



# Exclusive Breastfeeding and Its Association with Socio-Demographic Profile of Mother in a Tertiary Care Hospital of Central India

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## ABSTRACT

**Introduction:** Breast milk is an ideal food that serves as a complete source of infant nutrition. Exclusive breastfeeding (EBF) is defined as infant receives no other food or drink, not even water, except breast milk (including milk expressed or from a wet nurse) for 6 months of life, but allows to receive ORS, drops and medicinal syrups (vitamins, minerals and medicines).

The study aimed to find out prevalence of exclusive breastfeeding and its socio demographic determinants.

**Methodology:** Study has been conducted in the Immuno-Prophylaxis Clinic of a tertiary care hospital. All infants aged 6 months - 12 months have been included in the study.

**Data has been collected** from mothers of infants with the help of semi structured questionnaire.

**Results:** Early Initiation of breastfeeding was done by 55% of mothers, while 29.4% mothers gave pre-lacteal feeds. Only 59.4% of mothers exclusively breastfed their infants for first 6 months of life. The study revealed factors positively associated with EBF such as higher maternal educational level, moderate maternal age (25 - 29 yrs.), and middle socio economic status. No association was found with maternal employment and family size in this study.

**Conclusion:** The findings from present study highlight the importance of educating and counselling mothers on specifically about exclusive breastfeeding practices.

**KeyWords:** Exclusive breastfeeding, Prevalence, Central India

## INTRODUCTION

Exclusive breastfeeding is defined as no any other food water or any liquid (except some medicines and vitamins if needed) except mother's milk for first 6 months. WHO has recommended exclusive breastfeeding for first 6 months for proper growth and development of an infant.<sup>1</sup>

Breast milk has appropriate balance of nutrients provided in a bio-available and easily digestible form<sup>2</sup> protecting both mothers and children against in illnesses and diseases with immunological and anti-inflammatory properties.<sup>3</sup> There is decrease in

cases of diabetes mellitus, obesity and asthma and also shown decrease in severity of infectious disease<sup>4,5,6</sup> Infants who are exclusively breastfed have less chance of becoming ill or dying from diarrhoea and other infections. In addition, they are less likely to acquire pneumonia, meningitis, and ear infections than non-breastfed infants.<sup>7</sup>

Optimal breastfeeding practices can prevent 1.4 million deaths worldwide among children under five every year.<sup>8</sup> Suboptimal breastfeeding contributes to 45% of neonatal infectious deaths, 30% of diarrheal deaths and 18% of acute respiratory

deaths among children under five in developing countries.<sup>9</sup>

Less than 35% of mothers exclusively feed their infants for 4 months. Previous studies has shown that in developing countries incidence of exclusive breastfeeding is just 37% in infants less than 6 months. In previous studies it has shown that in India there is less prevalence of exclusive breastfeeding. Prevalence of EBF in India is 23.7%<sup>10</sup>, in Maharashtra state 37.6%<sup>11</sup> and in Nagpur district 43.5%.<sup>12</sup> Prevalence of initiation of breastfeeding in India is 40.5%<sup>10</sup>, in Maharashtra 71.2%<sup>11</sup> and in Nagpur district 66.1%.<sup>12</sup>

In India, breastfeeding in rural areas appears to be shaped by the beliefs of a community, Proper counselling and information from family and society are the contributing factors which can lead to exclusive breastfeeding. Factors such as prematurity and sickness of newborn then depression and sickness of mother then social reasons such as working mother nuclear family etc are reasons behind discontinuation of breastfeeding.<sup>13</sup> Some studies associated low family income, low maternal age, primiparity and returning to work as interruption in exclusive breastfeeding practices.<sup>14</sup> High maternal education level, gestational age greater than 37 weeks these are the factors positively associated with breastfeeding.<sup>15</sup>

Prevalence of exclusive breastfeeding is still low. The National Family Health Survey (NFHS-3) data showed a gross inter-state variation for IYCF practices.<sup>16</sup>

As breastfeeding depends on social cultural factors many beliefs and customs are related to breastfeeding which differs from region to region. As there are fewer studies in Vidarbha region of Maharashtra on exclusive breastfeeding. This study was planned to study the prevalence of exclusive breastfeeding and its predictors.

## MATERIALS AND METHODS

Ethics committee approval was taken before starting the research project Sr. No-17/2016. A cross sectional study was conducted at the Immuno-Prophylaxis Clinic (IPC) of a tertiary care hospital. All consecutive infants aged 6 months - 1 year, coming to IPC were included, except infants who have not been exclusively breastfed because of any breastfeeding contraindication. After explaining aims and objectives of the study, informed consent was taken up from mothers of infants. Data regarding breastfeeding practices and relevant socio demographic factors was obtained from mothers of the infants by interviewing them with the help of semi structured questionnaire, which consisted

both open and close ended questions. This study was conducted from July 2016 to September 2016 and the data was collected. Descriptive statistics was used to elaborate socio demographic characters of study participants and breastfeeding practices followed by them. Association between exclusive breastfeeding and socio demographic factors has been evaluated by Chi square trend; p value < 0.05 was considered to be statistically significant.

## Definition of Variables

Early initiation of breastfeeding: It means initiation of breastfeeding within one hour of birth.<sup>17</sup>

Pre lacteal feeds: Any feed given to new-born before initiation of breast milk.<sup>18 19</sup>

Exclusive Breastfeeding: Infant who has been exclusive breastfed with only breast milk and no additional food, water, or other liquids (except for medicines and vitamins, if needed) during the first six months of life.<sup>20</sup>

## Statistics

Data was analysed using statistical software, Epi. Info. Version 3.4.3 using Chi-square and Proportion; p value < 0.05 was considered to be statistically significant.

## RESULTS

Total of 160 infants were included in the study. In our study, maternal age ranged from 20 - 39 years, with a majority of 74 (46%) belonging to the age group of 25 - 29 years. As far as education is concerned, 63 mothers (39.4%) were educated up to primary school, 28.8% (46) mothers were middle school pass out, and 25% (40) were high school pass outs. Occupation wise most of the mothers (134) were unemployed. Out of 160, 97 mothers (60.6%) were staying in joint or three generation type of family. According to the modified BG Prasad's Classification for 2013, most of them either belonged to class II (25%) or class III (24.4%).

Table 1 shows breastfeeding practices among 160 mothers of infants included in the study. All mothers breastfed their children, and almost all, i.e., 98.1% of them gave colostrum. Only 29.4% of mothers gave prelacteal feeds. Initiation of breastfeeding within 1 hour of birth was done by only 55% of mothers. It can be seen from the table that 95 mothers (59.4%) exclusively breastfed their infants, while 62 mothers (40.6%) did not exclusively breastfed.

Table 2 describes association of exclusive breastfeeding with socio-demographic determinants like maternal age, maternal literacy status, maternal occupation, type of family and socio economic status. Socio-demographic data is pooled together for statistical calculation. It is evident that young mothers (20 - 29 yrs.) tend to exclusively breastfed their children, while elderly mothers are not prone for exclusive breastfeeding. Maternal occupation is not associated with exclusive breastfeeding and highly educated (above middle school) mothers tend to breastfeed their children more evidently than less educated. Mothers belonging to lower socioeconomic class are more inclined towards exclusive breastfeeding. There seems to be no significant as-

sociation of maternal occupation and type of family with exclusive breastfeeding.

**Table 1: Breastfeeding practices among 160 mothers**

Breastfeeding Practices	Yes (%)	No (%)
Ever Breastfed	160 (100)	0 (0)
Colostrum	157 (98.1)	3 (1.9)
Pre lacteal feeds	47 (29.4)	113 (70.6)
Initiation of Breastfeeding within 1 hr	88 (55)	72 (45)
Exclusive Breastfeeding for 6 months	95 (59.4)	65 (40.6)

**Table 2: Association of exclusive breastfeeding with maternal age, literacy status, maternal occupation, type of family and socio economic status (Significant factors are shown in bold)**

Socio Demographic Determinants	Exclusive Breastfeeding		P value	O.R (C.I)
	Yes (%)	No (%)		
Maternal Age				
20-29 years	86 (53.8)	26 (16.2)	< 0.001	14.33(6.144,33.44)
30-39 years	9 (5.6)	39 (24.4)		
Literacy status of mothers				
Up to middle school	51 (31.9)	58 (36.2)	< 0.001	0.1399(0.057,0.33)
Above middle school	44 (27.5)	7 (4.4)		
Maternal Occupation				
Employed	12 (7.5)	14 (8.7)	0.14 (N.S)	
Unemployed	83 (51.9)	51 (31.9)		
Type of family				
Nuclear	54 (33.8)	43 (26.9)	0.25 (N.S)	
Joint or three generation	41 (25.5)	22 (13.8)		
Socio-economic status				
Class III, IV and V	63 (39.3)	28 (19.5)	< 0.001	2.602(1.35,4.98)
Class I and II	32 (20.0)	37 (21.2)		

**DISCUSSION**

Early initiation of breastfeeding and exclusive breastfeeding among infants are considered the most decisive indicators for assessing breastfeeding practices.

In the present study, 55% of the children received breastfeeding within one hour of birth. Similarly the National Family Health Survey (NFHS-4) 2015-2016 estimates show similar results for Maharashtra that 59.5%<sup>21</sup> of mothers initiating breastfeeding within one hour of birth. Another recent Indian study from Madhya Pradesh recorded lower results which showed that only 26 mothers initiating breastfeeding in first hour.<sup>22</sup> Though we have achieved improvements in the rate of early initiation of breastfeeding, the current rate is still inadequate to achieve the estimated mortality benefits of early initiation.

Prevalence of the pre lacteal feeding among the respondent in current study was 29.4%. Roy et al. in Kolkata slum (29.16%) found similar prevalence of pre-lacteal feeding as that of the current study.<sup>23</sup>

Higher rates were observed by Jagzape et al. (43.2%)<sup>24</sup> in study conducted in Wardha and Wadade et al. (40.2%)<sup>25</sup> in Beed district of Maharashtra.

In this study we observed 59.4% of the infants exclusively breastfed till complete six months. Similar rate was observed by Das et al. (58.7%)<sup>26</sup> and NFHS 4 data of rural Maharashtra (60.0%).<sup>21</sup> A study from West Bengal has also shown that 57.1% of the children below 6 months were exclusively breastfed<sup>27</sup> Indian studies by Kulkarni et al. (70.2%)<sup>28</sup> and Nimbalkar et al. (85.6%)<sup>29</sup> recorded much higher rates. An estimated 10% to 15% of under-five deaths in resource poor countries could be prevented if 90% of babies were exclusively breastfed for the first 6 months.

Maternal age, maternal education and maternal socioeconomic status have been reported to be associated with early cessation of exclusive breastfeeding. On contrary, some studies show that breastfeeding failure at 6 months was independent of maternal age, socioeconomic status, and maternal education.

We observed associations between maternal education with duration and initiation of breastfeeding. Maternal illiteracy has been associated with suboptimal feeding practices. Maternal education plays a role in increasing the receptivity of mothers towards correct practices. Lower literacy in mothers, in addition to lack of knowledge about correct practices and recommendations, makes routine counselling by community health workers also ineffective.

We did not find significant association of maternal occupation with exclusive breastfeeding despite housewives supposedly having more time available to feed their infants. One of the probable reasons for this is that working mothers carry their children at workplace and they are able to provide breastfeeding. A study in Malaysia reported that facility at workplace allowing mothers a flexible time to express breast milk helps in maintaining lactation.<sup>30</sup> conversely, there have been other studies observing maternal occupation associated with suboptimal feeding practices.

The current study did not find any association between type of family and exclusive breastfeeding. A study from Haryana found that large family to have an adverse relation with breastfeeding success.<sup>31</sup> which possibly translates to high likelihood of mother feeling embarrassed due to lack of privacy.

Discrepancies in the results between current study and other studies from India may be due to variation in the promotional and interventional activities across state and national level. Inconsistent results from other Indian studies can also be due to regional and cultural differences.

## CONCLUSION

Though there has been improvement in feeding practices at the national level since the last NFHS survey in 2005-2006, the current rates of proper feeding practices are still well below the targeted indicators. Late initiation of breastfeeding and nonexclusive breastfeeding are still prevailing. There is an alarming need of a prospective educational intervention study or new innovative practices to achieve the optimum feeding practices in infants.

The finding from the present study clearly highlights the importance of educating the women on specifically about exclusive breastfeeding practices. Mothers should also be encouraged to attend antenatal and postnatal care clinics where they are likely to be educated and counselled about breastfeeding practice.

This study has shown significant association with literacy of mother, mother's age and socioeconomic status with exclusive breastfeeding practices and the breastfeeding promotion should be instituted at an early stage when it would be possible to prevent the default. The information regarding the advantages and duration of breastfeeding needs to be provided for the community.

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