Original Research Article

A cross sectional survey to analyze infant and young child feeding practices among mothers of Chottanikkara Panchayat

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ABSTRACT

Background: This study was carried out to assess the practices of young mothers related to Infant and Young Child Feeding Practices (IYCF) in Chottanikkara Grama Panchayat.

Methods: All mothers of infants and children up to 5 years in Chottanikkara Grama Panchayat who were registered under the Integrated Child Development Services (ICDS) program for services were interviewed based on self-prepared questionnaire based on National guidelines for IYCF by Indian Academy of Pediatrics (IAP).

Results: 277 ladies were interviewed. Of this 50% of ladies had undergone caesarean delivery. 60.7% of children had received prelacteals. Only less than 30% of infants had been given breast milk within one hour after delivery. 50% of the ladies exclusively breast fed their babies only below a period of four months. Around 50% of ladies started complementary feeding of child on 6th month of age, whereas around 30% started complementary feeding before 6 months and 20% started complementary feeding only after 6 months of age. 78.6% of ladies continued breast feeding till 2 years after delivery.

Conclusions: The studied population was a small population who had used services of the anganwadi and ASHA workers. But there are many who are not properly utilizing these services. In both rural and urban areas more efforts are needed to encourage exclusive breast feeding, to avoid premature complementation and, in the urban areas to protect extended breast feeding.

Keywords: Prelacteals, Exclusive breast feeding, Complementary feeding, Infant and young child feeding practices, Integrated child development services

INTRODUCTION

The first 2 years of life is the most crucial period in an individual’s life. There is a critical window of opportunity to have healthy living, starting from woman’s pregnancy to her child’s second birthday – the first 1000 days of life. Nutrition during this period is very crucial as it has greatest impact on saving child lives and promoting physical and cognitive development. This period is crucial for addressing undernutrition that arises as a result of a combination of low birth weight, sub-optimum feeding and infections such as diarrhea. Early undernutrition predisposes to irreversible effects on growth and development and the birth weight of subsequent off spring.1 After the age of two, the window closes and the opportunity for the child is lost. This ‘Window of Opportunity’ to prevent under nutrition can be best utilized by practicing optimum Infant and Young Child Feeding Practices (IYCF).2

A resolution on infant and young child nutrition (WHA 55.25) was adopted by the 55th World Health Assembly
in May 2002. The resolution endorsed a global strategy on infant and young child feeding recognizing that inappropriate feeding practices and their consequences were major obstacles to sustainable socio-economic development and poverty reduction. It reinstated that Governments will be unsuccessful in their efforts to accelerate economic development in any significant long term sense until optimal child growth and development, specially through appropriate feeding practices, were ensured.

Indian Academy of Pediatrics (IAP) formulated the National Guidelines for IYCF in 2004 and revised the same in 2010. Major guidelines for IYCF practices are initiation of breast feeding within half to one hour of delivery, exclusive breast feeding for the first six months of life, timely starting of complementary feeding at six months and continuing of breast feeding atleast for two years of life. Periodical IYCF counseling along with antenatal counseling is necessary and should be followed for the first two years of life which will help in ensuring the optimal feeding practices being followed.

There has been major improvement in the IYCF practices by the joint efforts of governments and private and public sector health caterers. National guidelines on infant and young child feeding had been made into an integral part of nation-wide integrated child development services (ICDS) and the Reproductive and Child Health (RCH) Program. ICDS Program is the major community program for catering various nutrition health programs in community level in India. Trained anganwadi workers and ASHA workers have helped much in producing a major behavior change favoring IYCF practices. ICDS workers give doorstep periodical counseling to stake holders, both pregnant as well as lactating mothers. Kerala being a state with high literacy rate and better health indices, the women of Kerala are supposed to follow the IYCF practices very clearly. When compared to Indian scenario which has an overall IYCF practices of 55.2% of exclusive breast feeding rates in and 33.5% of complementary feeding rate at six months in 2002 according to national guidelines for IYCF, Kerala had an exclusive breast feeding rate of 56.2%.

Studies have shown that despite best efforts we have not been able to reduce the maternal mortality, infant mortality and under-nutrition appreciably. Underutilization of antenatal health care services by pregnant women, lack of knowledge among frontline health workers and lack of counseling on breastfeeding from any frontline health workers are the major barriers to early initiation and exclusive breast feeding. Late introduction of complementary foods coupled with lower frequency, lack of food diversity, inappropriate consistency and quantity along with lack of knowledge and misconceptions among elderly like mothers - in - law were found to be the common bottlenecks in optimal complimentary feeding (Population Council, 2010). Also, significant gaps in the knowledge and practices of mothers regarding optimal IYCF practices have been reported. Though ICDS is supposed to have a full coverage of the population, the usage of services is found to be minimal. This may be due to the fact that Kerala is having a more working women population, and they depend more on the private sector for the services. IYCF practices too cannot be fully done as the employment is more in the private sector where the maternity leaves are shorter and exclusive breast feeding for six months become difficult without proper knowledge and family support.

Healthy citizen increases the productivity of the nation. Breast feeding and weaning practices are crucial for optimal growth and development during infancy. Continuous vigilance over infant feeding practices in community is necessary for timely interventions to ensure optimal growth and development. Although effort has been made since very long, infant feeding practices are far from satisfactory in our country. Exclusive breast feeding has to be protected and promoted in our community due to its beneficial effect on growth and development of infants. It is also essential to promote appropriate weaning practice, which is also equally important for prevention of malnutrition. Throughout the world, in developed and developing countries alike, inappropriate feeding of infants leading to their poor nutrition is a significant problem affecting socioeconomic progress in general.

Chottanikkara Panchayat is a small temple village situated in Ernakulam district with a population of ----. There are 22 anganwadi centres under ICDS program. This cross sectional survey was conducted to assess the practices of young mothers related to IYCF in Chottanikkara Grama Panchayat and to understand the difficulties related to IYCF practices.

**METHODS**

**Study design**

Descriptive cross sectional method

**Study place and period**

This study was conducted in 22 anganwadi centres of Chottanikkara Grama Panchayat during a period of 3 months. Selection criteria of the subjects: All mothers of infants and children upto5 years in Chottanikkara Grama Panchayat who were registered under the ICDS program for services

**Procedure**

Group and individual interview based on self-prepared questionnaire based on national guidelines for IYCF by IAP.
Tools

Schedule consisted of questions on:

- Type of delivery whether caesarian or normal
- Any prelacteals used, and if used what all
- At what time after delivery initiation of breast feeding was done- initiation of breast feeding within one hour after delivery was considered normal
- Period of exclusive breast feeding- whether below 4 months, 4-6 months, 6 months, above 6 months
- Whether any substitution feed used, and if any what all and the reasons for giving and what all things are given
- Age of starting complementary feeding and whether this was a balanced diet
- Age till which breast feeding is continued

Statistical analysis

Data were entered in Microsoft Excel and analysed.

RESULTS

Data from 277 ladies were collected through interview. Percentage of ladies who had undergone normal delivery and caesarian delivery is given in table1.

<table>
<thead>
<tr>
<th>Type of delivery</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal delivery</td>
<td>50</td>
</tr>
<tr>
<td>Caesarian delivery</td>
<td>50</td>
</tr>
</tbody>
</table>

50% of ladies had undergone caesarian delivery

Figure 1: Percentage of children who had received prelacteals.

61% of children had received prelacteals.

Data of children who had received prelacteals is given in Figure 1.

Data of initiation of breast feeding after delivery is given in Figure 2.

Figure 2: Percentage of children who have received breast milk within one hour.

30% of infants had been given breast milk within one hour after delivery.

Figure 3: Period of exclusive breast feeding.

50% of the ladies exclusively breast fed their babies only below a period of four months.

Data showing period of exclusive breast feeding is given in Figure 3.

Around 76% of mothers had given substitution milk, whereas the rest of mothers did not use any substitution milk. Data of ladies started complementary feeding of child according to the child’s month of age is given in Table 2.

Table 2: Age of starting complementary feeding.

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage of children (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 6th month of age</td>
<td>30</td>
</tr>
<tr>
<td>6th month of age</td>
<td>50</td>
</tr>
<tr>
<td>After 6th month of age</td>
<td>20</td>
</tr>
</tbody>
</table>

50% of ladies started complementary feeding of child on 6th month of age

Data of age till which breast feeding is continued is given in Figure 4.
50% of ladies had caesarian delivery. 60% of infants received prelacteals. In most of the cases gold dipped in honey was used to touch the tongue as part of rituals. Many newborns were given infant formulae due to the delay in initiation of breast feeding. Mothers who had undergone Caesarian delivery used prelacteals more because of delay in initiation of breast milk. This is similar to studies reported by Akuse and Al-Jassir who have mentioned about the usage of prelacteals for new born. The mothers were not aware of any complications with prelacteals though no complications were reported in the present study. Studies have shown that practice of giving honey had a risk of contracting botulism though it has been followed on cultural and religious basis. Also the minimal discharge of milk in the first two days made the mothers think that milk was insufficient for their infant and prompted them to start with prelacteals and substitution milk. Studies have also shown practice of giving any prelacteals have a risk of decreasing supply of breast milk.

The survey had shown that only 30% of women could breast feed within the first hour after delivery. This is similar to the India's National Family Health Survey 2006 which indicated that only 24.5% of newborns were breast fed within 1 hour of birth as recommended by India’s Ministry of Health and the WHO. Current evidence indicates that skin-to-skin contact between mother and infant shortly after birth helps to initiate early breast feeding and increase the likelihood of exclusive breast feeding for four to six months of life as well as the overall duration of breast feeding. The women had reasoned the delay in initiation due to caesarian delivery, lack of knowledge in part of mother and caregivers, lack of technical support. Though most of the women had heard about the necessity of early initiation of breast feeding, they never had thought about the importance of practicing it for their own children.

Prospective cohort studies in India have shown that infants born by caesarean section were almost four times less likely to initiate breast feeding within 1 hour of birth than infants born by vaginal delivery. However, global evidence suggests that, in the presence of adequate support, a caesarean section is not necessarily a barrier to timely initiation of breast feeding. Most of the women had counseling sessions from the ICDS workers. Studies have shown that community-based group counseling and home-based individual counseling focusing on infant feeding decision-making and preparation for breast feeding increased the likelihood of early initiation of breast feeding by 65% and 74%, respectively. Right after birth the sucking reflex is most active and babies are more alert during the first 60 minutes and if babies are put to mother's breast within this period, chance of exclusive breastfeeding increase. Gupta and others reported that 40% of their respondents initiated breast feeding within one hour of birth. Another study had shown that 20% women initiated breastfeeding newborns within 1 hour, while 30% women initiated breastfeeding their baby after 24 hours. A cross-sectional descriptive study to estimate the prevalence of early initiation breast feeding in Tamil Nadu, southern India reveal 97.5% of the study subjects had been initiated breast feeding within one hour of birth, which was higher than present study. In a study by Patel and others, it was found that hospital-delivered infants in India timely initiation of breastfeeding rates was 36.4%.

The present study had shown that 50% of ladies exclusively breast fed their infants for only less than 4 months of age and about 4% exclusively breast fed their infants beyond a period of 6 months due to over enthusiasm to provide their infants better health. It is known that breast feeding exclusively beyond 6 months of age can lead to deficiencies in the infant due to increase in needs of growing infants whose demands exceeds that which is provided by breast milk. About 45% of ladies exclusively breast fed their infants between 4-6 months of age of their infants. Most of the working ladies who worked in the private sector could not depend on exclusive breast feeding alone for 6 months of age.

Around 76% of ladies had given substitution milk to babies because they felt their milk insufficient and made the babies cry. Some ladies had knowledge about improving feeding by proper attachment of baby to breast and proper positioning but could not find technical support to help them with improving their lactation. They also had to substitute because of their job restrictions. Most of them used infant formulae and very few used diluted cow’s milk. They also used substitutes while travelling because they felt difficulty in feeding in public places. Usually breast-milk substitutes which are given in bottles carry risk of infection and can be fatal for infants. There is also a chance of creating nipple confusion in babies thus decreasing the chance of exclusive breast feeding. Helping them with overcoming difficulties related to breast feeding through proper periodical counseling starting with antenatal period and continuing through till atleast the first few months of...
delivery can help them in avoiding substitution milk. Also knowledge about expressing breast milk and hazards of substitution milk can help them in avoiding substitution milk. Here the role of family and society is very important.

Half of the study population had started complementary feeding by 6 months itself. This was also based on rituals in certain communities. If they were unable to perform rituals at this time the starting of complementary feeding too was delayed. Some of the mothers who started before 6 months had done it because they felt their milk insufficient. Some of the mothers thought it necessary because of their working status. Most of the mothers had started complementary feeding with arrow root biscuits and rusks moistened in milk, ignorant about the fact that they were not nutritious enough for growing infant’s body demands. Most of the mothers gave rice after churning in a mixer, diluted with either milk or water or porridge. Most of them did not have the knowledge that optimum complementary feeding was a mixed diet with cereals, pulses, vegetables and non-vegetarian foods. Few of mothers gave rice only with salt and oil. They thought that their little one could not swallow these things properly. Most of them fed their babies in a much diluted consistency. The findings were consistent with the findings of Tan who identified that the area of residence, occupation, parity, and husbands’ supports all were associated with proper feeding practices. They also felt necessary to start with early complementary feed due to the fact that constant frustrations of infants made them feel that they didn’t have enough milk. Care givers too insisted on giving something good enough for filling their baby’s stomach. Only very few mothers had knowledge on optimal complementary feeding. During the period of complementary feeding, children are at high risk of undernutrition. Complementary foods are often of inadequate nutritional quality, or they are given too early or too late, in too small amounts, or not frequently enough.

The good fact was that higher number of mothers had fed their babies up to and beyond two years. Only 10% of mothers stopped breast feeding before one year of the baby. The findings are consistent with an urban setting. Premature cessation or low frequency of breastfeeding also contributes to insufficient nutrient and energy intake in infants beyond 6 months of age.

**CONCLUSION**

Exclusive breastfeeding for 6 months confers several benefits to the infant and the mother. In both rural and urban areas more efforts are needed to encourage exclusive breast feeding, to avoid premature complementation and, in the urban areas to protect extended breast feeding. The studied population was a small population who had used services of the anganwadi and ASHA workers. But there are many who are not properly utilizing these services. Mothers should be counseled on proper IYCF practices right from the beginning of conception of an offspring and they should be supported right through the time of pregnancy and followed atleast up to 6 months, thus helping them to do the optimal feeding practices for an infant as it is the infant’s right to have proper upbringing. Thus promoting optimal IYCF practices become an important and combined responsibility of the nation.

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**Conflict of interest:** None declared

**Ethical approval:** The study was approved by the Institutional Ethics Committee

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3. National Guidelines on Infant and young Child Feeding. Ministry of Human Resources Development, Department of women and Child (Food and Nutrition board), Govt of India.

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