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## Breast feeding and Immunization Practices in a Rural Area of Thrissur District, Kerala, India

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### Abstract

It's widely known that breastfeeding saves the infant lives and reduces disease burden. But social and religious factors have affected the breastfeeding practices in our country. Also immunisation coverage is not uniform may be due to the stigma regarding immunisation which is still persisting in some parts of our country. 1) To assess breastfeeding practices among mothers of under five children in a rural area of Thrissur district, Kerala. 2) To assess immunisation practices among mothers of under five children in a rural area of Thrissur district, Kerala. It was a cross sectional study conducted in a rural area of Thrissur District, Kerala. Door to door survey was done and data was collected from 189 mothers of under five children using standard questionnaire developed by UNICEF (United Nations Childrens Fund). We interviewed 189 mothers. Of all 183 (96.8%) mothers fed their babies within one hour and 180 (95.2 %) mothers fed their children with colostrum. Fully immunised children were 184 (97.4%) and Vitamin A prophylaxis was given for 109(57.7%) children. In our study 96.8% mothers fed their babies within one hour of birth. Almost 97.4% children were fully immunised and 57.7% children were given Vitamin A prophylaxis.

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Breast feeding practices,  
Immunization, Rural area, Kerala

### Introduction

Breastfeeding and immunization are the undeniable rights of every newborn. It's widely known that breastfeeding and immunization saves infant lives and reduces disease burden.

Hence WHO (World Health Organization) recommended exclusive breastfeeding for all the children for the first six months and to continue feeding till two years along with regular home food ([http://www.who.int/nutrition/topics/exclusive\\_breastfeeding/en/](http://www.who.int/nutrition/topics/exclusive_breastfeeding/en/) (last accessed on 19/06/2018)). As part of global effort to protect, promote and support breastfeeding, UNICEF (United

Nations Children's Fund) and WHO launched baby friendly hospital initiative in 1992. Although people are aware of breastfeeding practices, desired effects of breastfeeding are not reaching all the children due to prelacteal feeds, delay in initiating breastfeeding and discarding colostrum because of various beliefs and customs among mothers and grandmothers. In a study conducted among scheduled castes community in Haryana exclusive breastfeeding was 15% (Umesh Kapil *et al.*, 1994). In a study conducted in Bihar regarding breastfeeding, it was found that most mothers started feeding on second day as they discarded colostrum (Yadav and Singh, 2004-07 - 2004-09).

In 1991, WHO Working Group on infant feeding recommended definitions of key breast feeding indicators and specific methodologies for their measurements. These were intended to evaluate progress of breastfeeding promotional programme (WHO, 1991). The prevailing rates show that early initiation within one hour of birth is 25%, exclusive breast feeding for six months is 46% and start of appropriate complementary feeds at six months is 57% (NFHS, 2005-2006). Due to malnutrition there have been 45% child deaths, which can be pointed to the problem of prelacteal feeds, delay in initiating breastfeeding or even discarding colostrum (Pelletier *et al.*, 1995; <http://www.who.int/news-room/factsheets/detail/children-reducing-mortality>). (last accessed on 19/06/2018)). This malnutrition problem can be tackled right from birth of the child by ensuring 100% breastfeeding. Also the myths regarding breastfeeding practices can be alleviated by increasing mothers' literacy and education. Currently literacy rate of Indian mothers is 68.4% according to NFHS 4 (National Family Health Survey) data. Recent studies on maternal and child under nutrition has estimated that nearly 1.4 million infant deaths can be prevented with exclusive breast feeding (Black *et al.*, 2008; Bhutta *et al.*, 2008). The timely introduction of complementary feeds can prevent almost 6% of under-five mortality (Jones *et al.*, 2003).

Expanded programme on immunization target diseases which are one of the leading causes of high childhood morbidity and mortality as evidenced by high IMR (Infant Mortality Rate) in developing countries. Immunization is a timely step for prevention of mortality and morbidity due to communicable diseases in 0-5 years of age group. Immunization coverage has been improved sufficiently in developed countries but developing countries are still underway, most likely due to the beliefs and prejudiced thoughts of the people. Immunization impact is one of the best indicators to evaluate health outcomes. It is one of the cost effective interventions to prevent major preventable illness. Biggest challenge to implement immunization services is to offer parents risks vs benefits information in a convincing manner. With this background, we conducted this study in a rural area of Thrissur district in Kerala to assess breastfeeding and immunization practices.

## Materials and Methods

We conducted a community based cross-sectional study in one randomly selected Panchayath of Thrissur district in Kerala. The data was collected during the period of 2012-2013. Door to door survey was carried out and 189

mothers were interviewed who fulfilled our criteria. Mothers of severely ill children were excluded from the study. Study participants were interviewed using validated questionnaire developed by UNICEF. The questionnaire included questions on socio-demographic variables, practices related to breast feeding, immunization and vitamin A prophylaxis. Also questionnaire collected information on immunization status of mother during antenatal period. The data collected was analyzed using SPSS version 23.

## Results and Discussion

A total of 189 mothers were interviewed of which 109(57.7%) belonged to APL (Above Poverty Line) category and 80(42.3%) in BPL (Below Poverty Line) category. Among the 189 mothers, 170 of them were home-makers. Mean age of mothers was  $28.8 \pm 4.8$  years. Mean age of the children was  $3.07 \pm 1.66$  years. There were 91(45%) girls and 110 (55%) boys. Among 189 mothers, 183 (96.8%) of them started breastfeeding at first hour of birth of the child and 2 (1.1%) of them started after 24 hours. Feeding of colostrum was practised by 180 (95.2%) mothers and 9 (4.8%) of them discarded it. Around 180 (94.7%) of the mothers did not feed their children with pre lacteal feeds but 9 (4.8%) mothers gave pre lacteal feeds which included honey and samsam. Frequency of feeding depended on how often the child cries in 158 (83.6%) of mothers.

It was found that 148 (78.3%) of mothers fed their babies even when they were ill and 180 (95.2%) of them fed their babies when the babies fell ill. Usage of breast pump and bottle feeding was limited to 11(5.8%) of mothers. Exclusive breastfeeding was given for six months in 111(58.7%) children. Ragi and banana powder was used as complementary feeds. Ragi was used by 57 (30.2%) and banana powder by 102 (54%) mothers. Around half of the mothers 100 (52.9%) were planning to breast feed their children till two years of age and 71(37.6%) of them even after two years of age. Regarding immunization among children 184(97.4%) was fully immunized. Almost 140 (74.1%) of children took optional vaccines. Around 183(96.8%) mothers have safely kept the immunization card and 149(78.8%) of mothers had immunized their children on time. Of all 187(98.9%) mothers took Tetanus Toxoid vaccine during their antenatal period. In the household 185 (97.9%) supported the mother in immunizing the child and in 4 (2.1%) families didn't support the cause. Around 70 (37%) children took vaccines from private hospitals and 48 (25.4%) children took from govt hospitals.

**Table.1** Age distribution of mothers and sex distribution of children of the study population

Variable		Frequency	Percentage	
1.	Age	18-25yrs	48	25.4
		26-35yrs	123	65.1
		>35yrs	18	9.5
2.	Sex of children	Female	91	45.0
		Male	110	55.0

**Table.2** Socio-demographic details of the study population

Sl. No.	Variable	Frequency	Percentage	
1.	Economic status	APL	109	57.7
		BPL	80	42.3
2.	Religion	Hindu	51	27.0
		Christian	125	66.1
		Muslim	13	6.9
3.	Education	Primary	21	11.1
		Secondary	70	37.0
		Degree	91	48.1
		Professional	7	3.7
4.	Type of family	Nuclear	70	37.0
		Joint	78	41.3
		Extended	41	21.7

**Table.3** Breast feeding practices among the study population

Sl. no.	Variable	Frequency	Percentage	
1.	Colostrum given	Yes	180	95.2
		No	9	4.8
2.	Prelacteal feeds given	No	180	95.2
		Yes	9	4.8
3.	Exclusive breastfeeding	3months	78	41.3
		6months	111	58.7
4.	Plan regarding breastfeeding	2years	97	51.3
		>2years	71	37.6
5.	Usage of feeding bottles	Yes	34	18.5
		No	154	81.5

**Table.4** Immunization practices among study population

Sl. No.	Variable	Frequency	Percentage	
1.	Immunization status	Fully	184	97.4
		Partially	4	2.1
		Unimmunized	1	0.5
2.	Optional vaccines	Yes	140	74.1
		No	49	25.9
3.	Immunization card	Yes	183	96.8
		No	6	3.1
4.	Encouragement from family	Yes	186	98.4
		No	3	1.6
5.	Vitamin A	Yes	109	57.7
		No	80	42.3

**Table.5** Association between economic status and immunization practices among the study population

Economic status	Immunization status			Total	P value
	Fully	Partially	Unknown		
APL	111	3	0	114	0.035
BPL	73	0	0	75	
Total	184	3	2	189	
Economic status	Optional vaccines given			Total	P value
	Yes	No	Unknown		
APL	92	19	3	114	0.005
BPL	46	20	9	75	
Total	138	39	12	189	

In view of Vitamin A prophylaxis, last dose of Vitamin A was taken in last six months by 109(57.7%) of children and 140(74.1%) mothers knew that nine doses were required till five years of age. Also 119(63%) of mothers knew that blindness is the symptom of Vitamin A deficiency and 26.5% of mothers were not aware about deficiency of Vitamin A.

It was found that there was no association with religion and feeding colostrum and pre lacteal feeds.

In our study it was found that 96.8% of mothers fed their babies within one hour of birth which was higher when compared with NFHS 4 data was 41.6% (Shamila Hamid *et al.*, 2012). Another study in Karnataka urban slum area gave 59% on early initiation of breastfeeding. Colostrum was refused to 4.8% children which was lesser than a study in Karnataka which was 18%. Pre-lacteal feeds were not given to 94.7% of children when compared to a study conducted in Karnataka was 47.5% (Angelillo *et al.*, 1999). This observation gives an impression that our study population is aware of the fact that giving pre-lacteal feeds to the newborn is not a good practice. Exclusive breastfeeding for six months was given to 58.7%; which was similar to NFHS 4 is 54.3% (Shamila Hamid *et al.*, 2012). This shows that there should be an improvement in breastfeeding practices in this area.

Regarding immunization of our study area, 97.4% children were fully immunized for age. This value is way higher than a study in Tamilnadu which was 69.7% which showed that stigma related to immunization is being lifted. In another study conducted in Kashmir rural area, 98% children were fully immunized which is comparable to our study (Shamila Hamid *et al.*, 2012). These studies prove that parents have positive attitude towards immunization. Almost 99.5% of mothers knew

about immunization and its benefits. Studies have reported on mothers regarding child immunization and showed that success of immunization depends on parents' positive attitude and knowledge on this topic (Shamila Hamid *et al.*, 2012; Angelillo *et al.*, 1999). Though coverage rate is fairly good in our country, still many children are yet to be covered. Also in this study we found that 96.8% of mothers took two doses of TT injection during their antenatal period when compared to a study in Kashmir it was only 16% (Shamila Hamid *et al.*, 2012).

About vitamin A prophylaxis, 57.7% children were given vitamin A in last six months, although according to NFHS 4 done in Kerala it was 74.4% (NFHS 4 IIPS 2015-2016). Fortunately parents knew about the benefits of vitamin A prophylaxis, they knew about the deficiency disorders of vitamin A.

Breastfeeding and immunization practises in our study population were found to be optimal. The attitude and knowledge regarding immunization was appreciable. We could find small pockets of resistance towards immunization and suboptimal practices of breast feeding. Awareness programs on immunization and breast feeding for these targeted groups has to be initiated.

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