

Breast Feeding and Weaning Practices in Thar Desert of Rajasthan, India

Madhu B. Singh* and J. Lakshminarayana

Desert Medicine Research Centre (ICMR), New Pali Road, Jodhpur 342 005, India

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Abstract: Breast Feeding and Weaning Practices have a major effect on short term and long term nutritional status of infants. An attempt was made to find out the pattern of infant feeding practices in Thar Desert of Rajasthan so as to know the community perceptions existing in this area. Data were collected from 434 young women belonging to rural house-holds of Thar Desert. Analysis revealed that exclusive breast feeding rate (<4 months of age) was 0.09 indicating that majority of the mothers were discarding colostrum and delivering some fluids to their children. Predominant breast feeding rate was 0.90. Timely complementary feeding rate (6-9 months of age-groups) was 0.23. In present study, mean duration of breast feeding was 26 months. Continued breast feeding rate (1 & 2 year) was 0.95 and 0.59, respectively, indicating a 'traditional face' according to WHO typology. In studied population, majority of the mothers were illiterate, socio-economically backward and very particular about their cultural beliefs and practices. The study revealed that it is the mother's perceptions and cultural beliefs, which determine the foods to be delivered to the child. So while planning community based educational intervention programs and to make them more effective and acceptable to the community, one has to keep these findings in mind regarding determination of the particular types of foods which are useful and culturally accepted. These programs should aim at correcting the local perceptions regarding feeding pattern by encouraging and improving the useful dietary pattern and discouraging the harmful ones.

Key words: Breast feeding, weaning, desert, practices, traditions.

Nutritional status of infants depends on the infant feeding and weaning practices existing in a particular community. These practices vary from place to place and country to country. It has a major effect on short term and long term nutritional status of infants. PEM is one of the major causes of death of children the age of five. Ignorance of mothers about correct breast feeding and weaning practices and inadequate feeding during childhood illnesses are some of the crucial factors for the prevention of child mortality from diseases in developing countries. WHO (1989) has given lot of stress on this problem and considered breast milk as the best food for a baby from birth to under 2 years of age. According to WHO, when the baby is 4-5 months old, the breast feed should be supplemented by the soft foods as growing baby needs other foods 2-3 times a day at this stage. Colostrum is very important for the new born as it contains extra proteins, fats and immune substances. All these crucial decisions have to be made by the mother. Western parts of this country in general and Rajasthan

State in particular, are found entangled with generations old beliefs and taboos pertaining to infant feeding and weaning practices (Singh *et al.*, 1997). In desert areas of Rajasthan deep routed traditions pass from generation to generations prevent their rational thinking, which directly or indirectly influences these practices. In India, Thar Desert of Rajasthan is one of the areas where lot of work has to be done in these directions where population has to bear the extremes of the calamities (such as low-rainfall, scorching sun-light, frequent droughts and extremes of temperature). In order to fill-up the major gap in our knowledge regarding infant feeding practices in Thar Desert an attempt has been made to find out the pattern of infant feeding practices so as to know the community perceptions existing in this area. This will help in formulating intervention programmes for this region by encouraging the gainful feeding practices and discouraging the harmful ones and inserting the culturally and locally accepted foods in the programmes during the management of paediatric illnesses so as to make it more effective in the society.

*E-mail: mbsgh@yahoo.com

Materials and Methods

The great Indian Desert or Thar, as commonly called, is spread over 2,85,680 km² area between 22°30' N and 32°50' N and from 68°05' E to 75°45' E. Within India it forms a part of the country's north-west arid zone in the states of Rajasthan (69%), Gujarat (21%) and Punjab and Haryana (10%). The desert is bordered by the irrigated plains of river Indus in the west, the Aravalli hill ranges in the east, the Rann of Kachchh in the south and the plains of Punjab and Haryana in the north and north-east. The greater part of desert has remained arid to hyper-arid all through. Delayed onset and early withdrawal of monsoon, is quite common. Summer temperature is high, reaching upto 50°C in May and June in some places. Dust storms were quite common with wind velocity above 50 km h⁻¹. During the past century, the arid region experienced 47-62% droughts of varying intensities. The desert dwellers have for centuries lived under harsh conditions with bare minimum of potable water, which was fetched from far off places and stored as a precious treasure. Milk and milk products were available in plenty, but not drinking water (Narain, 2001).

As a sampling unit we used the rural household in Thar Desert and the target population was young and elderly women having pre-school children. The population residing in rural areas of Thar Desert of Rajasthan is 13,962,000 settled in 12,359 villages according to Census, 1994. Thar Desert is being divided into three ecological zones i.e. Zone I - Marusthali region having following districts i.e. Jaisalmer, western Barmer, western Nagaur, Bikaner and western Churu. Zone II is Shekhawati region comprising of eastern Churu, Jhunjhunu, Sikar and central Nagaur districts. Zone III is Luni Basin comprising of eastern Jodhpur, Sirohi, Jalore, Pali and eastern Barmer. In estimating sample size, the WHO criteria for random sampling were used (Moser and Kelton, 1964; WHO, 1986) on the basis of prevalence of malnutrition as observed in earlier studies. On the basis of which the required sample size was 434 rural house-holds of Thar Desert. Here in this area most of the villages have small populations. Number of villages to be covered was 17 calculated on the assumption that 12 to 15% (all India estimate) of the total population belong to pre-school children. Six villages from

each Zone, i.e. I and III and five villages from Zone II, were covered (as population was less) on the basis of random sampling. From each village, equal number of households was randomly selected. All mothers with pre-school children were enrolled in the study.

Information on demography, socio-economic aspects, breast-feeding and weaning practices were collected from 26 young mothers by interview technique in pre-designed, pre-tested structured questionnaire schedules from young women and open-ended questionnaire schedules for elderly women. Information only for the last child borne was included in the study. The quantitative data which were adequately completed were 434 young women. Analysis was done manually. WHO (1991) recommendations regarding the breast feeding indicators and specific methodologies for their measurements have been used while analyzing the data. The age distribution of the children were <1 year 205, 1 to 2½ years 229 and 2½ to 5 years 180. Verbal consent was taken from each woman.

Results and Discussion

Results revealed that the majority of the women under survey were illiterate (94%), 48% of the house-holds' women belonged to the lower and upper-middle income groups. 98.6% of them were Hindu. 79% of women had nuclear families. Regarding the place of delivery 96.3% of the deliveries occurred at home. Only 3.7% deliveries occurred at hospital. 59.4% done by old-women and 24.4% by untrained birth attendants.

On analyzing the data according to the criteria mentioned in WHO 2001, exclusive breast feeding rate (<4 months of age) was observed to be 0.09 indicating that majority of the mothers were discarding colostrum and delivering some fluids to their children. 47.5% of the infants received jaggary with ghee, 34.2% ingested ajwain (Omum) with jaggary water, 6.3% ghutti (decoction of nutmeg, cardamom, dry grapes, black salt and skin of pomegranate) (Table 1). Predominant breast feeding rate was observed to be 0.90. These infants did not receive anything else, particularly non-human milk and food-based fluids. Timely complementary feeding rate (6-9 months of age-groups) was observed to be 0.23. Continued breast feeding rate (1 year)

Table 1. Indicators for assessing breast-feeding practices in the studied population

WHO Indicators for assessing breast-feeding practices			Rates
1. Exclusive breast feeding rate			
Proportion of infants less than 4 months of age who are exclusively breast fed	=	$\frac{\text{Infants <4 months (<120 days) of age who were exclusively breast-fed in the last 24 hours}}{\text{Infants <4 months (<120 days) age}}$	0.09
2. Predominant breast feeding rate			
Proportion of infants less than 4 months of age who are predominantly breast fed	=	$\frac{\text{Infants <4 months (<120 days) of age who were predominantly breast-fed in the last 24 hours}}{\text{Infants <4 months (<120 days) age}}$	0.90
<i>These infants did not receive anything else, particularly non-human milk and food based fluids</i>			
3. Timely complementary feeding rate			
Proportion of infants 6-9 months of age who are receiving breast milk and complementary foodss	=	$\frac{\text{Infants 6-9 months of age receiving breast milk and complementary foods in addition to breast milk in last 24 hours}}{\text{Live infants 6-9 months age}}$	0.23
4. Continued breast-feeding rate (1 year)			
Proportion of children 12-15 months of age who are being breast-fed	=	$\frac{\text{Children 12-15 months of age breast-fed in last 24 hours}}{\text{Live children 12-15 months of age}}$	0.95
5. Continued breast-feeding rate (2 year)			
Proportion of children 20-23 months of age who are being breast-feeding	=	$\frac{\text{Children 20-23 months of age breast-fed in last 24 hours}}{\text{Live children 20-23 months of age}}$	0.59
6. Ever breast rate			
Proportion of infants less than 12 months of age who were ever breast-fed	=	$\frac{\text{Live infants < 12 months of age who were ever breast-fed}}{\text{Live infants <12 months of age}}$	1.00
7. Timely first suckling rate			
Proportion of infants less than 12 months of age who first suckled within one hour of birth	=	$\frac{\text{Infants less than 12 months of age who first suckled within one hour of birth}}{\text{Infants less than 12 months of age}}$	0.00

was observed to be 0.95 and continued breast feeding rate (2 years) was 0.59. Ever breast fed rate was 1.0 and timely first suckling rate was observed to be zero.

In the present study, timely first suckling rate was observed to be zero and only 9% infants were exclusively breast fed during the first four months of life. Rest received the ritual fluids such as water along with jaggery, ghee and omum and traditional ghutti as mentioned above, thereby increasing the risk of gastrointestinal infection. They give these fluids as traditions as custom is prevalent in their society and passing from generation to generation. It is believed that these fluids will relieve pain and

make their infants healthy by improving their digestive capabilities as it has been reported earlier also (Kapil *et al.*, 1994; Sachdev *et al.*, 1992). According to WHO (1991) supplementary fluids such as water and tea given to young infants in addition to breast milk is associated with a significant increase in the risk of diarrhea disease, decreased milk intake and premature termination of breast feeding (Sachdev *et al.*, 1992; Martines *et al.*, 1989). Their deep rooted traditions regarding exclusive breast feeding is of serious concern.

In the present study, mean duration of breast feeding was 26 months. The earlier studies reported the mean duration of breast

feeding was 23 months (Ahmed *et al.*, 1984) and 22 months (Singh *et al.*, 1992) amongst Muslim communities. In the age group of 6-9 months only 23% of the infants received timely complementary feeding which is too low. According to WHO (1989), breast milk is the perfect food for the babies. It is nourishing and pure and it protects the baby from diseases. Breast milk alone is enough for a newborn for initial 4 months of life. After 4 months, breast milk alone is not sufficient enough for normal growth of the baby. Breast milk alone cannot supply extra calories and iron required by the growing baby. So that the other foods (i.e. supplementary feeding) need to be given in addition to the breast milk. This is the major cause of malnutrition. Continuous breast feeding rate (1 and 2 years) were observed to be very high i.e. 0.95 and 0.59, respectively, indicating a 'traditional face' according to WHO typology of infant feeding pattern where there is a high prevalence and duration of breast feeding (WHO, 2007). It has been observed earlier also by Singh *et al.* (1997) that the prolonged breast feeding and delayed supplementation adversely affect the health of mothers as well as their children and ultimately leads to high incidence of under-nutrition among both. Another review study in Japanese health system (Madoka *et al.*, 2012) revealed that the prevalence of exclusive breast feeding at one month postpartum between 1980 and 2005 has remained unchanged, fluctuating between 42% and 49%. At the same time, the breast feeding prevalence has gradually increased from about 80% to 95%. In 2010, the latest national breast feeding report showed that 'exclusive' and 'any' breast feeding rates have improved.

In the present study of Thar Desert, majority of the mothers were found to be illiterate, socio-economically backward and they were very particular about their cultural beliefs and practices. Deep rooted traditions are passing from generation to generation. These traditions vary from place to place and country to country. They are in the traditional phase of infant feeding pattern according to WHO typology. The study revealed that it is the mother's perceptions and cultural beliefs which determine the foods to be delivered to the child. So while planning community based educational intervention programmes and to

make them more effective and acceptable to the community, one has to keep these findings in mind regarding determination of the particular type of foods which are useful and culturally acceptable. These programmes should aim at correcting the local perceptions regarding feeding pattern by encouraging and improving the useful dietary pattern and discouraging the harmful ones.

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