
ORIGINAL ARTICLE**A Cross-Sectional Study on Child Rearing Practices in Rural Goa***Jagadish Cacodcar¹, Anagha Dubhashi^{2*}, Shilpa Joglekar²**¹Department of Preventive and Social Medicine, ²Department of Pediatrics, Goa Medical College
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Abstract:

Aim: To assess the traditional child rearing practices among rural Goan mothers and the various socio demographic factors influencing these practices. **Materials and Methods:** A cross sectional study was conducted among 307 rural mothers with children < 2 years in two rural areas under rural health and training centre Mandur located 16 kilometres from Panaji Goa, through house to house visits and oral interviews. Analysis of collected data was done using Microsoft Excel and SPSS version. Chi-square test was applied in addition to proportions and percentages. **Results:** Rooming in was practiced by majority (86%) of the mothers within 24 hours of birth. 46.25% of the mothers fed colostrum to their newborns while 73.62 % of the mothers breastfed within 24 hours. 37.59% of the mothers practiced exclusive breastfeeding (EBF) for the first six months. The mean duration of breastfeeding was 11.015 months. 90% of the women was educated 12th standard and above breastfed their babies up to 12 months. Bottle feeding was common (75%). Cereal based diet was the commonest complementary feeding administered by 23% of the mothers. Commonest traditional practices followed included oil massage (97.72%) and use of amulets/talisman (97.72%) in the study population. **Conclusion:** Beneficial infant feeding practices such as early initiation of breastfeeding and feeding of colostrum among rural Goan mothers was low despite accessible antenatal care and health care services. However, though some

of the traditional children rearing practices followed such as oil massage, delivery at parents' home were as per the recommended norms, some of the beliefs/practices such as kajal application, bathing the newborn immediately after birth, need to be replaced by sound and scientific methods.

Keywords: Breastfeeding, Child Rearing, Colostrum, Traditional, Rural Goa

Introduction:

Childrearing practices were described by Bouchard, (1994) and Jenni and O'Conner (2005) as "transmission of the tradition, beliefs, culture and cognitive actions from parents to the offspring" [1]. The subject of child rearing practices encompasses feeding practices as well as traditional practices followed during various stages of the child's growth and development.

Factors such as religion, literacy, socio-economic status of a family influence the child rearing practices in India. Infant feeding and rearing practices differ in communities, depending on social customs, traditional beliefs and prejudices of the community. These practices at times are not of any benefit to the newborn and can also be harmful. The traditional health practices are categorised into four main groups [2].

a) Beneficial practices: Include first

confinement at mother's place for delivery, feeding pregnant women calorie rich diet, postnatal isolation of mother and infant for 40 days post delivery, keeping the baby well covered with clean washed and sundried clothes, oil massage to the baby prior to bath.

- b) Harmful practices: Include practices like initiating breast milk 2-5 days after delivery as well as discarding colostrum post delivery as it is known to have a cleansing effect on the breast according to the Indian Medical system [3]. "Janam ghutti" is popularly used for treating the sick newborns. It is manufactured by many indigenous pharmaceuticals. Common ingredients are turmeric, ghee, saunf, ajwain etc. A few many contain opium derivatives also. It is used for treating abdominal problems and to deal with teething issues [4]. Others include conducting delivery in dark ill ventilated rooms at home, cutting cord with unsterile instruments and application of harmful substances to the cord, bathing the baby immediately after birth, discarding colostrum and administering prelacteal feeds, instillation of oil in ears and kajal to eyes.
- c) Innocuous Practices: Use of talisman, amulets, application of "teeka".
- d) Doubtful Practices: Avoiding exposure of pregnant women to eclipse, use of traditional galactogogues like garlic, ginger, coconut, concept of hot and cold foods.

In order to document the prevalent child rearing practices amongst rural mothers in Goa, this study was undertaken to design appropriate health education and health care strategies so that the harmful practices can be discouraged while beneficial practices may be encouraged towards better child health.

Material and Methods:

The present cross-sectional study was conducted over one year in two rural areas under subcentres; Mandur and Carambolim under Rural health and training centre. The study population was 322 mothers with children < 2 years.

There are four villages which come under subcentre of Mandur namely Dongrim, Mandur, Azossim and Neura. The villages under subcentre of Carambolim include Corlim, Gaunsabhat, Carambolim and Dhulapi. The total population of the study area was 11,887.

The study area is at a distance of 16 kilometres from Panaji, the capital of Goa. Rural Health and Training Centre, Mandur, a 22 bedded hospital attached to the Department of Preventive and Social medicine, Goa Medical College, caters to the health care needs of the population in this area. Inclusion criteria included children born in the preceding two years prior to the commencement of the study in order to minimise recall bias. List of mothers was obtained from records of the sub health centres, Anganwadis and RHTC Mandur.

Only women native to the village were included in the study. The proforma of the study was pretested among 30 rural Goan mothers having children less

than 2 years. Final proforma was then administered to the study participants by means of oral interview through house to house visits. 307(93%) of the study population was interviewed in this manner. Mothers who were unavailable despite 3 home visits were excluded from the study.

The observations were tabulated in MS excel sheet. Chi square test and other relevant statistical tests were applied to analyse the results in addition to proportions and percentages.

At the end of each interview the mother along with the other family members were urged to follow the recommended practices related to childrearing. Health education was imparted on the benefits of birth spacing, family planning, proper nutrition during pregnancy, post natally and immunization with tetanus toxoid, breastfeeding, complementary feeding, dangers of bottle feeding and importance of routine childhood immunization. The parents were also encouraged to educate their daughters as much as the sons.

Results:

In our study, a majority of the mothers were young i.e. less than 25 years (63.5%) and most were Hindus (82.41%). Most of the mothers had received only up to secondary school education (32.90%) and belonged to lower middle class (44.63%) according to the updated BG Prasad socioeconomic classification (2014) [5]. The majority resided in joint families (86.03%) with family members ranging from 5-10 per house (55.70%). (Table 1)

Rooming-in was widely practiced in the study population. Majority of the newborns 240 (78%) were placed alongside the mother within 6 hours of delivery, 24 (8%) carried out rooming in between 6-24 hours, whereas only 14% of the families after 24 hours. (Table 2)

142 (46.25%) mothers had fed colostrum to their newborn, whereas 165 (53.75%) discarded colostrum. 60.91% of the study population initiated breastfeeding within 6 hours while 5.86% within 6-12 hours of birth. However, majority of the rural mothers (73.62%) initiated breastfeeding within 24 hours of birth. 26.38% of the mothers initiated breastfeeding after 24 hours and the reasons cited were maternal fatigue and inadequate lactation (Table 3). 178 (58%) mothers practised "on schedule" breastfeeding versus 129 (42%) mothers who followed "on demand" breastfeeding. Average duration of breastfeeding was 11.015 (+/-6.56) months. 50 (37.59%) mothers breastfed their infant for a period of 0-6 months; 35(26.32%) breastfed for 6-12 months and 48(36.09%) had breastfed up to 12-24 months of age. (Table 4). The results of our study revealed a higher duration of breastfeeding of up to 12 months in women in 90% of women who were educated HSSC and above. (Fig. 1). The study demonstrated the age of weaning to be between 3-6 months in 191 infants (65.86%) and around 6-9 months in 70 infants (24.14%).

Table 1: Socio Demographic Profile of 307 Respondents

Variables	Number	Percent
Age (years)		
15-20	62	20.2
20-25	133	43.3
25-30	112	36.4
Education		
Graduate & above	10	3.26
HSSC	7	2.28
SSC	85	27.69
Secondary	101	32.90
Primary	55	17.92
No formal education	49	15.96
Socio Economic Status		
Upper class (>5357)	0	0
Upper middle class(2652-5356)	7	2.28
Middle class(1570-2651)	92	29.97
Lower middle class(812-1569)	137	44.63
Lower class(<811)	71	23.13
Religion		
Hindu	253	82.41
Christian	54	17.59
Type of family		
Joint	255	83.06
Nuclear	52	16.94
Household size		
<5 members	49	28.34
5-10	171	55.70
>10	87	15.96

($\chi^2=16.35, df=4, p<0.01$)

Table 2: Time at Rooming-in of Infants

Time (hours)	Number	Percent
<6	240	78
6-12	15	5
12-24	9	3
>24	43	14
Total	307	100

Table 3: Time of Initiation of Breastfeeding

Time	Number	Percent
<1	65	21.17
1-6	122	39.74
6-12	18	5.86
12-24	21	6.84
>24	81	26.38
Total	307	100.00

Table 4: Duration of Breastfeeding

Duration (months)	Number	Percent
0-3	11	8.27
3-6	39	29.32
6-12	35	26.32
12-18	31	23.31
18-24	17	12.87
Total	133	100.00

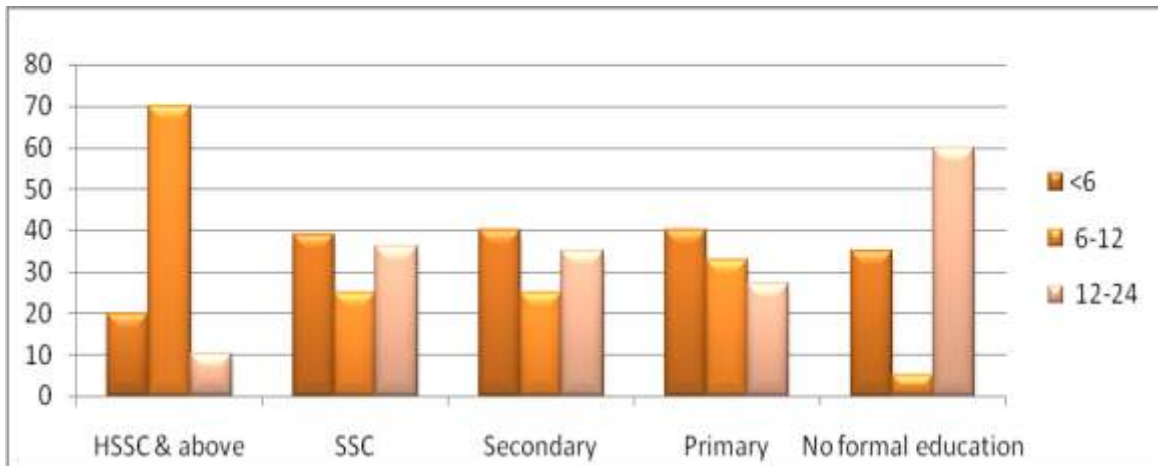


Fig.1: Educational Status of Mothers and Duration of Breastfeeding

A large number of infants were given cereal based complementary feeding in the form of “kanji”, soft cooked rice and porridge. Other common weaning foods included fruit juice (16%),

vegetable soup (16%), infant formula (16%), whole fruits, cow/buffalo milk, dal water and other liquids. (Fig. 2)

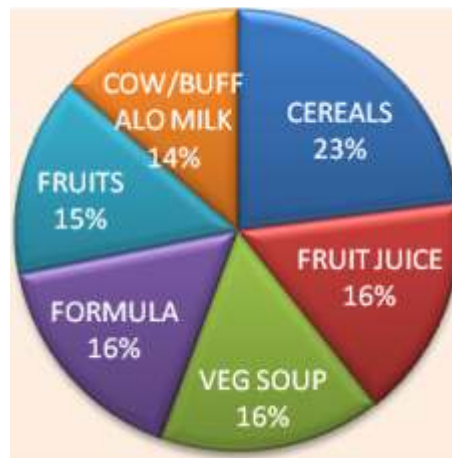


Fig.2: Type of Complementary Feeding

Most infants received complementary feeding by a feeding bottle (75%), while other utensils used were spoons (45%), bowls (38%) and even droppers (2%). 302 children (98.37%) of the study

children were immunized for age. The traditional child rearing practices identified among the rural mothers in our study are depicted in table 5.

Table 5: Traditional Child Rearing Practices among Rural Mothers

Practice	Number	Percent
Delivery at parents' house	175	57
Oil massage	300	97.72
Exposure to early morning sunlight	210	68.40
Instillation of oil in ears	158	51.46
Application of kajal to eyes	120	39.08
Giving bath to newborn on the first day of life	249	81.11
Use of amulets, talisman	300	97.72
Belief in hot & cold foods	192	62.54
Stopping feeds during childhood illness	47	15.31

Discussion:

Our study aimed at assessing the various child rearing practices prevalent among rural mothers in the study area of Goa. Breast milk should be initiated within 30 minutes of delivery. Delay in initiation leads to a delay in the development of oxytocin reflexes, which are very important for the contraction of the uterus and the breast milk reflex. Studies show that the sooner the breastfeeding begins more effective is the consolidation of the process, and therefore, a better impact on the after-birth period, which helps in the earlier initiation of the secretion of breast milk. Colostrum is rich in vitamins, minerals, protein and immunoglobulins that protect the child from infections [6].

About 46.25% of mothers fed colostrum to their child, which is a good practice. Similar observations were reported by Deshpande *et al* 2010 [7], and Mahmood 2012 [8] in their rural study. The most common reason stated by the rest of the 53.75% mothers for discarding colostrum

was that they thought colostrum was not good for the child and described as pus or dirty milk. About 25% of the respondents admitted that they gave pre-lacteal feeding to their child. Sugar water, tea, and animal milk were the commonly used pre-lacteal feeds. Honey and water was commonly used as a pre-lacteal feed in rural West Bengal as reported by Mandal *et al* 2007 [9].

Pre-lacteal feeds are given because it is believed that they act as laxatives or as a means of clearing the meconium. Unfortunately, the mothers are not aware that the pre-lacteal feeds could be a source of contamination. Honey, which is used as pre-lacteal food in infants, is now not recommended to be given below the age of one, because of the risk of infection by *Clostridium botulinum* [10].

According to Infant and Young Child Feeding (IYCF) 2006 guidelines [11], Government of India recommends that initiation of breastfeeding should begin immediately after birth; preferably within one hour. Practice of late initiation of

breastfeeding may be due to mother's illiteracy, low socioeconomic class, and majority of deliveries taking place at home.

Other reasons could be harmful customs & beliefs, less milk secretion, mother too tired to feed; sleeping baby. This reflects that the mothers were not motivated adequately for early initiation of breastfeeding. This study shows that delayed breastfeeding (>1hr) is still practiced in the rural areas of Goa. In our study, although the first hour feeding rates were less (21.17%) but almost three quarters of the babies (73.62%) were breastfed within the first 24hrs, which compares well with the findings of NFHS-3 (India) [12] and Takalkar *et al* [13]. In contrast to our findings, breastfeeding within 1hr & 24 hr was lower in study by Kumar *et al* [14] where breastfeeding within 1 hour was only 6.3% and 32.6% within 24 hours.

The World Health Organization (WHO) recommends Exclusive Breast Feeding (EBF) for the first six months of life [15]. Third National Family Health Survey (NFHS III) for India reports EBF rates of 46.3% at 5 months [16]. India is ranked at 25 out of 33 countries in parameters like early initiation of breastfeeding, EBF for the first six months, complementary feeding and bottle feeding rates. The concerning factor is that EBF rate for the first 6 months has remained stagnant at 46% since 1998 in India while bottle feeding has gone up from 13.4% in 1998 to 17.3% in 2005-2006 [17].

In the present study 37.59% of mothers had exclusively breast fed their infant up to six months. Studies from Hyderabad [18] and coastal areas of South India [19] have reported an EBF rate of 68.7% and 57.9%. However in studies conducted in Bangalore [20], Davangere [21] the

rates were lower namely 40% and 26.8% respectively.

Benefits of breastfeeding reduce as its exclusivity decreases. The reasons given by the mothers for not EBF were that breast milk was not enough to fulfil the water requirements of the baby. It was surprising to find such a low awareness among mothers regarding EBF even though the level of literacy among mothers as well as the quality of antenatal services in the study area is very high. The other reasons cited were that the mothers had to join work back after their maternity leave as well others such as infant illness. A community based study on breastfeeding practices in rural Uttarakhand showed EBF duration to be only around 5.9% and the reason being similar to our study that breastfeeding wouldn't suffice infant's water needs [22].

Our study revealed an association between literacy and longer duration of breastfeeding as also seen in work done by Rizwan *et al* in 2013 [23] and Kimani Murage *et al* 2011 [24].

The study demonstrated the age of weaning to be between 3-6 months in 191 infants (65.86%) and around 6-9 months in 70 infants (24.14%). Cereal based complementary feeds were the commonest. All over the world the first semi solid foods introduced are usually gruels composed of rice, wheat, oatmeal and mashed banana. A study in rural Bolivia showed that vegetable soups and potatoes were the most common weaning food [25].

There is a belief in certain communities that the mother and her baby are polluted from the birthing process which can be removed by bathing. This can make the newborn extremely vulnerable to hypothermia. Bathing should be avoided immediately after birth.

Preferably, normal baby should be given bath on second day during summer [26]. In our study 81.1% mothers gave bath to the baby on the first day itself among whom, 71.7% gave for hygienic reasons and 18.3% felt that giving bath reduces the heat in the baby's body and makes it sleep well. In a similar study in Chandigarh, 76.1% of the newborns were bathed on the first day of birth [27].

Majority (97.72%) of mothers in our study gave oil massage to their babies. The most commonly used oil were coconut oil (70%), commercial baby oil (21%) and ayurvedic oil (9%). Majority of the mothers practiced oil massage to give strength to the limbs. In a similar study in Chandigarh [27], 72.6% of the mothers in rural area and 56.6% mothers in urban area practiced massage to their babies. A study in Bangladesh reported that mothers used mustard oil to give body massage to the babies [28].

Application of unhygienic substances on the cord stump is a cause of tetanus Neonatorum and infant deaths. In our study we fortunately did not observe any such practice as was seen in studies from Chandigarh [27] and Bangladesh [28].

Applying Kajal to the eye or face is age old traditional belief considered to ward off evil, with the added cosmetic benefit of making the baby's eyes look bigger. However, its application to the eyes can cause conjunctivitis and dacrocystitis, and finger nail trauma to the eye can also occur [29]. 39.08% of the mothers in our study applied kajal to the baby's eye to ward off evil. Other child rearing practices observed in our study were tying black thread around the neck and waist of the baby and amulets to ward off evil (97.72%).

192 (62.54%) of the mothers had strong beliefs in "hot" and "cold" foods such as mangoes, meat,

eggs as they were believed to generate excessive body heat. A study of Mexican culture revealed strong beliefs in "hot" and "cold" foods giving rise to disease in the body of postnatal women [30].

The immunization coverage in our study area was excellent with 98.37% of the children immunized for age. Studies by Rizwan *et al* [23] and NHFS-3 [12] data also demonstrated that 87% and 51.8% children being immunized for age respectively with a significant association between literacy of the mother and vaccination status of the child.

Conclusion:

The findings of this study suggest that some of the childrearing practices followed are similar to the currently recommended practices such as stay at parents' house for first pregnancy, rooming in within first 6 hours of birth, universal practice of breastfeeding, early initiation and prolonged duration of breastfeeding, near universal immunization and the desire to educate girls as much as boys. Since their perceptions regarding the feeding practices directly influence the health of the child, certain false beliefs and myths such as discarding colostrum and stopping feeds during illness that are deeply rooted in all strata of community need to be replaced by sound and scientific messages.

Limitations of the study:

Though this study was conducted in a rural community, the per capita income of Goa being the third highest in the country, the results of this study may not be applicable to the entire rural Indian population.

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