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# EARLY AND EXCLUSIVE BREASTFEEDING AMONG WOMEN IN BIHAR AND MAHARASHTRA

# \*AJIT KUMAR YADAV & \*\*DR. SIMRIT KAHLON,

\*Junior Research Fellow, \*\* Asst. Professor,

Dept. of Geography, Panjab University Chandigarh (India)

# **INTRODUCTION**

Exclusive breastfeeding means that the infant receives only breast milk. No other liquids or solids are given – not even water – with the exception of oral rehydration solution, or drops/syrups of vitamins, minerals or medicines (WHO 2013).Breastfeeding is important for young child survival, health & nutrition. Further, breast feeding serves as one of the child spacing methods, which is especially important in developing country like ours where the awareness, acceptability & availability of modern family planning methods are very low (Yadavannavar and Patil, 2011). Breastfeeding in common and exclusive breast feeding in particular are invariably accepted as essential elements for the satisfactory growth and development of infants as well as for prevention of childhood illness (Ahmed Hamudat Abiodun, Olayiw olaIbisumbo, 2008).

Early breastfeeding is an important family health intervention, if implemented widely, it can reduce neonatal mortality rate by 20 percent (Mullany et al. 2008). Population Council's study reveals that a little more than a third (36%) of women in rural Bihar initiated breastfeeding within one hour of birth of their child (Aruldas et al. 2012a). The CES-2009 report shows that only 17 percent newborns were breastfed within one hour after birth as compared to the national average of 34 percent (UNICEF 2010).

Compared with urban areas, under-nutrition is higher in rural areas and in Mumbai. Similar to the national picture, there is a strong correlation between child malnutrition and the level of maternal education showing a two-fold difference between non-educated and well-educated mothers. The stunting and underweight prevalence for children with illiterate mothers is 52.9% and 53.1% respectively contrasted with 22.9% and 25.9% for children with well educated mothers. The stark difference may be linked to access to nutritious diet and complementary feeding at 6-9 months (NFHS-3) In a nutshell, exclusive breastfeeding protects the child from obesity risks, decrease in the severity of infectious diseases such as diarrhea, respiratory tract infections and

urinary tract infection (World health Assembly Resolution, 2010). Only 35% of infants world-wide are exclusively breastfed during the first four months of life and complementary feeding begins either too early or too late with foods which are often nutritionally inadequate and unsafe (WHO, 2011). Although Breastfeeding is universal in India, but exclusive breastfeeding practice rates are not satisfactory. In a study in Rajkot, the Prevalence of exclusive breastfeeding at 6 months of age of infants was found to be 62% (Chudasma *et al.*2014). Furthermore, as per the (NFHS-3) third round, only 69 percent of children fewer than two months of age are exclusively breastfed, which further drops to 51 percent at 2-3 months of age and 28 percent at 4-5 months of age (NFHS-3). There are numerous socio-cultural barriers which potentially may affect the breastfeeding practice. Among all, beliefs like the first milk are not good or there is no secretion of milk in first three days result in practices like discarding colostrums and promoting pre-lactating feeds. Such practices increase the risk of infections and deprive the valuable benefit of colostrums feeding to the vulnerable neonates (Palestinian Family Survey, 2010). This issue becomes an area of concern since large numbers of babies born in India are low birth weight whereas exclusive breastfeeding for the first six months is viewed as the single-most effective intervention among other preventive interventions.

# **REVIEW OF LITERATURE**

In a study it is observed that, exclusive breastfeeding is higher among illiterate mothers and mothers younger than 25 years. Furthermore, no differences were described in the frequency of feeding during the day or night among literate or illiterate mothers, and no differences were noted by sex of the index child (Mustafa K. Mujeri Alam Shamsul, 2011).exclusive breastfeeding has been recognized as an important public health tool for the primary prevention of child mortality and morbidity (Iddrisu Seidu, 2013) In the developing world, childbirth and the first days postpartum are a risky time for mother and baby. Approximately one-fourth to one-half of deaths in the first year of life occurs in the first week. Many of the interventions that will improve the health and survival of newborns are relatively low cost and feasible to implement. One of these interventions is immediate and exclusive breastfeeding. This intervention can also help women by minimizing immediate postpartum hemorrhage, one of the most common causes of maternal many cultures hold strong beliefs about the appropriateness of different foods during illness. These beliefs usually have their roots in an understanding of the nature of illness or the balance of qualities in the human body death (AED, 2005).

The importance of appropriate feeding practice is obvious as more than 90 per cent of the brain develops during this critical period (Gupta Arun, 2003).WHO also estimates that 53 per cent of acute pneumonia and 55 per cent



of diarrhea deaths are attributable to poor feeding practices during the first six months of life (Lauer et al, 2006). Median duration of breastfeeding is excellent in India, which has been a traditionally breastfeeding nation (WBTI,2012). The present assessment was conducted during the period, June to September 2012 using the process of the World Breastfeeding Trends Initiative with the help of a web-based toolkit. National Institute of Public Cooperation and Child Development (NIPCCD) and Breastfeeding Promotion Network of India (BPNI) jointly coordinated the India assessment-2012. The India Report 2012 provides in detail the findings of the assessment, compares it with the status in 2008, analyses gaps and offers some recommendations to bridge them. This process has helped to build understanding and trust between civil society groups on many issues for advocacy on policy and programme support to breastfeeding.

The UN Secretary General's Global Strategy for Women's and Children's Health, 2012 has set a specific target for increasing 21.9 million infants who are exclusively breastfed for the first six months of life, by 2015, in 49 least developed countries. The World Health Organization's Implementation plan on Maternal, Infant and Young Child Nutrition presented at the World Health Assembly, 2012 has also set a global target to increase exclusive breastfeeding rates in the first six months of life by at least 50 per cent. This target implies that the current global average, estimated to be 37 per cent for the period 2006–2010, should increase to 50 per cent by 2025. Annually about 26 million babies are delivered in India. According to National Family Health Survey, 2005-06 data, 20 million babies are not able to receive exclusive breastfeeding for the first six months and about 13 million do not get good timely and appropriate complementary feeding after six months along with continued breastfeeding. (WBTI, 2012).

A study in rural area in Bangalore has observed that 96% of infants were being reducing infant and child deaths and improving the level of nutritional status of the child is one of the important priority areas for Government of India. We aim to reduce IMR by 50% under NRHM which calls for all those actions that would effectively contribute to reduction in infant mortality and improvement in child nutrition. Further there are innumerable benefits to the child when it is breastfed as compared to not being breastfed. One of the important ways to achieve desired reduction of infant mortality and improvement in nutritional status of child is to ensure 100% exclusive breastfeeding for the first six months followed by appropriate complementary feeding along with the continuation of breastfeeding (P Sudharto, 2008). Lancet (2008) has estimated that nearly 14 lakh infant deaths can be averted with exclusive breastfeeding for the first six months of life.

Another study conducted in North Parganas district of West Bengal to see the age and sex differential in the nutritional status among the adolescent. It was observed that there were variations by age and sex in the rate of under nutrition and this rate of under nutrition among the studied population were lower than other developing countries and specifically lesser than earlier Indian findings (Mukhopadayay *et al*; 2005).

A study in Bangladesh has shown that exclusive breastfeeding affects the nutritional status of the child from 0 to 24 months of age. Information was collected from mothers of 2781 children between 0 and 24 months of age. It was found that 16% of women still exclusively breastfed their children for less than 6 months. Of the children 38.1% were stunted and 38% were under weight for their age. Overall, 46% of children were suffering from diseases (Giashuddin MS,et al, 2004).

Mahanta et al in 2004 undertook a study to evaluate breastfeeding and weaning practices in relation to nutritional status of infants of tea garden workers of Assam after report of high prevalence of under nutrition. They found that 100% breastfeeding rate was maintained throughout 0 to 12 months. Exclusive breastfeeding rate was 69.35% up to 6 months of age.

# **NEED OF THE STUDY**

There are considerable variations in the level and trend of early and exclusive breastfeeding practices among subgroups of women in India. Moreover, Bihar and Maharashtra exhibits contradictory population and health pattern in the country. Bihar is the state with lowest women literacy whereas Maharashtra is considered as one of the high performing state in India (RGI, 2011). Furthermore, both states differ substantially on socio-cultural beliefs while bearing or rearing children. Thus, any insightful assessment of the level and pattern of early and exclusive breastfeeding among women in these states will have number of policy implications.

With this backdrop, this study is an attempt to shed light on the level and pattern of early and exclusive breastfeeding in Bihar and Maharashtra.

# **OBJECTIVES**

The broader objective of this study is determining the status of early and exclusive breastfeeding practices among the women in Bihar and Maharashtra.



The specific objectives of this study are:

- 1. To determine the status of early and exclusive breastfeeding in women in Bihar and Maharashtra.
- 2. To understanding the barriers and facilitating factor's adopting to desiredbreastfeeding practices.

# **DATA SOURCE**

The District Level Household and Facility Survey is one of the largest ever demographic and health surveys carried out in India, with a sample size of about seven lakh households covering all the districts of the country. The Ministry of Health and Family Welfare (MoHFW), Government of India, initiated District Level Household Surveys (DLHS) in 1997 to provide district level estimates on health indicators to assists policy makers and program administrators in decentralized planning, monitoring and evaluation

The study used third round data of District Level Health Survey (DLHS) 2007-2008 for the assessment of early and exclusive breastfeeding among women in Bihar and Maharashtra. The District Level Household and Facility Survey is one of the largest ever demographic and health surveys carried out in India, with a sample size of about seven lakh households covering all the districts of the country. In DLHS-3, along with ever-married women age 15-49, never married women (age 15-24) are also included as respondents. DLHS-3 adopts a multi-stage stratified probability proportion to size sampling design. Details of sampling design, including sampling frame and sample implementations, are provided in the basic survey report for all India (DLHS, 2008). DLHS collects information from a nationally-representative sample of 34,920 ever married women in Maharashtra and 46, 842 ever married women in Bihar. The crude birth rate (CBR) is 31.9, infant mortality rate (IMR) is 62 and the percentage of underweight children under the age 3 is 54.4 in Bihar.

# **METHODOLOGY**

# **Variables**

The variables which are included in this study can be divided into two parts,

# **Outcome Variable**

Early Breastfeeding: In this study, those women who have initiated breastfeeding within an hour after the last delivery is considered as early or immediate breastfeeding.



*Exclusive Breastfeeding:* Those women who have breastfed their last child exclusively for six months is considered as exclusively breastfeeding in this study.

# **Predictor Variables**

The survey has collected information on number socioeconomic and demographic characteristics which could potentially affect the breastfeeding practices among women in Bihar and Maharashtra. The variables which are included in this study are, place of residence, caste, religion, education, age at first birth, place of delivery and awareness on breastfeeding practices.

# **Statistical Analysis**

Descriptive and bivariate analysis is carried out to examine the differentials in the level and pattern of early and exclusive breastfeeding practices among women in Bihar and Maharashtra. Further, multivariate analysis in terms of binary logistic regression is done to check the adjusted effect of selected covariates on the level and pattern of early and exclusive breastfeeding among women in the selected two states.

# **RESULTS**

The figure one shows that home delivery in Maharashtra is almost half comparison to home delivery in Bihar. Delivery in private hospital in more than double of the private delivery in Bihar. Delivery in government hospital in Maharashtra is more than two times in comparison to Bihar.

This diagram shows that initiation of immediate breastfeeding in Maharashtra is more than three times in comparison to Bihar. Initiation of exclusive breastfeeding in Maharashtra is more than four times in comparison to Bihar.

The initiation of immediate and exclusive breastfeeding among women in Biharis presented in Table 1. The immediate breastfeeding in government hospital (26.26%) is higher than home delivery (24%) in Patna zone, Bihar and the exclusive breasting in home delivery (59.83%) is higher than as compare to the government hospital (8.16%) in Patna zone in Bihar. In Saran zone the immediate breastfeeding in government hospital (25%) is higher than home delivery (10.7%) and exclusive breastfeeding in home delivery (81.55%) is higher than government hospital. In Saran zone immediate breastfeeding in government hospital (25.02%) is higher than home delivery and exclusive breastfeeding in home delivery is higher than government hospital. In Darbhanga



zone immediate breastfeeding in government hospital (25.02%) is higher than (10.70%) home delivery and the exclusive breastfeeding in home delivery is higher than government hospital. In Kosi zone the immediate breastfeeding in government hospital (16%) is higher than home delivery (13%) and the exclusive breastfeeding in home delivery (84%) is higher than government hospital. In Bhagalpur zone the immediate breastfeeding in government hospital (33%) is higher than home delivery (16%) and the exclusive breastfeeding in home delivery (72%) is higher than government hospital.

Initiation of immediate and exclusive breastfeeding among women in Maharashtra is presented in **Table 2**.In Amravati zone the immediate breastfeeding in government hospital (66%) is higher than home delivery (49%) and the exclusive breastfeeding in home delivery (30%) is equal to government hospital. In Konkan zone the immediate breastfeeding in government hospital 63%) is higher than home delivery (43%) and the exclusive breastfeeding in home delivery 16%) is lower than government hospital (45%). In Nashik zone the immediate breastfeeding in government hospital (58%) is higher than home delivery (39%) and the exclusive breastfeeding in home delivery 50%) is higher than government hospital (21%). In Pune zone the immediate breastfeeding in government hospital (60%) is higher than home delivery 41%) and the exclusive breastfeeding in private hospital (50%) is higher than home delivery (18%).

In Bihar the immediate breastfeeding in urban area is (18.64%) higher than (15.08%) rural area and in Maharashtra immediate breastfeeding in rural area (52.38%) is higher than (51.74%) urban area. On the basis of caste in Bihar immediate breastfeeding in other caste (18.00%) is lower than (51%) other caste of Maharashtra. However, immediate breastfeeding in Scheduled Tribe is in Bihar (18%) whereas in Maharashtra is (48%) but in Maharashtra immediate breastfeeding among all caste is higher than Bihar. On the basis of Religion immediate breastfeeding in all religion is more three times in Maharashtra than Bihar. On the basis of Education, age at first birth, place of delivery, awareness is approximately three times more in Maharashtra than Bihar (Table 3).

In Bihar the exclusive breastfeeding in urban area is (8.02%) higher than (6.99%) rural area and in Maharashtra exclusive breastfeeding in urban area (28.99%) is higher than (28.16%) rural area. On the basis of caste in Bihar exclusive breastfeeding in Scheduled Tribe (10.21%) is higher than (7.64%) other caste and in Maharashtra exclusive breastfeeding in Scheduled Tribe is higher than (24.30%) other caste but in Maharashtra exclusive breastfeeding among all caste is higher than Bihar. On the basis of Religion exclusive breastfeeding in other religion is (16.76%) higher than Hindu (7.42%), Muslim (5.12%) and Christian (9.12%) in Bihar and in Maharashtra exclusive breastfeeding among other religion (32.81%) is higher than Hindu (28.63%), Muslim

(23.66%) and Christian (25.18%) but in Maharashtra exclusive breastfeeding among all religion is higher than Bihar. On the basis of Education the exclusive breastfeeding in higher education (10.48%) is higher than no education in Bihar and he exclusive breastfeeding in higher education (33.90%) is higher than no education in Maharashtra. On the basis of age at first birth the exclusive breastfeeding in 25+ age group is (8.50%) is higher than (6.25%) 19-21age group in Bihar and the exclusive breastfeeding in 25+ age group is (30.61%) is higher than (26.17%) below age group 18 in Maharashtra but in Maharashtra exclusive breastfeeding age at first birth is higher than Bihar. On the basis of place of delivery the exclusive breastfeeding in home is (6.95%) higher than (5.65%) government hospital in Bihar and place of delivery the exclusive breastfeeding in government hospital is (30.22%) higher than (27.32%) private hospital in Maharashtra but exclusive breastfeeding in place of delivery in Maharashtra is higher than Bihar (Table 4).

It is evident in the study that the immediate breastfeeding both in normal and caesarean delivery in Maharashtra is three times higher than the Bihar. This pattern is observed across the place of residence and caste. However, on the basis the immediate breastfeeding in normal delivery is highest in Christian (66% and 28% in Bihar and Maharashtra respectively) among all remaining religion. Moreover, immediate breastfeeding is increases as education increases in both normal and caesarean delivery. In normal delivery immediate breastfeeding is highest in Maharashtra (65%) and Bihar (25%) of those women who have higher education. On the basis of age at first birth, immediate breastfeeding ofthe normal delivery is three times more in Maharashtra than Bihar while in caesarean delivery more than two times in Maharashtra than Bihar (Table 5).

It is observed in the study that the exclusive breastfeeding both in normal and caesarean delivery in Maharashtra is higher than Bihar across the place of residence and caste. However, exclusive breastfeeding in normal delivery is highest in other religion i.e. 32% in Maharashtra and 18% in Bihar. Moreover, exclusive breastfeeding is increases as education increases in normal delivery. In normal delivery exclusive breastfeeding is highest in Maharashtra (34%) and Bihar (10%) of those women who have higher education. On the basis of age at first birth, exclusive breastfeeding of the normal delivery is more than three times in Maharashtra than Bihar while in caesarean delivery more than two times in Maharashtra than Bihar. Moreover, Exclusive breastfed of normal delivery is more than three times in Maharashtra than the Bihar in both government and private hospital (Table 6). The adjusted effects of selected covariates on exclusive breastfeeding in Bihar and Maharashtra are presented in Table 7. Education and breastfeeding practice is positively associated both in Bihar and Maharashtra. Furthermore, women who had delivered their child in private or at home are more likely to breastfeed exclusively than who had delivered in government hospital in Bihar. However, the result is not statistically significant.

Women who had no awareness about the advantages of breastfeeding are 36 percent less likely to breastfed exclusively than who has the knowledge in Bihar.

It is evident in Table 8 that, education and initiation breastfeeding within an hour after the birth has positive and negative association in Bihar and Maharashtra respectively. Women who had delivered child at private and home are less likely to initiate breastfeeding within hour after the birth. This pattern is observed in both the states in the study. Moreover, women had no knowledge on the advantages of breastfeeding are less likely to initiate breastfeeding within hour after the birth in both Bihar and Maharashtra.

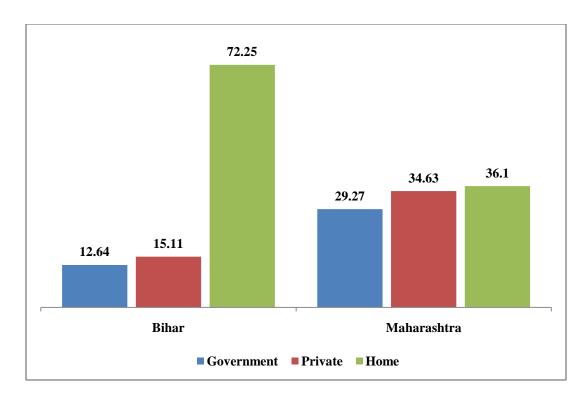


Figure 1. Place of delivery of women in Bihar and Maharashtra, 2007-08



Figure 2. Initiation of immediate and exclusive breastfeeding among women in Bihar and Maharashtra, 2007-08

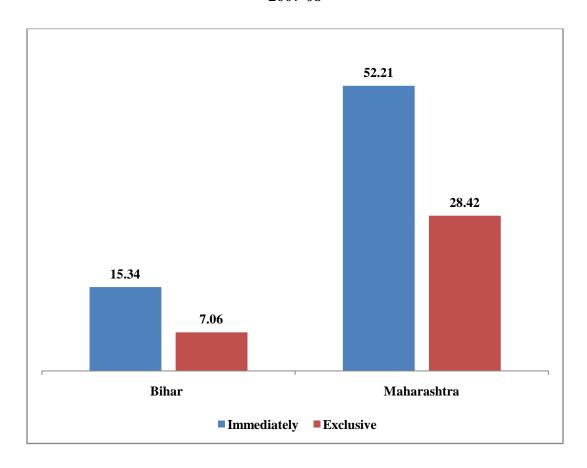




Table 1. Initiation of immediate and exclusive breastfeeding among women in Bihar .2007-2008

Zone	Immediately	Exclusive
Patna		
Government Hospital	26.26	8.16
Private Hospital	24.07	32.01
Home Delivery	23.94	59.83
Tirhut		
Government Hospital	22.80	7.61
Private Hospital	23.23	10.84
Home Delivery	11.38	81.55
Saran		
Government Hospital	25.02	9.99
Private Hospital	16.41	14.27
Home Delivery	10.70	75.73
Darbhanga		
Government Hospital	20.97	19.84
Private Hospital	12.89	16.18
Home Delivery	8.93	63.98
Kosi		
Government Hospital	15.53	6.21
Private Hospital	15.71	10.11
Home Delivery	12.75	83.68
Purniya		
Government Hospital	18.94	6.95
Private Hospital	17.29	9.78
Home Delivery	12.87	83.27
Bhagalpur		
Government Hospital	33.14	13.85
Private Hospital	22.26	14.30
Home Delivery	15.98	71.85
Munger		
Government Hospital	15.33	10.34
Private Hospital	16.23	17.02
Home Delivery	12.19	72.63
Magadh		
Government Hospital	21.71	7.42
Private Hospital	17.49	35.64
Home Delivery	14.23	56.93

Table 2. Initiation of immediate and exclusive breastfeeding among women in Maharashtra. 2007-2008

Zone	Immediately	Exclusive
Amravati		
Government Hospital	65.69	30.29
Private Hospital	53.94	39.84
Home Delivery	48.45	29.87
Aurangabad		
Government Hospital	58.24	24.47
Private Hospital	51.54	37.67
Home Delivery	44.45	37.87
Konkan		
Government Hospital	62.62	45.14
Private Hospital	48.20	39.18
Home Delivery	42.64	15.68
Nagpur		
Government Hospital	67.99	37.20
Private Hospital	55.27	17.37
Home Delivery	52.19	45.43
Nashik		
Government Hospital	58.40	21.20
Private Hospital	48.26	29.23
Home Delivery	39.27	49.57
Pune		
Government Hospital	59.91	32.48
Private Hospital	49.98	49.88
Home Delivery	40.95	17.64



Table 3. Prevalence of exclusive breastfeeding among women in Bihar and Maharashtra, 2007-08

	Bihar	Maharashtra
Place of residence		
Rural	6.99	28.16
Urban	8.02	28.99
Caste		
<sup>1</sup> SC	7.03	30.89
<sup>2</sup> ST	10.21	32.05
<sup>3</sup> OBC	6.81	30.16
Others	7.64	24.30
Religion		
Hindu	7.42	28.63
Muslim	5.12	23.66
Christian	9.12	25.18
Others	16.76	32.81
Education		
No education	3.87	19.89
Primary	7.71	2368
Secondary	8.1	28.17
Higher	10.48	33.90
Age at first birth		
Below 18	7.22	26.17
19-21	6.75	28.86
22-25	7.22	30.89
25+	8.50	30.61
Place of Delivery		
Government	5.65	30.22
Private	8.67	27.32
Home	6.95	28.01
Awareness		
No	5.64	30.01
Yes	7.90	28.25

<sup>1</sup> Scheduled Caste, 2 Scheduled Tribe, 3 Other Backward Caste – No Cases

Table 4. Initiation of immediate breastfeeding among women in Bihar and Maharashtra. 2007-2008

Characteristics	Bihar	Maharashtra	
Place of residence			
Rural	15.08	52.38	
Urban	18.64	51.74	
Caste			
<sup>1</sup> SC	15.83	56.75	
<sup>2</sup> ST	17.72	47.6	
<sup>3</sup> OBC	14.34	54.97	
Others	18.0	51.0	
Religion			
Hindu	15.97	52.74	
Muslim	11.92	43.11	
Christian	23.0	59.84	
Others	14.35	58.55	
Education			
No education	11.86	100.0	
Primary	15.72	48.09	
Secondary	22.69	55.04	
Higher	21.95	57.28	
Age at first birth			
Below 18	14.88	47.69	
19-21	15.55	55.14	
22-25	16.15	51.92	
25+	14.74	56.68	
Place of Delivery			
Government	21.28	62.40	
Private	19.86	50.94	
Home	13.32	45.24	
Awareness			
No	10.31	31.75	
Yes	18.26	54.30	

<sup>1</sup> Scheduled Caste, 2 Scheduled Tribe, 3 Other Backward Caste – No Cases



Table 5. Initiation of immediate breastfeeding among women by birth in Bihar and Maharashtra 2007-08

Characteristics		Normal	Caesarean	
	Bihar	Maharashtra	Bihar	Maharashtra
Place of residence				
Rural	15.0	53.96	12.64	33.21
Urban	19.3	56.06	11.35	32.23
Caste				
<sup>1</sup> SC	15.84	59.14	12.83	36.32
<sup>2</sup> ST	17.6	48.2	12.89	36.79
<sup>3</sup> OBC	14.31	58.06	11.98	32.78
Others	17.88	53.96	13.02	30.85
Religion				
Hindu	15.97	54.91	12.35	33.76
Muslim	11.64	45.57	13.23	24.86
Christian	27.94	65.75	0.0	27.47
Others	15.05	61.82		34.53
Education				
No education	11.75	100.0	0.0	
Primary	15.58	49.35	11.79	26.71
Secondary	23.34	57.51	13.68	33.52
Higher	24.69	64.54	10.97	33.18
Age at first birth				
Below 18	14.76	48.77	15.05	27.0
19-21	15.55	57.4	12.71	32.37
22-25	16.29	56.71	8.49	31.86
25+	14.12	64.12	13.4	40.61
Place of Delivery				
Government	21.75	65.40	9.81	38.98
Private	21.67	56.59	12.13	29.71
Home	13.32	45.24		
Awareness				
No	10.18	32.02	12.95	20.92
Yes	18.38	57.02	12.22	33.12

<sup>1</sup> Scheduled Caste, 2 Scheduled Tribe, 3 Other Backward Caste – No Cases

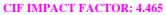


Table 6. Exclusive breastfeeding among women by birth in Bihar and Maharashtra, 2007-2008

Clare de l'alle		Normal		sarean
Characteristics -	Bihar	Maharashtra	Bihar	Maharashtra
Place of residence				
Rural	6.88	28.07	8.36	28.20
Urban	7.81	27.9	12.38	34.42
Caste				
<sup>1</sup> SC	6.96	31.01	9.44	29.64
$^{2}$ ST	10.24	32.02	0.0	30.89
<sup>3</sup> OBC	6.71	29.13	8.56	36.67
Others	7.35	23.75	10.39	28.22
Religion				
Hindu	7.27	28.3	10.50	30.88
Muslim	5.2	22.84	0.0	29.07
Christian	11.08	27.39	0.0	14.67
Others	17.73	32.26		39.63
Education				
No education	3.37	19.89	33.58	
Primary	7.54	23.54	8.87	24.93
Secondary	8.16	28.04	7.27	28.46
Higher	9.93	33.61	14.43	34.92
Age at first birth				
Below 18	7.18	25.88	8.31	31.74
19-21	6.62	28.84	8.24	27.87
22-25	6.86	30.22	13.05	33.69
25+	8.7	29.19	3.87	34.07
Place of Delivery				
Government	5.37	29.72	9.18	100.0
Private	8.58	26.47	9.20	30.35
Home	6.93	27.98		
Awareness				
No	5.55	30.57	6.90	13.74
Yes	7.8	27.75	9.84	31.67

<sup>1</sup> Scheduled Caste, 2 Scheduled Tribe, 3 Other Backward Caste – No Cases

Table7. Adjusted effects of selected covariates on exclusive breastfeeding in Bihar and Maharashtra, 2007-08

	Bihar		Maharashtra	
Characteristics	<b>Odds Ratio</b>	95% CI	<b>Odds Ratio</b>	95% CI
Residence				
Rural <sup>®</sup>				
Urban	0.999	0.754-1.323	1.102	0.973-1.247
Caste				
$^{1}\mathrm{SC}^{^{\circledR}}$				
<sup>2</sup> ST	0.985	0.451-2.148	1.157	0.931-1.437
<sup>3</sup> OBC	0.746**	0.573-0.970	1.024	0.845-1.242
Others	0.960	0.714-1.289	0.759**	0.628-0.918
Religion				
Hindu <sup>®</sup>				
Muslim	0.960	0.716-1.288	0.882	0.728-1.096
Christian	0.761	0.092-6.275	0.581	0.237-1.428
Others	1.000		1.213	0.966-1.522
Education				
No education®				
Primary	2.029*	0.883-4.662	1.337	0.149-12.698
Secondary	1.946	0.846-4.474	1.758	0.191-16.182
Higher	2.445**	1.030-5.805	2.355	0.255-21.703
Age at first birth				
Below 18 years®				
19-21	1.047	0.843-1.300	1.016	0.891-1.157
22-25	1.075	0.817-1.414	1.041	0.882-1.229
25+	1.290	0.784-2.121	1.009	0.787-1.292
Place of birth				
Government <sup>®</sup>				
Private	1.218	0.894-1.660	0.837*	0.736-0.951
Home	1.210	0.904-1.620	0.945	0.821-1.087
Awareness				
Yes®				
No	0.639***	0.491-0.831	0.972	0.763-1.238
Constant	0.046		0.249	
Pseudo R2	0.01		0.012	

<sup>\*</sup> P <0.1 \*\* P<0.05 \*\*\* P<0.011 Scheduled Caste, 2 Scheduled Tribe, 3 Other Backward Caste – No Cases



Table8. Adjusted effects of selected covariates on immediately breastfeeding in Bihar and Maharashtra, 2007-08

	Bihar		Maharashtra	
Characterstics	<b>Odds Ratio</b>	95% CI	<b>Odds Ratio</b>	95% CI
Residence				
Rural <sup>®</sup>				
Urban	0.901	0.748-1.087	0.872	0.783-0.972
Caste				
$^{1}\mathrm{SC}^{^{\circledR}}$				
$^{2}$ ST	0.853	0.496-1.465	0.892	0.737-1.081
<sup>3</sup> OBC	0.813**	0.683-0.968	0.924	0.778-1.096
Others	0.893	0.792-1.086	0.874	0.740-1.032
Religion				
Hindu <sup>®</sup>				
Muslim	0.801**	0.653-0.983	0.658***	0.561-0.772
Christian	2.078	0.647-6.672	1.355	0.671-2.734
Others	1		1.04	0.846-1.278
Education				
No education®				
Primary	1.326	0.817-2.150	0.727***	0.621-0.851
Secondary	1.898***	1.172-3.072	0.898*	0.798-1.012
Higher	1.808*	1.085-3.014		
Age at first birth				
Below 18 years®				
19-21	0.938	0.816-1.078	1.196***	1.07-1.336
22-25	0.88	0.734-1.055	0.978	0.849-1.130
25+	0.841	0.581-1.219	1.175	0.946-1.460
Place of birth				
Government <sup>®</sup>				
Private	0.843*	0.703-1.010	0.611**	0.546-0.682
Home	0.759***	0.643-0.897	0.605***	0.535-0.684
Awareness				
Yes®				
No	0.600***	0.505-0.713	0.434***	0.351-0.538
Constant	0.255		2.161	
Pseudo R2	0.018		0.025	

<sup>\*</sup> P <0.1 \*\* P<0.05 \*\*\* P<0.011 Scheduled Caste, 2 Scheduled Tribe, 3 Other Backward Caste – No Cases



# **CONCLUSION**

Present study revealed that various inappropriate breast feeding practices are prevalent in both Maharashtra and Bihar though urban mothers had more favorable practices compared to rural mothers. Mothers' education, her socioeconomic status, place of delivery, and receiving information in the hospitals about benefits of breast feeding influenced the breast feeding practices. Elders' advice played an important role in shaping the breast feeding practices.

In case of immediate and exclusive breastfeeding among women, each zone of Bihar has very worst condition than each zone of Maharashtra. Moreover in each selected background characteristics Bihar has less than 25% immediate breastfeeding among women while Maharashtra has more than 45%. Exclusive breast feeding in selected background characteristics is less than 20% in Bihar whereas in Maharashtra has more than 20%. There are large gap between Bihar and Maharashtra in both immediate and exclusive breastfeeding of both normal and Caesarean delivery. Caste, Religion, Education, Place of birth, and Awareness is significantly highly the immediate breastfeeding in Bihar whereas in Maharashtra, Religion, Education, Place of birth and Awareness is highly significant. Bihar has highly significant in Caste, Religion, Education, Place of birth, and Awareness while in Maharashtra caste and the place of birth is significantly affect the exclusive breastfeeding.

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