



Infant and Young Child Feeding Practices among the Lactating Mothers: A Cross-Sectional Study in a Village of Chandigarh

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Abstract:

- 1. Introduction:** Early and exclusive breastfeeding is now recognized as one of the most effective interventions for child survival particularly to address morbidity and mortality related to three major conditions i.e. neonatal infections, diarrhea and pneumonia.
- 2. Aim:** To study the infant and young child feeding practices among the lactating mothers of village Khuda Lahora of Chandigarh.
- 3. Objectives:**
 - a. To assess the prevailing breast feeding practices adopted by the lactating mothers of village Khuda Lahora.
 - b. To identify the barriers which lead to inappropriate breast feeding practices.
 - c. To examine the complementary feeding given to the infants and young children of the village.
- 4. Methodology:** The study was conducted in the one of the randomly selected village Khuda Lahora of the “city beautiful”- Chandigarh. The total population of the village is 3,476. There are 2,011 males and 1,456 females. There were 191 mothers who were registered in the sub centre of the village but only 167 participated in the study.
- 5. Results:** The rate of exclusive breast feeding among the lactating mothers is found to be 22.7% and 46% of the mothers have some prior knowledge of breastfeeding. It was found that 71% of the respondents started complementary feeding at the age of 4-5 months. It is seen that 29% of the respondents gave diluted milk.

Keywords: *breastfeeding, infant, lactating mothers*

I. INTRODUCTION

“Breast feeding was the best, is the best and will remain the best” as far as infant feeding is concerned. Breast feeding has been a part of our culture since ancient times. It is a rich traditional practice in Indian society. Many social, moral, and mythological factors are attached to the practice of breast feeding. The Indian mind has recognized breast milk as the best food for the child since antiquity. But in modern times, till recently the practice of breast feeding has been declining not in Indian society but all over the world. This has resulted in activities for increasing awareness and promotion of breast feeding. UNICEF and WHO launched Baby Friendly Hospital Initiative in 1992 as a part of global effort to protect promote and support breast feeding. Breastfeeding is one of the most effective ways to ensure child health and survival. Optimal breastfeeding together with complementary feeding help prevent malnutrition and can save about a million child lives. Globally less than 40% of infants fewer than six months of age are exclusively breastfed. Adequate breastfeeding support for mothers and families could save many young lives. (Mamtarani, 2012)



To formulate new guidelines, the IYCF chapter of Indian Academy of Pediatrics organized a National Consultative Meet on the 20th anniversary of the signing of the Convention on the Rights of the Child. Various partners from WHO, UNICEF, USAIDS, Ministry of Child Welfare Department and Academicians from various states of India met and drafted these guidelines.

Early Initiation of Breastfeeding means breastfeeding all normal newborns as early as possible after birth, ideally within first hour. Colostrum, the milk secreted in the first 2-3 days, must not be discarded but should be fed to newborn as it contains high concentration of protective immunoglobulins and cells. No pre-lacteal fluid should be given to the newborn. Exclusive breastfeeding for the first 6 months means that an infant receives only breast milk from his or her mother or a wet nurse, or expressed breast milk, and no other liquids or solids, not even water.

An international code to regulate the marketing of breast-milk substitutes was adopted in 1981. It include all formula labels and information to state the benefits of breastfeeding and the health risks of substitutes, no promotion of breast-milk substitutes, no free samples of substitutes to be given to pregnant women, mothers or their families, no distribution of free or subsidized substitutes to health workers or facilities. The baby who is artificially fed receives no breast milk at all. Bottle-feeding means the child has received liquid or semi-solid food from a bottle with a nipple/teat. This term applies irrespective of the nature of the liquid or semi-liquid. Supplementary feeds are feeds given to a baby under 6 months old to supplement his intake of Breast milk, where this is insufficient.

Though many efforts are being done to promote the appropriate breastfeeding and complementary feeding practices in infants and young children yet the results are not very much satisfactory. This study was conducted to know the infant and young child feeding practices and the factors which lead act as hindrances in following proper feeding practices. The participants in the study are the mothers of village Khuda Lahora of Chandigarh. The participants included are those who are registered at the sub centre of the village and who are having babies of 0-2 years. These participants are supposed to have been advised about the correct methods of feeding during their antenatal visits.

II. AIM

To study the infant and young child feeding practices among the lactating mothers of village Khuda Lahora of Chandigarh.

III. OBJECTIVES

1. To assess the prevailing breast feeding practices adopted by the lactating mothers of village Khuda Lahora.
2. To identify the barriers which lead to inappropriate breast feeding practices.
3. To examine the complementary feeding given to the infants and young children of the village.

IV. METHODOLOGY

Study area: The study was conducted in the one of the randomly selected village Khuda Lahora of the “city beautiful”- Chandigarh. It is located at a distance of 2 km from Post Graduate Institute of Medical Education and Research (PGIMER). It has total area of 776 acre. The total population of the village is 3,476. There are 2,011 males and 1,456 females. There are 13 villages in U.T. Chandigarh, which are located within a radius of 8 K.M. from Chandigarh city and have a population of 50,135. The village Khuda Lahora is selected randomly out of the 9 village which have sub centres.

Study population: Mothers of infants and children of 0-2 years who were registered in the sub centre.

Study design: non random judgmental sampling

Sampling size: There were 191 mothers who were registered in the sub centre of the village but only 167 participated in the study. Rest of the women either could not fulfilled the inclusion criteria or were available at the time of data collection. Study period is from January 2013 to April 2013.

Inclusion criteria:

- A) All the lactating mothers who are staying there from time period of less than 2 years
- B. All the lactating mothers who have children of age 0-2 years

Exclusion criteria:

- A) All the lactating mothers who are staying there from time period of less than 2 years
- B. Visitors

Data collection tool: the data collection tool was a Semi-structured, interview schedule which consisted of following parts i.e. demographic profile, history of breastfeeding, complementary feeding

Pilot study: A pilot study was done in a randomly selected village of Chandigarh and the results of the pilot study are not included in this study

Data validation and data analysis: Data validation was conducted for all the data collected. This consist of cross-checking and matching all the data from hard copies into soft copies

Ethical consent: Informed consent has been taken from the respondents. All the possible information regarding the study was given and the participants were assured that all the information provided by them will be kept confidential.



V. RESULTS

After analyzing the data collected from 167 respondents who were registered, and were available at the time of study.

The age of the respondents is divided into four groups i.e. 15-20 years, 21-25 years, 25-30 years, and 31-35 years. Similarly at the time of delivery 55% of the respondents fall into the age group of 21-25 followed by 34% who fall in the age group of 15-20 years. The present mean age is 23 years and 21 years at the time of delivery.

The respondents who are educated up to the level of intermediate or have done any diploma course are 46% followed by 29% who are educated up to the level of high school, 8% and 7% are educated up to the level of middle and primary respectively. About 4% of the respondents are either graduates or post graduates. Only 4% of the respondents are illiterate. It shows that the 42% of the respondents of the study belongs to the nuclear families followed by 35% of the extended families and 23% of the joint families.

The number of children between 7-12 months are maximum (68%) followed by 41% of children who fall in the age group of 0-6 months, 18% who belongs to the age group of 13-18 months and 8% who fall into the age group of 19-24 months.

Approximately 46% of the respondents replied that they were provided information regarding breastfeeding during antenatal checkups. However 16% gave a negative response. Out of the total 37% of the lactating mothers don't remember whether they were provided any information. 42% of respondents acquired information regarding breastfeeding from doctors and nurses who delivered their babies while 32% said that ANM was the source of information followed by 15% who were informed by either by their elders or the family members.

There were three type of birth attendants the doctors, the nurses and the dais out of which the maximum were doctors(77%) followed by nurses(14%) and the dai who attended the deliveries of the respondents. 97% of the respondents tried breast feeding their babies after their delivery. The remaining 3% could not express their breast milk.

Out of the total there were 48% of the respondents who initiated breastfeeding after 2-3 hours of their delivery, followed by 22% who initiated breast feeding within one hour of their delivery, 11% who started it within 4-5 hours of delivery, 8% started it within 7-9 hours and 2% started it after one day. There were 7% of the respondents who don't remember the exact duration of the initiation of breast feeding by them.

Approximately 70% of the lactating mothers intended to breastfeed their baby for 24 months and 14% would continue it even after two years. There are 9% of the mothers who would like to continue breastfeeding only up to 18 months followed by 5% of those who would continue it for 12 months only. There is not even a single mother who would not discontinue it before six months. Out of 167 respondents 131 were those who did not exclusively breastfeed their children. Out of those 131 respondents 55% of the respondents gave different type of Pre-lectal feeds to their children while 45% were those who did not follow any such practice.

Various type of pre-lectal foods includes animal milk. Honey, sweet water, plain water and jaggery, among the above mentioned Pre-lectal foods the most common is sweet water(20%) followed by honey(16%), animal milk(11%) and jiggery and plain water age given 3% and 2% respectively Figure 16: Colostrum given to the child or not

Complementary feeding practices: 71% of the respondents started giving complementary feeding to their children at an age of 5-6 months followed by 23% who started the complementary feeding at 3-4 months and 3% who started it at the age of 2-3 months. 29% of the respondents gave diluted milk, 16% dal water, 13% gave infant milk formulas, followed by mashed fruits 12% and mashed chapatti is given by 6%. thus the type of complementary foods such as infant milk formulas are given by maximum no. of respondents. Almost half (51%) of the respondents believe in introducing complementary foods before 6 months because they think baby will remain hungry, 23% had introduced early complementary feeding because of the insufficient breast milk production. The 15% and 11% practiced it on their elder's advice and consider them healthier respectively. 40% of the respondents are those said that they will start giving them infant milk formulas before 6 months if provided free of cost to them. It is seen that class III followed by class II have the maximum no. of respondents who follow this practice. 51 mothers are literate up to intermediate level and this group is having the maximum number of respondents who breastfeed exclusively.

There are nuclear families which are maximum in number however the no of respondents who exclusively breastfed do not vary much. It is seen that 225 of the lactating mothers exclusively breastfeed their children, 55% gave Pre-lectal feed, 71% discarded colostrum and 71% initiated complementary feeding before six months.

VI. DISCUSSION

Mother is the most important person in a baby's life for both its physical as well as its psychosocial care and growth. The mother infant relationship is the most vital relationship for the child. From the very first moments of life, a baby begins interacting with its mother. Thus, mother's health, her education, her beliefs & attitude regarding child rearing are plays a very important role



before and after the birth of a child. However improper breast and complementary feeding practices adopted by the mothers can produce harmful effects on the health of their children.

The present study was done to know the kind of feeding practices followed by the mothers of infants and young children. Out of all 13 the villages present in the outskirts of Chandigarh 9 villages have functioning sub centers and Khuda Lahora was randomly selected by lottery method. Secondary data was used to collect information about the mothers registered from past 2 years i.e. April 2011- March 2013. According to the record all the selected mothers have received both antenatal as well as prenatal checkups. A semi-structured schedule was used to collect information about the prevailing breast feeding and complementary feeding practices. 167 mothers were interviewed and the results obtained are discussed below.

Our study shows that most of the respondents (65%) are Hindu followers, 30% are follows Sikhism, 2% are Muslims the remaining 1% belongs to other religion. The mean age of the respondents at the time of delivery is 21 years and minimum and maximum age at the time of delivery is 17 years and 32 years respectively. The results show that 94% of the respondents are homemakers.

The results of the study shows that out of 167 mothers only 38 feed their children exclusively. Thus the rate of EBF is 22.7%. The results are in concordance with the study one by (Anjum Fazilli, 2011) in which the author reported the rate of exclusive breastfeeding as 23.9% but lower than (I.I. MESHARAM, 2012) whose study the practice of EBF in mothers is 44.7%. If we compare our finding to a cross-sectional study conducted by (Tiras E Nkala, 2011) in western Tanzania the practice of exclusive breast feeding is 86%, the results of our study are not very encouraging comparatively. On contrary we compare our findings with that of a study done in Nepal by (Maheswari Ekambaram, 2010) the rate of exclusive breast feeding is found to be only 9% our results are very much better but not as good as they should be.

The socioeconomic status of the respondents is calculated with the help of revised Kuppuswamy socioeconomic scale 2012. According to the scale the respondents are categorized into five classes. Class I refers to the upper class, class II refers to the upper middle class, class III is the lower middle class, class IV is the upper lower class and class V is the lower class. 57% of the respondents of this study belong to class III, 28% belongs to class IV, 10% belongs to class II and 3% belongs to the upper class.

In our study the most of the respondents 47.3% have received intermediate education or have done a diploma followed by 29% who completed their high school only. 7% have received. The results are in concordance with study done by (Neeraj Mohan Srivastava S. A., 2013) according to which Neonates born to mothers with no formal education, fathers with no formal education, whose mothers had fewer (<3) antenatal care visits, were born in Muslim families, were slum residents or were from low socio-economic status were significantly ($p < 0.05$) less likely to be exclusively breastfed than their counterparts. However this finding is not supported by the study done by (Mahmood SE, 2012) in which 69.9% of the mothers were illiterate i.e. the literacy rate is lower than our study but only 22.8% of the infants were not exclusively breastfed.

The family type was divided into three categories joint, nuclear, extended. 35% of the families are nuclear and 26% live in extended families and 16% live in joint families. However it was seen that there is no major difference seen with respect to feeding practices in the various types of families. The result shows that 36%, 31%, 32% rate of exclusive breastfeeding in nuclear, joint, extended families. This is supported by study done by (Maheswari Ekambaram, 2010) in which comparison done between family type and exclusive breastfeeding comes out to be non significant.

In our study the secondary data all the respondents have received at least one antenatal and postnatal check up and thus supposed to have required information regarding the feeding practices however the results of this study shows a different picture. 46% of the respondents gave an affirmative response when they were asked were provided with the information and 32% said the ANM was the source of information. Study which support our result is that of (Maheswari Ekambaram, 2010) in which it was seen that only 48% of the women had received any advice on breastfeeding during antenatal period out of which 17% was from health worker.

In our study 50% of the respondents replied that doctor and the nurse who delivered their babies suggested them how to feed and 15% were guided by their elders. The above findings of the study are similar to (K Madhu, 2009) according to which 42% doctors, 21% mothers in laws was the source of information. However one of the participants of the study expressed her views as “*doctor aur nurse k paas itna time hi nai hota. Hum kuch pucchae to theek se jawab nai dete*”

Our study shows that only 31% of the mothers have satisfactory knowledge of breastfeeding however all of them are not practicing it due to various reasons. This finding is comparable to study done by (M. Sai Sunil Kishore, 2008) in which 39% of the mothers have satisfactory knowledge however only 30% and 10% of them feed their babies exclusively.

The present study shows that Initiation of breastfeeding in hospital is reported to be 97% in our study and 22% initiated within one hour. The results are comparable to the study done by (K Madhu, 2009) which shows that 90% of the mothers have institutional delivery and 97% out of them initiated breastfeeding.



In our study 55% of the respondents gave Prelectal feeds to their children. There are various kinds of Prelectal feeds which are given to the children such as animal milk, honey, sweet water, plain water and jaggery. The most common type of prelectal food given to the infants is sweet water (20%), honey (16%), animal milk (11%) and jaggery (3%). In case of animal milk cow milk is given in most of the cases. These results are in concordance with the study conducted by (DINESH KUMAR, 2006) in which prelectal feed is given 64%. However the most common type of prelectal feed in the latter study is cow's milk (70%) and honey (15%). When the respondents of our study were asked about the reason behind giving the prelectal feeds most of them said they don't know the exact reason. They said that their family members suggested them to do so as it is a cultural norm. Some consider it as "shagun". It is believed that whosoever will offer the prelectal feed to the child the child will acquire his or her characters when he will grow up.

Colostrum- the first milk is scientifically considered very nutritious and plays very important role in building up the child's immunity. It was encouraging to note that 56% of the respondents gave colostrums to their offspring. The colostrums was discarded by 39% of the respondents .if we compare our findings with that of a study done in Nepal by (Maheswari Ekambaram, 2010) in which the rate of colostrums feeding is 91% a lot more efforts are required to motivate the lactating mothers.

There are several reasons which are given by the respondents such as elder / family member's advice, it is not good for the child, and it is thick and dirty hence they considered it impure for the new born. Out of the above mentioned reason the most common reason(64%) given was elder's advice (mother -in -law),21% of the respondents consider it to be thick,dirty ,followed by those who consider it harmful for the health of the child(9%). The remaining (4%) consider colostrums to be impure.

One of the mother in law said the "*pehla dhood to girana bahut hi jaroori hai, warna bacha fhoool jata hai*" which means it is very necessary to drop the first milk otherwise the child will swell up"

One of the lactating mothers shared her memory of discarding colostrums. She said "*muje yaad hai k muje meri saas ne pehla dhood ghas pe girane ko bola tha par muje pata nai unho ne aisa kyun kaha, muje jo bola maine kar diya*" (I remember my mother -in -law asked me to drop the first milk on the grass but I don't know the reason behind it. I just obeyed what she said)

One of the factor which hampers the practice of exclusive breastfeeding is that the child is offered water. This study shows that in81% of the cases water is given to the child along with the breast milk, however the quantity of water given is limited like it was given once or twice a day. Thus we can say that about 81% of the children are predominantly breast fed .out of those who gave water 63% gave it after 3-4 months. On the other hand the study done by (Neeraj Mohan Srivastava S. A., 2013) it was found that only 48.1% of the participants gave water to their children .if we compare our with the above study, our results are not very much encouraging.

Most of the participants (94%) of the study are housewives and it was very encouraging to know that 91.6% of the respondents don't avoid feeding their babies due to house hold chores. Our study also shows that only 8% of the respondents avoid feeding the child in front of someone.

The present study shows that the respondents start alternative feeding methods such bottle feeding, spoon feeding, feeding with the help of container. The results of the study shows that 42% of the respondents feed their babies with the help of container and26% feed them with the help of bottle.

In our study the time of initiation of breast feeding is divided into three age groups. The first age group consists of infants of 0-2 months, the second age group is from 3-4 months and the third age group is of 5-6 months. It is found that most of the respondents (71%) start complementary feeding to their children when they are of 5-6 months old, followed by 23% of 3-4 months and 0-2% months . the various type of commonly given foods are animal milk water, porridge /mashed chapatti , mashed fruits and vegetables and infant milk formulas. It is seen that 29% of the respondents gave diluted milk, 16%dal water, 13% gave infant milk formulas, followed by mashed fruits 12% and mashed chapatti is given by 6%.The results of the study are in concordance with the study done by (Neeraj Mohan Srivastava S. A., 2013) in which potentially harmful materials such as animals' milk (35.8%), formula feeds (17.6%), water (48.1%) and other substances (teas/herbal drinks/juices/soups/rice water/mashed banana/etc (9.9%)) were being fed to 74% of the neonates.

When the respondents were asked about the reason for introducing these foods so early they gave reasons such as they think that the complementary foods are healthier than the breast milk. There are various reasons for introducing complementary food before six months. Almost half (51%) of the respondents believe in introducing complementary foods before 6 months because they think baby will remain hungry,23% had introduced early complementary feeding because of the insufficient breast milk production. The 15% and 11% practiced it on their elder's advice and consider them healthier respectively.

It is observed that some of the lactating mothers avoid feeding popular infant milk formulas because they think they are expensive however out of the total respondents of this study 40% of the respondents are those said that they will start giving they infant milk formulas before 6 months if provided free of cost to them.



VII. CONCLUSION

The rate of exclusive breast feeding among the lactating mothers is found to be 22.7% and 46% of the mothers have some prior knowledge of breastfeeding. Periodic feeding was found to be very common among the lactating mothers. 55% of the lactating mothers gave Prelectal feeds to their children. There are various kinds of Prelectal feeds which are given to the children such as animal milk, honey, sweet water, plain water and jaggery and 56% discarded the colostrums. It was found that 71% of the respondents started complementary feeding at the age of 4-5 months. The various types of commonly given foods are animal milk water, porridge/mashed chapatti, mashed fruits and vegetables and infant milk formulas. It is seen that 29% of the respondents gave diluted milk.

On the basis of present study, it can be concluded that the knowledge of the respondents regarding breast feeding is lacking. Myths influence of traditions and norms effect the practice of exclusive breast feeding. Family members along with the health professional are play a crucial role in guiding the lactating mothers.

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