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# Infant Feeding Practices of Paroja: A Tribal Community of Orissa

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**ABSTRACT** Child under-nutrition and infant mortality are among the serious sufferings of many backward communities of India. Proper infant feeding practices stand as a major public health intervention to reduce child under-nutrition and related consequences. The infant feeding practices of '*Paroja*', one of the major tribal communities of Koraput District, Orissa was studied in detail in the present investigation. The information was collected through interview of mothers with the help of pre-designed and pre-tested schedules and through personal observation. The study revealed an encouraging fact that all the respondents fed their babies with breast milk. At the same time, it was disheartening to note that breast milk was introduced only after 24 hours of birth and in more than 60% of cases, colostrum was discarded. Instead, varieties of pre lacteal foods were given prior to putting the child for breast feeding. Exclusive breast feeding was practiced for a long period of 1 year and supplementary foods were introduced only after the child attained about 1 year age. Mostly cereal preparations were given twice daily as supplementary foods. Such methods of infant feeding practices including late initiation of breast milk, inordinate delay in supplementary feeding etc. may be among the reasons of prevalence of malnutrition among the growing children of such communities. Proper counselling of the mothers on the infant feeding practices would help in a great way in reducing child under- nutrition.

## INTRODUCTION

Despite remarkable progress in the field of health and education, backward communities of India are the worst sufferers of high rate of child under- nutrition coupled with infant and neonatal mortality. There is an urgent need for a comprehensive strategy to tackle such situation. Exclusive breast feeding stands as a major public health intervention to reduce the child mortality particularly in the neonates and infants (Edmond et al. 2006).

Breast-feeding greatly improves the quality of life of a baby by providing nutritional, immunological and other beneficial substances (Ansari et al. 2007). Further, ensuring adequate and timely introduction of supplementary feeding along with continued breast feeding could benefit the nation in reducing an important nutritional disorder among child, 'stunting' (Gupta et al. 2010).

Although UNICEF has been promoting breast- feeding as a most important strategy for improving infant and child survival (Grant 1984), improper breast-feeding pattern–is still a big problem in South Asian countries including India, and tribal communities are probably the most vulnerable group (Ramachandran 2004). From time immemorial, many tribes living in isolated pockets in the mountainous areas have been practicing a distinctive way of feeding their babies due to their ignorance and underlying cultural beliefs and practices (Morose 1984). Therefore, base line information about infant feeding and weaning practices of such communities is of paramount importance in planning health services intervention in order to improve the health status of children.

Keeping in view the importance of infant feeding practices particularly in the backward regions, the present study was undertaken among the *Paroja*, one of the most backward communities of Koraput district, Orissa.

### Objectives of the Study

The present study was undertaken to investigate the infant feeding practices among *Paroja* community of Koraput district, Orissa. with certain specific objectives such as, to study breast feeding status of the community, use of colostrum, time of initiation of breast milk, use of pre lacteal feeds, period of exclusive breast feed-

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ing, reasons of stopping breast feeding, age of introduction of supplementary feeding, types of supplementary foods etc.

## MATERIAL AND METHODS

The study was purposefully conducted in the Koraput district of Orissa, since it is one of the most backward and tribal dominated districts of the country. *Paroja* community was also selected for the present study purposefully, as it is one of the dominant communities of the district. Multi- stage random sampling technique was adopted for the selection of samples. One hundred and fifty *Paroja* mothers were randomly selected from fifteen arbitrarily selected villages belonging to three community development blocks namely, Koraput, Jeypore and Dasmantpur, which are highly populated with the *Paroja* community. One essential criterion for selection of mothers was that the mother must be having at least one child below six years of age.

The data were collected during May-June 2010. The mothers were interviewed with the help of pre-designed and pre-tested schedules and also through personal observation. The respondents were interviewed in local language. The questions were framed to elicit information about breast- feeding status of the community, the time of introduction of breast milk, use of colostrum, pattern of feeding the baby (self demand / time demand), frequency of feeding the baby with breast milk, practice of feeding pre lacteal food ( types of pre lacteal feed used, frequency of feeding and method of feeding), age of exclusive breast feeding, method and reason for stopping breast milk, age of introduction of supplementary feeding, reason of introducing supplementary feeding and the foods used for supplementary feeding by the tribal mothers. The results were analysed with the help of appropriate statistical tools.

## RESULTS AND DISCUSSION

The pattern of breast feeding practices being followed by the respondents is shown in Table 1. Almost all the respondents in the sampling site were found to feed their babies with breast milk, which is a good practice and should be encouraged. Ninety- six percent of Indian population breast fed their baby (NFHS 2005-06). Singh and Singh (2008) while studying among the people of Melghat region observed that breast- feeding was practiced by 90% of respondents. The first milk of mother contains yellowish thick fluid called colostrum, which is a very useful substance containing vitamin A, high digestible protein and antibodies. More than sixty percent of the respondents were observed to discard colostrum in the present study. The various reasons stated for discarding colostrum were that it was not good for health, caused diarrhoea or indigestion. Similarly, the practice of discarding colostrum among the tribes of various parts of country was observed by Shinde and Kamble (2000), Das and Choudhury (2005) and Narahari et al. (2009). Contrary to this, introduction of colostrum to the infants of Koyadar tribes of Godavari district was observed by Naribabu et al. (2006).

**Table 1: Distribution of respondents according to breast feeding practice**

| *S. No.* | *Parameters* | | *Respondents No. (%)* | *Cumulative %* |
|---|---|---|---|---|
| 1 | *Breast Feeding Status* | a Given | 150 (100) | 100 |
| | | b Not given | - - | - |
| 2 | *Colostrum* | a Given | 59 (39.3) | 39.3 |
| | | b Not given | 91 (60.7) | 100.0 |
| 3 | *Initiation of Breast Milk* | a 1-2 hour | 12 (8.00) | 8.00 |
| | | b 6-8 hour | 25 (16.6) | 24.6 |
| | | c After one day | 80 (53.4) | 78.0 |
| | | d After two days | 33 (22.0) | 100 |
| 4 | *Reasons for Discarding Colostrum* | a Causes diarrhoea | 31 (34.1) | 34.1 |
| | | b Bad for health | 37 (40.6) | 74.7 |
| | | c Causes indigestion | 23 (25.3) | 100 |
| 5 | *Frequency of Feeding* | a 4-5 times | 39 (26.0) | 26 |
| | | b 6-7 times | 81 (54.0) | 80 |
| | | c 7-8 times | 30 (20.0) | 100 |
| 6 | *Schedule of Feeding* | a Time demand | - - | - |
| | | b Self demand | 150 (100) | 100 |

Edmond et al. (2006, 2007) found that 22.3% of neonatal deaths could be prevented when breast-feeding was initiated within an hour of birth. Contrary to this, only 25% of Indian population has been reported to start breast- feeding within an hour of birth (NFHS 2005-06). In the present study, only a few mothers (less than 10 %) breast -fed their babies within 1-2 hours of birth and more than fifty percent of the mothers introduced breast milk only after 24 hours of birth. More than 60% of mothers were found to discard colostrum. Again, more than fifty percent respondents fed their babies 6-7 times a

day and the rest fed either 4-5 or 7-8 times a day on self demand only (Table 1). Time of initiation of breast-feeding, frequency of feeding and its schedule varied from mothers to mothers and from community to community. Das and Choudhury (2005) observed that mothers initiated breast-feeding within six hours to three days of birth. Similarly, Laxmaih et al (2007) observed that their respondents initiated breast-feeding within 24 hour of delivery. Gupta et al. (2010) on the other hand, observed that 40 % of their respondents initiated breast-feeding within an hour of birth. They also followed self-demand schedule to feed their babies six to ten times a day. Shinde (2000) on the other hand observed that children were given breast milk only 2 to 5 times in a day.

A detailed account of pre lacteal feeding practice of the tribe has been given in Table 2. Use of pre lacteal feed is considered as harmful by pediatricians. Contrary to this, a variety of pre lacteal foods like plain water, sugar solution, honey and diluted milk were given to the infants prior to breast feeding. About sixty percent of respondents fed their babies with the help of mussel shell, a few (less than 10%) with cotton swab and about 30% respondents used spoon for feeding purpose. More than fifty percent of mothers fed their babies five to six times a day and rest either 3-4 times or 7-8 times a day. Feeding the baby with a variety of pre lacteal foods like sugar dissolved in water, castor oil, glucose water and honey has been reported by NFHS (2005-06), Laxmaih et al. (2007) and Narahari et al. (2009). Narahari et al. (2009) further reported that babies were fed with the help of cotton swab. However, Rao et al. (2005) observed that 73% of respondents were not using any pre lacteal food.

The duration of breast-feeding by the respondents has been presented in Table 3. More than 50% of respondents continued breast- feeding up to three years of age. A variety of reasons were stated by the mothers for stopping breast-feeding such as, cessation of milk secretion (> 47%), onset of subsequent pregnancy (18 %) and the return of the mother to wage earning (> 34%) and so on. Majority (that is, about 80 %) of mothers stopped breast- feeding gradually. Bakshi and Bhandari (1997) observed that children were breast- fed even after 3 years of age. Narahari et al. (2009) observed the practice of breast- feeding up to 2 years of age.

**Table 2: Distribution of respondents according to practice of feeding prelacteal food**

| *S. No.* | *Parameters* | *Respondents* | |
|---|---|---|---|
| | | *No. (%)* | *Cumulative (%)* |
| 1 | *Types of Food* | | |
| | a. Plain water | 28 (22.4) | 22.4 |
| | b. Sugar solution | 16 (12.8) | 35.2 |
| | c. Honey and water | 69 (55.2) | 94.4 |
| | d. Diluted cow milk | 12 (9.60) | 100.0 |
| | e. Others | - | |
| 2 | *Method of Feeding* | | |
| | a. With spoon | 39 (31.2) | 31.2 |
| | b. With shell | 79 (59.2) | 90.4 |
| | c. With cotton swab | 12 (9.6) | 100.0 |
| 3 | *Frequency of Feeding* | | |
| | a. 3-4 times | 36 (28.8) | 28.8 |
| | b. 5-6 times | 64 (55.2) | 84.0 |
| | c. 7-8 times | 20 (16.0) | 100.0 |

**Table 3: Distribution of respondents according to duration of breast-feeding**

| *S. No.* | *Parameters* | *Respondents* | |
|---|---|---|---|
| | | *No. (%)* | *Cumulative (%)* |
| 1 | *Duration of Breast Feeding* | | |
| | a. Upto 2year | 39 (26.0) | 26.0 |
| | b. Upto 3 year | 86 (57.4) | 83.4 |
| | c. Upto 4 year | 25 (16.6) | 100.0 |
| 2 | *Reasons for Stopping Breast Feeding* | | |
| | a. Cessation of secretion | 71 (47.3) | 47.3 |
| | b. Onset of next pregnancy | 27 (18.0) | 65.3 |
| | c. Return of the mother to work | 52 (34.7) | 100.0 |
| 3 | *Method of Stopping Breast Feeding* | | |
| | a. Abrupt | 31 (20.6) | 20.6 |
| | b. Gradual | 119 (79.4) | 100.0 |

Table 4 depicts the age of introduction of supplementary feeding and the pattern of feeding the baby with supplementary foods. In 2001, World Health Assembly resolved that exclusive breast- feeding up to six months is appropriate for normal growth, free from gastro- intestinal infection and prolonged post partum amenorrhea (WHO 2001). Exclusive breast- feeding for the 1st six months and continued breast- feeding for 2nd six months has been considered highly effective in preventing child death (Bhutta et al. 2008). In the present study, late weaning practice was observed. Children were weaned after one year of age in more than 60% of cases. Only 11 % of mothers introduced supplementary feeding at the right age, that is, at six month of age. This is because of the fact that only 7%

of the respondents were aware of the importance of supplementary feeding that it is good for the health of the growing child. Majority of mothers started supplementary feeding for a variety of reasons such as, child's likeness, insufficient milk secretion, child old enough to take solid food etc. Bamje and Thimmayamma (2000) reported introduction of supplementary food at 6-8 months of age. Gupta et al. (2010) and Singh and Singh (2008) reported introduction of supplementary food at 6-9 months of age. Laxmaih et al. (2007) and Narahari et al. (2009) reported introduction of supplementary food at 7-12 months of age.

**Table 4: Distribution of respondents according to supplementary feeding practice**

| *S. No.* | *Parameters* | *Respondents* | |
|---|---|---|---|
| | | *No. (%)* | *Cumulative (%)* |
| 1 | *Age of Introduction of Supplementary Food* | | |
| | a. After 6 month | 17 (11.4) | 11.4 |
| | b. After 7 month | 37 (24.6) | 36.0 |
| | c. After 1 year | 96 (64.0) | 100.0 |
| 2 | *Reasons for Supplementary Feeding* | | |
| | a. Liking of the child | 87 (58.0) | 58.0 |
| | b. For better health | 10 (6.70) | 64.7 |
| | c. Insufficient milk secretion | 33 (22.0) | 86.7 |
| | d. Old enough to take solid food | 8 (5.30) | 92.0 |
| | e. No specific reason | 12 (8.00) | 100.0 |
| 3 | *Foods Used for Supplementation* | | |
| | a. Cereal preparation | 98 (65.3) | 65.3 |
| | b. Combination of cereal and pulse preparation | 27 (18.0) | 83.3 |
| | c. Cereal, mashed potato, vegetables, greens | 18 (12.0) | 95.3 |
| | d. Snacks | 7 (4.70) | 100.0 |
| 4 | *Frequency of Consumption of Supplementary Food* | | |
| | a. Once a day | 35 (23.4) | 23.4 |
| | b. Twice a day | 89 (59.3) | 82.7 |
| | c. Thrice a day | 26 (17.3) | 100.0 |

In spite of the fact that the respondents were aware of a variety of supplementary foods, most of them (that is, > 68%) were observed to feed their babies with only cereal preparations. About 18% of the respondents fed their babies with a combination of cereal and pulse preparation. Few respondents (about 12%) used tender vegetables, greens and mashed potato with the cereal base as supplementary foods. In a still fewer percentage of the respondents (that is, <5%) provided their child with snacks like biscuit and bread. About 60% of the respondents gave supplementary feeding twice a day. Laxmaih et al. (2007) and Narahari et al. (2009) also reported cereal being used as supplementary foods in their respective study area. Singh and Singh (2008), however, observed a combination of cereal and pulse preparation being used as supplementary foods.

## CONCLUSION

It can be concluded from the study that the tribal mothers belonging to *Paroja* community of Koraput district are following a very good practice of feeding their baby with breast milk. However, the disheartening practice of discarding colostrum, late initiation of breast milk, providing pre lacteal food, continuing exclusive breast feeding for longer duration and inordinate delay in providing supplementary food etc. are matters of concern. Such faulty methods of infant feeding practices indicate illiteracy, ignorance and underlying superstitions of the population. The practice of feeding only cereal preparation by a majority of mothers in the present study may be attributed to their economic conditions or the prevailing customary practices. Inordinate delay in introducing supplementary feeding after one year of age must have negative consequences, as the mother's milk is not sufficient to meet the nutritional requirement of the fast growing infant after 6 months.

Such improper method of child rearing may be among the reasons of prevalence of malnutrition among the growing children of such communities. Proper counselling of the mothers on the infant feeding practices would help in a great way in reducing the serious menace like child under- nutrition, infant mortality etc. Besides, demonstration on preparation of inexpensive supplementary foods will help a lot in improving the health and nutritional status of a young growing child.

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