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# **Original Research Article**

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# Prospective study to assess knowledge, attitude and breast-feeding practices of post-natal mothers in Punjab, India

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## **ABSTRACT**

**Background:** According to World Health Organization WHO (2009), 'Exclusive breastfeeding means that an infant receives only breast milk from his or her mother, or expressed breast milk and no other liquids or solids, not even water, with exception of oral rehydration solutions, drops consisting of vitamins, minerals supplements or medicines if required'. In India, breastfeeding appears to be influenced by social, cultural and economic factors. In 1991, Breastfeeding Promotion Network of India (BPNI) was formed to protect, promote and support breastfeeding. Further, the government of India has undertaken National Rural Health Mission, which intends to implement Integrated Management of Neonatal and Childhood Illness (IMNCI) through the existing healthcare delivery system. Poor practices and attitudes towards breastfeeding have been reported as major reason for poor health outcomes in developing nations.

**Methods:** Present study is a prospective study carried out among postnatal mothers, attending OPD's and immunization clinic, Department of Paediatrics at Sri Guru Ramdas Institute of Medical Sciences and Research, Amritsar from February 2016 till March 2017 over period of 13 months. Total of 1000 mothers were included who met with the inclusion criteria. Inclusion criteria of study were mother of healthy baby (baby weight more than 2.5 kgs), baby without any congenital defect and baby born between 37 to 42 weeks of gestation.

**Results:** The sample of the present study comprised of postpartum mothers (N=1000), among whom 35% (n=350) belonged to 22-25-year age group and only 12.8% (128) were above age group of 31 years. Among total 1000 subjects 28% (n=28) were illiterate. 65.3% (n=653) of the mother were living in the joint family in contrast to 34.5% were having nuclear family. Among total subjects (n=1000) 18.2% were working mothers and rest 81.8% were housewives. 76.4% belonged to rural area and 23.6% to urban area. 60.4% were primigravida and 39.6% were multigravida. Among total subjects 56% delivered normally and 44% by LSCS. In present study, majority of the mothers had prior knowledge regarding importance of colostrum, the first breast milk to baby, i.e 71.8% where as 28.2% were not aware of it. 82% mothers in current study had knowledge about importance of breastfeeding while rest 18 said breastfeeding was not important.

**Conclusions:** The present study concludes that mothers have an average knowledge about breastfeeding and poor breastfeeding practices were followed, thus, it is important to educate mother and families regarding breastfeeding and its importance, we need to strengthen public health education system to promote breastfeeding. Further focus on various factors which play important role in promotion and practices of early initiation and exclusive breastfeeding can lead to successful implementation of policies and programmes and in turn help in raising and nurturing a healthy child, a healthy youth for the nation.

**Keywords:** Breastfeeding, Complimentary, Exclusive, Knowledge

#### **INTRODUCTION**

Nutrition is one of the very basic necessities for all species to live, survive and sustain life.

During pregnancy the placenta is the main source of nutrition to the growing fetus. After delivery breast feeding is the first boon received by a baby from mother. Mother and baby form a biological unit. Breast feeding is an integral part of reproductive process. It is the natural and ideal way of feeding the infant and provide a unique biological and emotional basis for healthy child development. It increases mother child bonding. Breast feeding is highly nutrient, anti-infective therefore prevents child from various illness.

According to World Health Organization WHO (2009) 'Exclusive breastfeeding means that an infant receives only breast milk from his or her mother, or expressed breast milk and no other liquids or solids, not even water, with exception of oral rehydration solutions, drops consisting of vitamins, minerals supplements or medicines if required.<sup>2</sup>

The benefits of breast feeding, to mother and baby, have long been recognized.<sup>3</sup> Despite strong evidences in support of exclusive breast feeding for the six months of life, its prevalence has remained low worldwide and it is estimated that only about one third of the infants were exclusively breast feed for first six months of life.<sup>4</sup>

According to WHO and UNICEF, exclusive breastfeeding for 6 months is the single most effective child survival intervention which reduces both infant mortality and under 5 mortality in India. 'Breastfeeding promotion' alone contributes to 11.6% reduction in infant mortality rate if coverage of promotion is 99% and avert 21.9% million DALY's (Disability adjusted life years) at 3 years.<sup>5</sup> It has also been seen that cases of diarrhoea and pneumonia which are two most common cause infant mortality are common and more severe in children who are artificially fed (WHO/UNICEF, global strategy for infant and young child feeding).

In India, breastfeeding appears to be influenced by social, cultural and economic factors. In 1991, Breastfeeding Promotion Network of India (BPNI) was formed to protect, promote and support breastfeeding.<sup>6</sup> Further, the Government of India has undertaken National Rural Health Mission, which intends to implement Integrated Management of Neonatal and Childhood Illness (IMNCI) through the existing healthcare delivery system.<sup>7</sup> Poor practices and attitudes towards breastfeeding have been reported as major reason for poor health outcomes in developing nations.

Breastfeeding has declined worldwide in recent years, as a result of urbanization and maternal employment. Studies in India, has shown decline in breastfeeding practices, especially in urban areas.<sup>8</sup> Although, the

practice of breastfeeding is influenced by various social, cultural and religious beliefs, maternal infant feeding attitude has been considered a strong independent predictor of breast feeding initiation. Maternal positive attitude towards breastfeeding are associated with initiating and continuing breastfeeding and on contrary, negative attitude of mother towards breastfeeding is seen to a major barrier to initiate breastfeeding. While a number of studies have assessed knowledge, attitude and practices of breastfeeding in different parts of the world; such studies and data are limited in India.

The World Breastfeeding Trends Initiative (WBTi) is adapted from WHO as a tool for assessing and monitoring the state of implementation of the global strategy for infant and young child feeding. It is currently being implemented in more than 100 nations, assessment is done on basis of IYCF indicator based questionnaire.

However, there were no reported studies on breast feeding knowledge and practices as per infant and young child feeding policies (IYCF) in India.

Thus the present study was carried out to assess the infant feeding practices, knowledge and attitude towards breastfeeding among postnatal mothers as per IYCF policies, in Punjab, India.

#### **METHODS**

Present study is a prospective study carried out among postnatal mothers, attending OPD's and immunization clinic, Department of Paediatric, at Sri Guru Ramdas Institute of Medical Sciences and Research, Amritsar from February 2016 till March 2017 over period of 13 months.

Total of 1000 mothers were included who met with the inclusion criteria. Inclusion criteria of study were mother of healthy baby (baby weight more than 2.5 kg), baby without any congenital defect and baby born between 37 to 42 weeks of gestation.

Mothers of preterm babies, babies who required NICU admission were excluded.

For process of data collection, preformed semi structured interview questionnaire was prepared in vernacular language Punjabi and English too.

This questionnaire has 3 sections

#### Section A

This part of questionnaire included demographic information of participants which included age of the mother, place of residence urban or rural, education and employment status of the mother, type of family nuclear or joint, type of delivery and number of delivery.

#### Section B

This part of questionnaire included 5 questions to assess the knowledge of the postnatal mother towards breastfeeding. Each question in this knowledge section had two possible responses namely yes or no.

#### Section C

This section gives a glimpse of the actual breastfeeding practices opted by the mothers. Questionnaire was prepared as per Breastfeeding Promotion Network of India (BPNI) and International Baby Food Action Network (IBFAN) policies to assess progress of breastfeeding practices among mothers. Questionnaire included 4 questions, that is initiation of breast feeding within 1 hour of delivery, exclusive breastfeeding, median duration of breastfeeding and complimentary feeding. Each question had multiple choice answer.

Data analysis was done using SPSS 22 and MS excel. Descriptive analysis was done to describe the characteristics of the study population.

## **RESULTS**

#### Sample description

The sample of the present study comprised of postpartum mothers (N=1000), among whom 35% (n=350) belonged to 22-25-year age group and only 12.8% (128) were above age group of 31 years.

Table 1: Demographic information of the respondents.

Demographic variables	Group	Frequency (n)	(%)
Age in years	<21	294	29.4
	22-25	350	35
	26-30	228	22.8
	>31	128	12.8
Education	Illiterate	280	28
	1°	318	31.8
	2°	252	25.2
	Graduation and above	150	15
Working status	Working	182	18.2
	Non-working	818	81.8
Family type	Joint	653	65.3
	Nuclear	347	34.7
Background	Urban	236	23.6
	Rural	764	76.4
Gravida	Primi	604	60.4
	Multi	396	39.6
Type of	NVD	560	56
delivery	LSCS	440	44

Among total 1000 subjects 28% (n=28) were illiterate. 65.3% (n=653) of the mother were living in the joint family in contrast to 34.5% were having nuclear family. Among total subjects (n=1000) 18.2% were working mothers and rest 81.8% were housewives. 76.4% belonged to rural area and 23.6% to urban area. 60.4% were primigravida and 39.6% were multigravida. Among total subjects 56% delivered normally and 44% by LSCS.

Table 2: Association between family type and breastfeeding information.

Family type	Breast feeding	Information received
	Yes	No
Nuclear family (n=347)	250 (72.1%)	97 (27.9%)
Joint family (n=653)	610 (93.4%)	43 (6.6%)

As shown in Table 2 maximum mothers in joint families (93.4%) received information regarding breastfeeding but in nuclear families only 72.1% had received information & this association has been found significant.

Table 3: Knowledge of breastfeeding among study population.

Knowledge questions	Options	Frequency (n)	%
Prior knowledge about the importance of colostrum	Yes	718	71.8
	No	282	28.2
Do you think	Yes	820	82
breastmilk is important for baby?	No	180	18
Do you think	Yes	554	55.4
breastmilk contains all required nutrients for baby till six months of life?	No	446	44.6
Do you think	Yes	726	72.6
prelacteal feed is important for the baby?	No	264	26.4
Any breastfeeding	Yes	104	10.4
information provided during ANC visit	No	896	89.6

Table 3 depicts the data considering prior knowledge of breastfeeding in the mothers, it was seen that 71.8% of the mothers had knowledge regarding colostrums and its importance. 82% of the mothers considered breastfeeding is important for baby and 55.4% agreed that breastmilk contains all nutrients required by baby for initial 6 months and no pre-lacteal feeds are to be given. It was observed that majority of the participants (89.6%) did not

receive any prior information on breastfeeding during their ANC visits.

Table 4 gives the glimpse of actual practices of breastfeeding being followed by the mothers. It was seen that majority of the mothers, that is 72.5% did not initiate breastfeeding within 1 hour after delivery. Practice of exclusive breastfeeding for 6 months was found to be very low, that is 27%. Median duration of breastfeeding was found to be more than 1 year among 75.7%. Practice starting complimentary feeds at 6 months was observed only in 18.8 % of the total mothers.

Table 4: Indicators for 4 optimal IYCF breastfeeding practices in Punjab.

IYCF breastfeeding indicators	Groups	Frequency (n)	%
Initiation of BF	< 1 hour	275	27.5
	1-2 hours	447	44.7
	2-3 hours	168	16.8
	>4 hours	110	11
Exclusive BF	3 months	85	8.5
	4 months	426	42.6
	5 months	219	21.9
	6 months	270	27
Median duration of BF	6 month-1 year	243	24.3
	1-2 years	757	75.7
Complementary feeding (when to start)	4-6 months	65	6.5
	6-8 months	188	18.8
	8-10 months	556	55.6
	10-12 months	191	19.1

# **DISCUSSION**

Adequate nutrition during infancy is essential to ensure the proper growth, good health and development of a child. Breastfeeding confers both short term and long-term benefits to both mother and child. Breastfeeding was reportedly on decline in 1990's, when India first measured breastfeeding in 1992 through NFHS 1 data revealed that only 40% women were giving exclusive breastfeeding to their babies; therefore BPNI (Breastfeeding promotion network of India) was initiated in 1992 to protect, promote and support breastfeeding.

In present study, mothers' knowledge regarding breastfeeding was assessed based on a questionnaire.

Various demographic factors were studied, statistically significant relation was observed between family type and breast-feeding knowledge, it was observed that maximum mothers in joint families received information regarding breastfeeding as compared to those staying in nuclear families, Similar results were observed in a study by Gopujgar PV et al.<sup>9</sup>

In present study, majority of the mothers had prior knowledge regarding importance of colostrum, the first breast milk to baby, i.e. 71.8% where as 28.2% were not aware of it. 82% mothers in current study had knowledge about importance of breastfeeding while rest 18% said breastfeeding was not important. It was seen that 72.6% of the mothers agreed to giving prelacteal feeds to the baby, and majority of the cases water and honey was the pre-lacteal feed given. Prior information on breastfeeding and its benefit during Antenatal checkups, also have a significant role and influence on early initiation of breastfeeding, but it was observed that only 10.4% of the mothers agreed that they were given prior information on breastfeeding during ANC Visits.

Various studies have shown that cultural beliefs are most common factor for not giving colostrums and giving prelacteal feeds to the baby. The present study demonstrated average knowledge regarding breastfeeding indicating room of improvement.

According to Infant and young child feeding (IYCF), government of India recommends that initiation of breastfeeding should begin immediately after birth, preferably within one hour. In current study, majority of mothers 71.8% were aware of breastfeeding but merely 27.5% initiated breastfeeding within an hour of delivery. These findings were supported by previous studies from different parts of the world. 11 As per NFHS 4 data of Punjab, exclusive breastfeeding within 1 hour of birth was observed to be 29.4% in urban and 31.6% in rural areas with average of 30.7%. Whereas in present study it was observed to be 27.5% which was quite low. National average of mothers who had initiated breastfeeding within an hour after birth is 23.4%. most common reason for delay in early initiation of breastfeeding observed was delay in shifting of mother from labour room or operation theatre, shifting of babies to NICU and various family restrictions.12

Exclusive breastfeeding for 6 months was observed in 27% mothers, which was substantially lower than previous studies and as per NFHS 4 data of Punjab state, where it is observed to be 53% (54.8% in urban and 51.1% in rural areas of Punjab) but higher than recent studies which reported 7.8% in study done by Tiwari et al and 16.5% by Bandhyopadhay et al. 13-14

Further studies indicate prevalence of exclusive breastfeeding for 6 months is generally low in low resource and developing nations. However, breastfeeding promotion interventions in developing countries have shown to result in 6-fold increase in exclusive breastfeeding for 6 months to achieve MDG 4.

It was observed that 75.7% mothers felt that breastfeeding should be continued till 2 years of age, these findings were consistent with recent study which also found 75% mothers, done by Chaudhary et al. Various published reports indicate that insufficient milk

outcome was the most common reason cited by mother for early weaning from breastfeed.<sup>16</sup>

Complimentary feeding at 6 months was seen only in 18.8%, whereas maximum started complimentary feeding at 8 to 10 months. As per NFHS 4 Data Punjab complimentary feeding at 6 months was observed to 6.9% in urban and 5% in rural with average rate of 5.7%.in current study it was found to be higher.

Aggressive promotion of baby foods, lack of knowledge and family support to mothers, inadequate healthcare support and weak overall policy and programmes were some of the reasons because of which breastfeeding have not shown a consistent rise.

#### **CONCLUSION**

The present study concludes that mothers have an average knowledge about breastfeeding and poor breastfeeding practises were followed, thus, it is important to educate mother and families regarding breastfeeding and its importance, we need to strengthen public health education system to promote breastfeeding. Further focus on various factors which play important role in promotion and practises of early initiation and exclusive breastfeeding can lead to successful implementation of policies and programmes and in turn help in raising and nurturing a healthy child, a healthy youth for the nation. Breastfeeding can make lasting changes.

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