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Breast feeding practices in Chandigarh and Sri Ganganagar: A comparative study

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Abstract
Background: Optimum Breast feeding practices play a critical role in improving child survival and decreasing Malnutrition.
Objective: To study and compare breast feeding practices in Chandigarh and Sri ganganagar.
Methodology: A total of 500 mothers respondents having infants less than 2 years were included purposively for study, Chandigarh (n=269) and Sriganganagar (n=231). Data collection was done using a standardised questionnaire developed by WHO, UNICEF and USAID (2010) modified to suit the objectives of the present study. Questionnaire covered parameters like socio demographic profile, knowledge and practices followed for breastfeeding like colostrum feeding, exclusive breast feeding duration of breastfeeding, prelacteal feeds and initiation of breast feeding etc.
Results: More than 93%, and 55%, reported having knowledge regarding colostrum and exclusive breast feeding respectively. 47.4% were initiated breast feeding within 1hour of delivery and 35.4% mothers reported giving prelacteal feeds within 72 hours of birth.
Conclusion: Concentrated efforts for awareness generation need to be continued to maintain existing improvement and better for obtaining improved results. Adequate steps must be ensured for effective communication and implementation of IYCF guidelines at all levels particularly at grass root levels should be emphasized for desired behaviour change and effective outcome. Effective implementation of IYCF guidelines will go a long way in improving child survival and health status indicators in our country too.

Keywords: breast feeding, knowledge, practices, infant and young child feeding (IYCF), prelacteal feed, exclusive breast feeding, colostrum

Introduction
The first two years of life are considered a critical "window of opportunity" for improved nutritional status and growth among infants and young children. Proper nutrition during this critical period, ensured by optimal infant and young child feeding practices, is therefore essential to children's health outcomes (Victora, C. G. *et al*. 2010) [2]. The standards set by the WHO for optimal feeding and nutrition during this window of opportunity include early initiation of breastfeeding (within the first hour after birth), exclusive breastfeeding for six months, continued breastfeeding until 24 months, introduction of complementary foods at six months, dietary diversity, and meal frequency (WHO, 2010) [3]. Taken together, these standards comprise "optimal infant and young child feeding" (IYCF).There is a strong relationship between breastfeeding practices and the occurrence of malnutrition in children (Muchina and Waithaka, 2010) [4]. Inappropriate breastfeeding practices are associated with severe malnutrition and growth faltering in the under-five children (Onayade, 2004).

Methodology
A hospital based cross-sectional study was prospectively conducted on 500 mothers having (0-24 months) infant and young children visiting private hospitals of Chandigarh and Sriganganagar.

List of private hospitals was prepared
↓
Random selection of hospitals
↓
Permission and approval to conduct the study
↓
Data collection from private hospitals

The proposed sample was studied with the help of a standardized, operationally modified questionnaire that included various parameters such as general information and questions pertaining to knowledge of mothers regarding breast feeding and breast feeding practices.

Results and discussion
Demographic Profile: Maximum respondent were in the age group of 26-29 years (39.6%) out of total (n=500) as has been depicted in the table 1.Interestingly, very few respondent mothers were in the age group of less than 21 years (2.4%) and more than 34 years (6.8%).

Table 1: Distribution of mothers according to age.

Age Of Mother (Yrs.)	Chandigarh (N=269)	Sriganganagar (N=231)	Total (N=500)
<=21	2 (0.7%)	10 (4.3%)	12 (2.4%)
22-25	36 (13.4%)	94 (40.7%)	130 (26.0%)
26-29	108 (40.1%)	90 (39.0%)	198 (39.6%)
30-33	92(34.2%)	34 (14.7%)	126 (25.2%)
>=34	31 (11.5%)	3 (1.3%)	34 (6.8%)
Total	269 (100%)	231(100%)	500(100%)

Education status

Out of total (n=500), more than one third respondents (42.8%) were postgraduate and only 1.2% were illiterate. In Chandigarh (n=269), majority of respondents were postgraduate 63.2%, and none was illiterate. However, in Sriganganagar 2.6% were found to be illiterate.

Occupational Status

Occupational status revealed that out of total (n=500) respondents, maximum respondents were housewives (68.2%) and minimum were in the labour group (4.2%). Maximum respondents were housewives both in Chandigarh 58.4% (n=269) and Sriganganagar 79.7% (n=231). However, more number of respondents were employed in Chandigarh (25.3%) as compared to Sriganganagar (3.5%)

The table below depicts the distribution of study respondents on the basis of the age and sex of the infants.

Table 2: Distribution of study respondents (infants) according to the place age, sex of children.

Age Of Child (In Months)	Chandigarh (N=269)			Sriganganagar (N=231)			Total (N=500)
	Male	Female	Total	Male	Female	Total	
0- 3	38	26	64(23.8%)	23	15	38(16.5%)	102 (20.4%)
3 – 6	21	27	48(17.8%)	21	13	34(14.7%)	82(16.4%)
6 – 9	29	10	39(14.5%)	13	9	22(9.5%)	61 (12.2%)
9 – 12	26	12	38(14.1%)	31	10	41(17.7%)	79 (15.8%)
12 – 15	16	11	27(10.0%)	6	7	13(5.6%)	40 (8%)
15 – 18	18	11	29(10.8%)	20	6	26(11.3%)	55 (11%)
18 – 21	4	2	6(2.2%)	15	9	24(10.4%)	30 (6%)
21-24	10	8	18(6.7%)	21	12	33(14.3%)	51(10.2%)
Total	162	107	269(100%)	150	81	231(100%)	500(100%)

The mean age of the study respondents (n=500) was 10.57±6.83.The mean age of study respondents residing in Chandigarh (n=269) was higher as compared to Sri Ganganagar (n=231) was 9.33± 6.51 and 11.82±7.15 months, respectively.

Table 3: Distribution of respondents on the basis of Knowledge about Colostrum and Exclusive Breast Feeding (EBF).

Knowledge About Feeding Colostrum	Chandigarh(N=269)	Sriganganagar(N=231)	Total (N=500)
Yes	254 (94.4%)	217 (93.9%)	471 (94.2%)
No	15 (5.6%)	14 (6.1%)	29 (5.8%)
Knowledge About Ebf			
Yes	154(57.3%)	138(59.7%)	292 (58.4%)
No	115(42.7%)	93(40.3%)	208 (41.6%)

The above table clearly depicts that nearly 95 percent and 58.4 percent of respondents in total (n=500), had knowledge regarding colostrums and exclusive breast feeding. However, respondents belonging to Chandigarh and Sri Ganganagar had almost similar levels of knowledge regarding colostrums feeding and exclusive breastfeeding as can be observed from the table above.

In the present study, majority of respondents had knowledge about feeding colostrum. This could be due the fact that large number of these were educated and employed and thus, were aware about the importance of feeding colostrum for the baby. Similar results have been found by Joshi *et al*. (2012) [6] and Kumar *et al*. (2014) [7].

Interestingly, in the present study, only a little more than half of the respondents were aware about Exclusive Breast Feeding, another very important component of IYCF guidelines. Study by Kishore *et al*. (2008) [9] also stated 39% of the mothers had 'satisfactory' breastfeeding knowledge, which was seen much lesser than the present study.

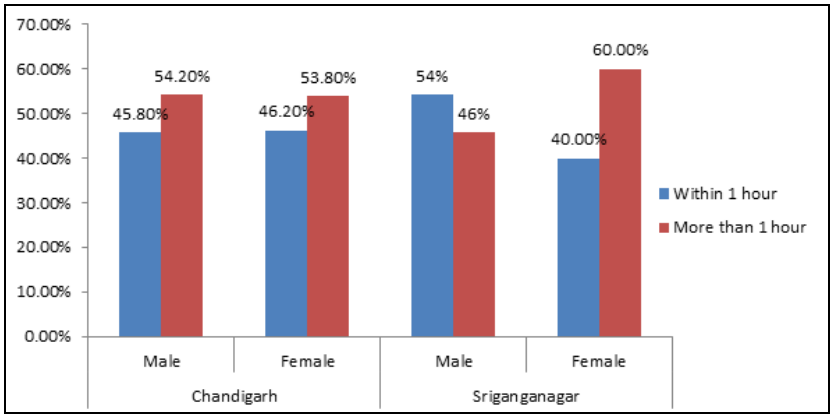

Fig 1: Distribution of initiation of breastfeed

According to the KPC module (2006) [10] immediate breastfeeding ensures that infants begin to receive the nutritional and antiviral/ antibacterial benefits of mother's colostrum. The importance of early initiation of breastfeeding is recognized by WHO, which recommends that mothers first provide breastmilk to their infants within the first hour of life; referred to as 'early initiation of breastfeeding' (WHO, 2010) [3].

The above table showed that out of total (n=500) respondents, only 47.4% initiated within one hour after birth. Less number of respondents (45.9%) belonging to Chandigarh initiated within one hour after birth as compared to Sriganganagar (49.1%) respondents.

According to IYCF (2010) [12] guidelines, Government of India recommends that initiation of breastfeeding should begin immediately after birth, preferably within one hour

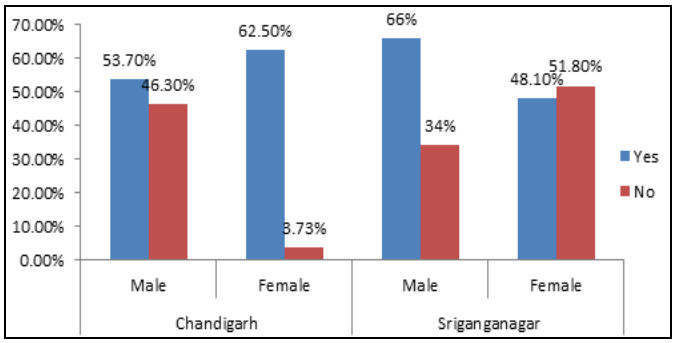

Fig 2: Distribution of exclusive breastfeed to their infants (0-6 months)

The World Health Organization recommends the practice of exclusive breastfeeding (EBF)of infants for the first 6 months after birth and to continue breastfeeding with supplementary diet up to two years or more (WHO, 2010) [3].

The above table depicted that out of total respondents (n=500), 58.4% mothers practiced exclusive breastfeeding to their infants. However respondents belonging to Chandigarh (n=269), 57.3% mothers practiced exclusive breastfeeding and (62.6%) mothers of female infants found to practice more exclusive breastfeeding than mothers of male infants (53.7%). whereas in Sriganganagar (n=231), 59.7% mothers practiced exclusive breastfeeding and 66% mothers of male infants found to practice more exclusive breastfeeding than mothers of female infants (48.1%). Reason behind not exclusively breastfeeding among those 42.7% and 40.3% of Chandigarh and Sriganganagar respectively were due to some mother's health issues, no milk production, baby unable to suck, family myths, less or no education, or because of some other demographic factors and those who were exclusively breast feeding their infant were found to have more knowledge regarding this.

According to IYCF (2010) [12] Exclusive breastfeeding should be practiced from birth till six months requirements. Mean intakes of human milk provide sufficient energy and protein to meet requirements during the first 6 months of infancy. During in the first six months of a child's life, only mother's milk (exclusive breast feeding) can reduce under-five mortality by 13% in developing countries as estimated by the United Nations Children's Fund (UNICEF, 2004) [13].

A study conducted among 250 mothers at Pondicherry by Ashwin Borade (2006) [17] found that 73(48.6%) babies were exclusively breastfed (EBF). Illiteracy, primi gravidae, younger age and mothers living in nuclear family were found at significant higher risk of not following EBF. Undesirable socio cultural beliefs and misconceptions in the society affect BF practices. Exclusive breastfeeding for 6 months is still not routinely practiced by most of mothers. Promotion of optimal BF practices improves maternal knowledge about BF; aggressive campaigning and heath personnel involvement are crucial to make Exclusive breastfeeding successful. This was found to be lesser than present study (58.4%).

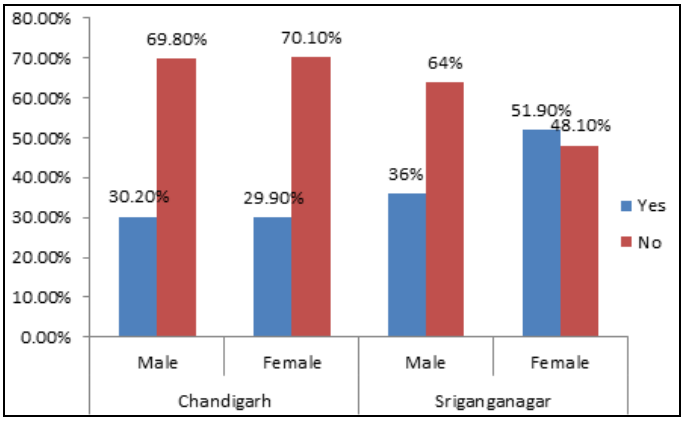

Fig 3: Distribution of prelacteal feed given by mothers after delivery.

According to the KPC module (2006) [10], fluids and/or some semi solids given to infants in the first few days after delivery are called prelacteal feeds.

The above figure depicted that out of total (n=500) sample, 35.4% respondents were given prelacteal feed in the first three days after delivery. In Sriganganagar higher (41.6%) respondent were given prelacteal feed in the first three days after delivery as compared to the 30.1% respondents belonging to Chandigarh. In Chandigarh, nearly same number of male (30.2%) and female (29.9%) infant were given prelecteal feed. Whereas in Sriganganagar, more number male (36%) female (51.9%). Infants were given prelacteal feed.

Higher number of prelacteal feeding in Sriganganagar than in Chandigarh was seen and this was maybe due to family myth, family pressure, cultural factor, lack of knowledge. And those respondents, who didn't give prelacteal feed reported to have knowledge about impact of prelacteal feed and had good knowledge of breastfeeding practices.

Various prelacteal feed commonly given to the infants as reported by the respondents were honey, jaggery, janamghutti, gripe water. In the present study, out of total (n=500) study sample, 78.5% respondents were given honey, followed by 11.9% jaggery, 9% other (janamgutti, gripe water) as prelacteal feed. Large number of respondents were giving honey as prelacteal feed at both the places.

Udgiri *et al.* (2015) [14] shows that 21(12.9%) of the babies were feed with prelacteal feeds like honey and sugar water, which is seen contradict to the present study. Likewise by Winch *et al.* (2011) [15] found that mothers and other family members gave prelacteal liquids intermittently after delivery to allow the mothers to rest and to pacify the babies until the milk came in.

Table 5: Distribution of sample on the basis of duration of breastfeed.

Period Of Breastfeed	Chandigarh (N=74)	Sriganganagar (N=69)	Total (N=143)
<=6	40(54.1%)	18(26.1%)	58(40.6%)
6-12	26(35.1%)	31(44.9%)	57(39.9%)
12-18	6(8.1%)	10(14.5%)	16(11.2%)
18+	2(2.7%)	10(14.5%)	12(8.3%)
Total	74(100%)	69(100%)	143(100%)

Table 5 revealed that out of total (n=143) sample, Majority (40%) mothers continued breastfeeding their baby till 6 months and till 12 months each. Very few mothers (8.3%) continued breast feeding their baby till more than 18 months. However, only 35 % respondents belonging to Chandigarh (n=74) breast fed their baby after 6 months which is significantly low as compared to the Sriganganagar (45 %). This could be due the fact that more number of housewives have been reported for Sri Ganganagar and more number of working women have been reported from Chandigarh. A study done by Khan *et al* in Delhi which showed that 72.1% of children between 12 and 23 months were continuing breast feeding. This was lesser in present study and another study from West Bengal has shown that 91.1% of the children between 12-23months were continuing breast feeding which was much higher than present study.

Conclusion

It is clearly evident from the study that both the places depict a low, diverse and varied compliance to breast feeding knowledge practices and infant and young child feeding guidelines. Chandigarh having more number of educated working class appears to be better in knowledge about breast feeding and exclusive breast feeding. However, at the implementation levels at both places almost similar and less percentages were found for practice for exclusive breast feeding, initiation of breast feeding within one hour and prelacteal feeding. Thus focused efforts needs to be initiated and implemented to generate awareness to disemminate standardized guidelines about infant and child feeding guidelines for the population at large.

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