness, use of baby care products and use of kajal/kohl in the eyes were also asked. A separate note was made for any specific cultural belief.

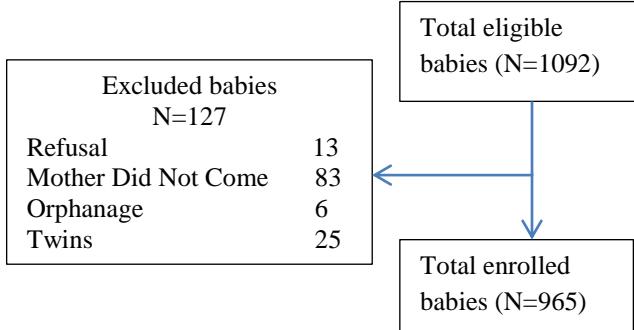
Data was collected by the investigators, compiled and analyzed using descriptive analysis using Microsoft Excel™ and statistical tests.

### Informed consent

Written informed consent was taken from one of the enrolled parents or guardians. They were provided with written and verbal information including the potential risk involved on the research. Confidentiality of the subjects was maintained.

## RESULTS

In our study a total of 1092 neonates were admitted during a period of eight months from January to August 2015. Out of these 965 were found eligible for enrolment. The reasons for exclusion are given in Figure 1. Out of these 760 neonates were born in our hospital and rest were admitted for various reasons.



**Figure 1: Study flow.**

### Socio demographic profile

The mean age of the mothers in our study was  $28.3 \pm 3.5$  in years. The majority 405/965 (42%) of the mothers were primigravidae. The vaginal delivery was the most common mode of delivery and was present in 598/965 (62%) mothers. The education status in most of the mothers was less than middle class 434/965 (45%). Sikh

families were most common. 801/965 (83%) of the mothers had antenatal check-up at least once and had shots of tetanus toxoid during their check-up. The details of all the demographic variables are mentioned in Table 1.

**Table 1: Socio-demographic profile of the family.**

Variable	Value	%
Age of Mother (in years)	28.3 $\pm$ 3.5	
Joint Family	608	63
Rural	714	74
ANC	801	83
TT	762	79
Parity of the mother		
P1	405	42
P2	357	37
P3	97	10
P4	58	6
>P4	48	5
Type of Delivery		
NVD	598	62
LSCS	290	30
Forceps	19	2
Breech	58	6
Education of Mother		
Illiterate	183	19
Up to Primary	154	16
Middle	97	10
Matric	309	32
XII	145	15
Graduate	48	5
Postgraduate	29	3
Occupation of Mother		
Housewife	463	48
Service	280	29
Daily Wages	145	15
Business	77	8
Religion of Family		
Hindu	193	20
Sikh	753	78
Muslim	10	1
Others	10	1

#### Rearing practices in the neonates

The detailed rearing practices are presented in Table 2. The mothers believed in taking advice of somebody for the rearing practices of the neonate and it was mostly the mother of either of the parents. Only 1% did not take any advice. The onus of the primary care providing mostly rested with the mother and fathers hardly shared this responsibility (84% vs. 1%). About a quarter of the babies received their first bath within twenty four hours. The majority of mothers 878/965 (91%) did know about the existence of vaccination against important diseases and almost all of them 859/965 (89%) got their children

vaccinated too in some hospital. Almost all the mothers 951/965 (99%) followed the principles of rooming in and kept the baby near to them. Similarly all the mothers 960/965 (99%) used some kind of massage oil to apply on the body of the baby. The most common oil used was coconut oil (75%) followed by desi ghee and olive oil (10% each). The awareness about the danger signs in the baby after discharge was not present in about half 454/965 (47%) of the mothers. In the present study only 608/965 (63%) of the mothers practiced hand washing before touching the baby. But almost all 945 (98%) of the mothers were aware about the hygiene of the umbilical stump in Table 2.

**Table 2: Feeding practices in the neonates.**

Variable	Value	%
Colostrum Given	685	71
Type of Feeding		
Animal Milk Feeding	290	30
Exclusive Breastfeeding,	492	51
Mixed Feeding	145	15
Formula Feeding	39	4
Breastfeeding Interval After Birth		
<30 Min	164	17
30 Min -1 Hr.	589	61
1-12 Hr.	183	19
> 12 Hr.	29	3
On Demand Feeding	849	88
Prelacteals	676	70
Prelacteals		
Tea	10	1
Honey	618	64
Janamghutti	290	30
Others	48	5
Knowledge About Duration of Exclusive Breast Feeding	521	54
Timing of exclusive breast feeding in months		10.81 $\pm$ 1.24

#### Feeding practices in the neonates

The feeding practices form an important aspect of the neonatal care and they are being tabulated in Table 3. The proportion of mothers giving colostrum was only 685/965 (71%). The most common feed given was the exclusive breast milk followed by cow's milk (51% vs. 30% respectively). The period of initiation of breast milk was less than one hour in 753/965 (78%) mothers. The prelacteals were administered in 676/965 (70%) of the neonates and the most common substance was honey followed by Janamghutti (64% vs. 30% respectively). Only about half of the mothers were aware about the duration of exclusive breast feeding and the mean duration of exclusive breast feeding was 10.81  $\pm$  1.24 months. The details of various feeding practices are mentioned in Table 3.

**Table 3: Rearing practices in the neonates.**

Variable	Value	%
Onus of Care		
Mother	810	84
Mother In Law	39	4
Own Mother	87	9
Father	10	1
Others	19	2
Rooming In	99	
Temperature Maintenance		86
Awareness		
Bathing	0	
<60 Min	116	12
60 Min -12 Hr.	87	9
12-24 Hr.	48	5
24-48 Hr.	463	48
2-5 Days	183	19
>5 Days	68	7
Source Of Guidance	0	
Own Mother	376	39
Mother In Law	290	30
Doctors	48	5
Nurses	125	13
Friends	87	9
Maids	19	2
Colleagues	10	1
Self	10	1
Massage Oil	955	99
Coconut Oil	724	75
Olive Oil	19	2
Desi Ghee	97	10
Mustard Oil	97	10
Other	29	3
Awareness About Vaccination	878	91
Immunization Done	859	89
Awareness About Danger Signs In Baby	511	53
awareness about hygiene of umbilical stump	598	62
Use Of Diapers	907	94
Continuous Use Of Diapers	203	21
Hand Washing Before Handling The Baby	608	63
Genetic screening awareness	48	5

#### **Other customs**

The most common taboo in the families was found to be belief in the bad omens, vernacularly called as “*Nazar lagna*”. Almost all the families believed into it. Also the use of diapers and baby care products was universal in the rearing practice. Dietary restraints in the mother, application of kajal in the eyes of the babies and no exposure to outside air were also some of the important customs prevalent. The exposure to rising sun as a treatment of jaundice was seen in 396/965 (41%) of the

families. These other customs are tabulated in the Table 4.

**Table 4: Taboos prevalent in the neonates.**

Variable	Value	%
Exposure to sun for jaundice	396	41
Dietary Restraints to the Mother	695	72
Belief in bad omens	936	97
Application of kajal in eyes	647	67
No exposure to outside air	830	86
Baby care products	955	99

#### **DISCUSSION**

WHO recommends exclusive breastfeeding for six months of life and this practice prevents a child from a lot of morbidities.<sup>3</sup> A lot of stress has been put over this duration but in our study this was present only in 51 % which was almost similar to that reported by NFHS-3.<sup>2</sup> The range of exclusive breastfeeding is variable across the globe.

Our study had 78% initiation of breastfeeding within one hour which was similar to a study done in Chandigarh and much more than the NFHS 3 survey and a study done in west Bengal. The reason of high proportion of breastfeeding initiation as compared to other studies is that it was a hospital based study and hospital staff motivated the mothers to start breastfeeding as soon as possible after the birth. The portion of babies in which it was delayed beyond one hour was mostly born by caesarean section.

The practice of applying massage oil has been practiced nearly universally. This practice is deemed beneficial to keep the baby healthy in form of making the baby strong, shiny or just by rituals. Similar to our study more than 95 % of the families applied some kind of massage oil to their baby in studies done across the globe.<sup>6,7</sup> A study done in our neighbouring country Pakistan also reported the massage rate of 89%.<sup>8</sup> The most common oil used in our study was coconut oil which was also used in study done at Chandigarh.<sup>4</sup>

The harmful practice of giving prelacteals is widely present all over the world and our study was no exception. This practice has also been recorded in number of studies done in India as well as other countries.<sup>5,9-12</sup> The common substance given in all the studies were honey, sugar water and Janamghutti.

The timing of bathing is variable across the regions depending upon the climate. The commonest recommendation is to bathe the baby after the cord stump falls but this practice is seldom followed.<sup>13</sup> In our study bathing on day 1 was present in 26 % as compared to 40 %, 45.4% and 76.1% in studies done in Bangladesh,

south India and Chandigarh.<sup>4,7,14</sup> The early bathing may predispose a child to low temperature and infections.

The new thing that has come out of our study which is not previously reported is that the onus of the child care mostly lies with the mother. The grandparents of both sides play a great role in framing the policies for the mother regarding what to eat, how to rear the neonate.

Taboos still play an important practice in the customs. They mostly harm the child and certainly do no benefit to the child. The most common taboos prevalent in this part of country were exposure to rising sun, kajal application and belief in restrictions of the baby to go outside during certain period post-partum even for medical reasons. Kajal application was also reported from studies done across India and the main reason for its application in our study was prevention from bad omens.<sup>6</sup> We also had three children who were not fed till there were stars in the sky. This practice was also reported in another study.<sup>15</sup> The lack of medical exposure even following the sickness is potentially dangerous and should be urgently addressed to. The practices of dietary restraints to mother, fear of bad omens, keeping the baby in sun for the treatment of jaundice were found to be pretty common in our study. We also noted that majority of the population believed in using baby care products and diapers. This could be due to excessive marketing of these products and the peer pressure as well as social symbol.

#### **Limitations**

This study had some limitations too. This study is hospital based only and does not include the families who never came to hospital or the mothers who had the delivery conducted in private nursing homes. Another limitation is that we only asked about customs but did not see how they actually reared the child or breastfed. There could be difference between the telling and the actual doing of the things. Small sample size is also one of the limitations. Further studies must be planned using home to home surveys including one and all. The rural and urban clusters should also be studied for the same.

#### **CONCLUSION**

The mother baby duo holds special position in the society and a number of rearing and feeding practices are prevalent based upon the local customs. Knowledge about the prevalent rearing and breastfeeding feeding practices is must to frame any health policy pertaining to the neonates. People like to follow their rituals and customs and eliminating potentially harmful practices should be tried keeping those in mind. There is increased awareness about the health of the child evident by increasing immunisation and exclusive breastfeeding but nevertheless harmful practices do still exist. The strengthening of the information, education and the communication to improve the existing neonatal rearing practices is the need of the day.

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