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Prevalence and Determinants of Exclusive Breastfeeding in Urban Slum

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Abstract:
Background:*Exclusive breastfeeding (EBF) for the first 6 months of life is the most effective preventive measurefor saving the lives of infants and children in country like India with high burden of under -five mortality.Despite of the demonstrated benefitsof breastfeeding the duration and prevalence are still low in first six months . Various social customs and misconceptions act as barrier to EBF.* ***Aims and objective:*** *To estimate the prevalence of exclusive breastfeeding practices among study population and to find out the factors affecting EBF.* ***Methodology:*** *A community based cross sectional study was conducted among mothers having at least one childinbetween 06-24 months of age. Considering the prevalence 54.9 % from NFHS4 (2015-2016) data with 95% confidence and a precision of 10.5%, 100 mothers were interviewed using pre tested semi structured questionnaire. Statistical analysis was done by using Chi-square test.* ***Results:*** *55% mothers have exclusively breastfeed their children up to 6 months or more. Mothers educational status, religion, socioeconomic status, ANC visits, place of delivery, counselling during ANC period and gender of the baby were the factors found to be significantly associated with EBF. Most common reason for partially or not breastfeed their babies was insufficient milk (40.4%).Colostrum was given only by 61% and most common reason for discarding colostrum was false beliefs (74.34%).* ***Conclusion:*** *The study shows that EBF practices is still low and more focus should be towards female empowerment and health care delivery system.*

Keywords: *Exclusive breast feeding, Prevalence, Determinant, Colostrum.*

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I. Introduction

The World Health Organization (WHO) defines exclusivebreastfeeding (EBF) as giving baby only breast milk for the first6 months without adding any additional drink including water orfood[(1).] Human milk is an incredible and renewable resource. It is a living and changing fluid that incessantly adapts to the needs of developing infants. It offers noteworthy immunological, developmental and nutritional benefits. Babies who do not receive breast milk are at risk for gastrointestinal infections, ear & respiratory infections, childhood cancers such as leukaemia, diabetes, obesity and lower intelligence and mothers who do not breast-feed have a higher rate of breast and ovarian cancer. These positive effects on mothers and babies remain despiteof political changes, climatic conditions, and environmental factors.[(2)]

Global Strategy for Infant and Young Child Feeding (IYCF) focusing on appropriateinfant feeding practices was developed in 2002 to revitalize worldattention to the impact that feeding practices have on the nutritional status, growth &development, health and survival of infants & young children. These globalrecommendations areInitiation of breast feeding immediately after birth, preferably within one hour, exclusive breastfeeding for first 6 month (180 days)and nutritionally adequate and safe complementary feeding starting after the ageof 6 month with continued breastfeeding up to 2 years of age or beyond.[(3)]

Prevalence of EBF remains less than desired. As per NFHS 4 (2015 -2016) prevalence of exclusive breastfeeding in India under 6 months age is 54.9% (urban=52.1%, rural=56%).[(4)]WHO and UNICEF launched the Babyfriendly Hospital Initiative in 1992 to strengthenmaternity practices to support breastfeeding.Exclusive breast feeding (EBF) is estimated to prevent approximately one tenth of child deaths and could play an important role in meeting sustainable development Goal 3 of reducing child mortality.[(5)]

Breastfeeding is a universal phenomenon in India, but breast feeding practices are far from optimal because they are influenced by socioeconomic factors, cultural background, psychological status, religious values, illiteracy, ignorance, lack of access to antenatal and postnatal care, inadequate training, knowledge and skills of breastfeeding. [(6)]

Cultural practices of different regions are diverse.The urban areas have rapid growth in slum populations living without traditional support of joint family system and underserved by medical facilities.Therefore, the present study was undertaken to understand the determinants of exclusive breastfeedingin urban slums of Meerut,Uttar Pradesh,India and by doing so we can formulate the local level plans at the grass root level.

II. Aims And Objectives

1. To estimate the prevalence of exclusive breastfeeding(EBF) practices among study population.
2. To find out the factors affecting exclusive breastfeeding.
3. To assess the awareness regarding colostrum.

III. Materials And Methods

A community based cross sectional study was conducted at Urban Health Training Centre,Surajkund which is the field practice area of Department of Community Medicine, LLRM Medical College Meerut.Women having at least one child between 06-24 months of age were interviewed using pre tested semi structured questionnaire.

Considering the prevalence 54.9% from NFHS4 (2015-2016) data with 95% confidence and a precision of 10.5%, a sample size of 89.79 was obtained,rounded to 100 mothers.

By using simple random technique mothers were contacted with the help of locally assigned ASHA and Informed consent was taken by explaining the survey on breastfeeding practices and benefits of exclusive breastfeeding for both mother and children.

Data was collected by interview and assessing the practices. The study wasdone for a period of three months(June to August, 2019).

Inclusion criteria:Permanent resident mothers of 6-24 months aged children who were willingto give information.

Exclusion criteria:Non-resident, not willing to give information and seriously ill mothers of 6-24 months aged children.

Study tool:

A semi structured pre designed pre tested questionnaire was used to collect data.Houseto house survey was done until the sample size was reached. Statistical analysis was done by using Chi-square test.

IV. Results

In the study 100 mothers having children between 06-24 months of age were included. Out of them, 55% mothers have exclusively breastfeed their children up to 6 months or more and 45% have partially breastfeed. Most of them were more than 25 years old (66).Only 22 were illiterate whereas 78 were literate. Majority were Hindu (64).Most of them belong to lower middle (26) and middle class (28) according to modified Kuppuswamy scale. Almost 87 mothers were housewives and only 13 were employed. Nearly 39 mothers live in nuclear family and 38 were primipara. Most of them (88) have at least visited one or more ANC clinic and 76 had institutional delivery. Majority had normal vaginal delivery (77) and about 70 mothers were counselled by health care provider regarding EBF. Mothers who have breastfed their baby within 1 hour of delivery were only 41.Nearly 21 mothers had low birth weight babies and male babies were 58 whereas female babies were 42.

In our study practice of EBF was higher (70.37%) in mothers who were graduate followed by Intermediate (61.5%), high school (55%), primary (5%) while among illiterates it was only 36.36% and EBF was significantly associated with the educational status of mother. Majority of the mothers who did EBF were Hindus (60.93%) followed by Muslims (44.44%) and religion was significantly associated. Mothers who belongs to upper middle class have highest rate of EBF (80%)followed by Upper class (70.58%) , middle (50%), lower middle (38.46%) and least in lower class (33.33%) and positively influences EBF. Nearly 46.15% employed mothers have breastfed whereas 56.32% housewives mothers have breastfed their babies and employment of mother was not affecting the EBF in the study. This may be due to break taken from job after delivery for 6 months or more. Among mothers living in nuclear family EBF was reported 51.28% while it was 57.37% in those living in joint family but not significantly associated.

Mothers who delivered in hospital 60.52% practiced exclusive breast feeding whereas only 37.5% practiced EBF who delivered at home and was positively associated with hospital delivery. Out of all women who underwent normal vaginal delivery EBF was reported only by 54.54% while it was 56.52% in case of caesarean section but had no significant association. EBF was high (60.23%) in mothers who had at least 3 ANC visits as compare to women who had no ANC visits (16.66%). EBF was practiced more (64.28%) in mothers who were counselled on exclusive breast feeding during their antenatal period as compare to those who were not counselled (33.33%).Both ANC visit and counselling during antenatal period have positive significant association with EBF. Among primipara 65.78% reported EBF while it was 48.38% in multipara. In mothers

who initiated breast feeding within one hour EBF was reported 56.09% and 52.54% in those who initiated BF after 1 hour. Mothers (57.14%) having Babies with low birth weight have EBF whereas it is nearly same (54.43%) with those babies having birth weight more than 2.5kg.Male babies were more exclusively breastfed (67.24%) compared to female babies (47.61%) and significantly associated with the gender of the child.
Nearly 45 mothers have not exclusively breastfeed their babies and the most common reason was insufficient milk in 40.4% mothers followed by not accepted by baby (20%), maternal illness (15.5%),advised by mother-in-law (13.3%) and some other reasons (6.66%) as shown in Table.3.Colostrum was given only by 61% of mothers while discarded by 39% (Table.4). Most common reason for not giving colostrum was due to false beliefs (74.34%), unawareness regarding colostrum (48.53%) [Table.5]. Majority of mothers have not given pre lacteal feed (64%) [Table.6]. Only 36 % have given prelacteal feed and the most common PLF given was honey(33.33%) ,ghutti (25%), top milk (22.22%), water (13.88%) and others 2(5.55%)[Table.7] .

TABLE.1 Distribution of Exclusive Breast feeding

Age of children in months	EBF(N)
1) <6 Months	45
2) 6 Months or more	55
Total	100

TABLE.2 Socio demographic profile of the study population.

Variables	Mothers	EBF Present N (%)	EBF Absent N (%)	P Value
1)Age				
Less than 25Years	34	20 (58.82%)	14(41.17%)	X^2=0.30
More than 25Years	66	35 (53.03%)	31(46.96%)	P=0.58
2)Education				
Illiterate	22	08 (36.36%)	14(66.63%)	X^2=18.05
Primary	18	09 (5%)	09(5%)	P=0.00*
High School	20	11(55%)	09(45%)	
Intermediate	13	08(61.5%)	05(38.46%)	
Graduate	27	19 (70.37%)	08(29.62%)	
3) Religion				
Hindu	64	39 (60.93%)	25(39.06%)	X^2=2.53
Muslims	36	16 (44.44%)	20(55.55%)	P=0.01*
4) Occupation				
Housewife	87	49 (56.32%)	38 (43.67%)	X^2=0.47
Employed	13	06 (46.15%)	07 (53.84%)	P=0.49
5)Socioeconomicstatus (kuppuswamy scale)				
Upper	17	12(70.58%)	05(29.41%)	X^2=11.58
Upper Middle	20	16 (80%)	4(20%)	P=0.02*
Middle	28	14(50%)	14(50%)	
Lower Middle	26	10 (38.46%)	16(61.53%)	
Lower	9	03(33.33%)	06(66.66%)	
6)Type of Family				
Nuclear	39	20(51.28%)	19 (48.71%)	X^2=0.35
Joint	61	35 (57.37%)	26(42.62%)	P=0.55
7)Parity				
Primipara	38	25 (65.78%)	13 (34.21%)	X^2=2.88
Multipara	62	30 (48.38%)	32 (51.61%)	P=0.08
8)ANC Visit				
None	12	02(16.66%)	10(83.33%)	X^2=8.09
At least 3	88	53 (60.23%)	35(39.77%)	P=0.00*
9)Place of Delivery				
Institutional	76	46 (60.52%)	30 (39.47%)	X^2=3.90
Home	24	9 (37.5%)	15(62.5%)	P=0.04*
10)Mode of Delivery				
Normal	77	42 (54.54%)	35(45.45%)	X^2=0.02
Caesarean Section	23	13(56.52%)	10 (43.47%)	P=0.86
11)Advise on EBF by health care provider				
Given	70	45(64.28%)	25(35.71%)	X^2=8.12
Not Given	30	10(33.33%)	20(66.66%)	P=0.00*
12)Initiation of BF				
less than 1Hour	41	23(56.09%)	18(43.90%)	X^2=0.12
more than 1Hour	59	31(52.54%)	28(47.45%)	P=0.72
13)Birth weight of				

Baby				
less than 2.5 kg	21	12(57.14%)	9(42.85%)	X^2=0.04
more than 2.5 kg	79	43(54.43%)	36(45.56%)	P=0.82
14) Gender of the Baby				
Male	58	39(67.24%)	19(32.75%)	X^2=3.87
Female	42	20(47.61%)	22(52.38%)	P=0.04*

TABLE.3 Reasons for not exclusive breastfeeding

Reasons	**N (%)**
1.Insufficient Milk	20(44.4%)
2.Maternal Illness	7(15.5%)
3.Not accepted by baby	9(20%)
4.Advised by mother in law	6(13.3%)
5.Others	3(6.66%)
Total	45

TABLE.4 Colostrum

	(N)
1.Given	61
2.Not given	39
Total	100

TABLE.5 Reason for discarding colostrum

Reasons	N (%)
1.False belief	22(74.34%)
2.Not aware	17(43.58%)
Total	39

TABLE.6 Pre lacteal feed

Prelacteal feed	(N)
1.Given	36
2.Not given	64
Total	100

TABLE.7 Distribution of prelacteal feed given

Food given	N (%)
1.Honey	12(33.33%)
2.Top milk	8 (22.22%)
3.Ghutti	9 (25%)
4.Water	5 (13.88%)
5.Others	2 (5.55%)

V. Discussion

The present study was designed to see the prevalence of exclusive breast feeding and evaluate various factors associated with exclusive breastfeeding. The prevalence of exclusive breast feeding in present study was 55%. As per NFHS-4 2015-2016, children under age of 6 months EBF in India is 54.9% and it is 52.1% in urban area..Almost similar finding was reported by Roy et al (56%) [7] ,Patel et al [8] (55.9%) ,Dixit et al.[9] (52.3%) and Akulwar et al.[10] (59.4%) respectively.

In the present study factors such as mother's educational status, religion, and socioeconomic status, ANC visits, place of delivery, counselling during ANC period and gender of the baby were found to be significantly associated with exclusive Breast feeding. Educational status of mother affect EBF was also documented in the study done Rajesh D et al.[11]where EBF was reported low (22%) among illiterate mothers as compared to educated ones . Dixit et al.[9] also had similar observation that literacy of mother, socioeconomic status of family, place of delivery, and counselling during ANC visits shows significant (<0.05) association with EBF. Another study by Akulwar et al[10]. also shows positive association of EBF and SES of the family.A study by Mog C[12] et al. also reported parity, place of delivery and number of antenatal check-up were significantly associated with exclusive breastfeeding. Panigrahi A et al.[13] reported higher prevalence of EBF in women with more than three antenatal visits. In our study mothers occupation and type of family has no association with EBF. Findings similar to the present study were reported by Akulwar[10] et al and Dixit et al[9]. Birth weight had not influenced the practice of EBF in our study similarly as Dixit et al[9] study. Age of mother, Parity and initiation of breastfeeding has no significant association with EBF. In the study 41% of the children received breastfeeding within one hour of birth while it was reported 55% in the study done by Akulwar et al. [10] Patel et al [8] reported 57.5% started breastfeeding within one hour of baby delivered.Present study shows

positive association of EBF with religion. EBF practice was reported low among mothers with Christian and another religious background in Eastern India and among mothers of Muslim background in Central region in the study done by Ogbo et al.[(14)]Age of mother and birth weight of the baby had no association with EBF reported in our study similar observation was reported by Dixit et al.[(9)]Gender of the baby is significantly associated with partial EBF and similar findings also reported by Ogbo et al.[(14)]

Most common reason in this study for not doing EBF was insufficient milk which is also documented in the study done by Dixit et al.[(9)] In the present study colostrum was given by 61% mothers while rest discarded it. The main reason was due to false beliefs among 74.34% followed by unawareness among 48.53% mothers. A study by Shikha et al[(17)] reported colostrum given only by 46.15% of mothers and majority of mothers (53.85%) discarded colostrum because of misconception , myths and lack of knowledge. Pre lacteal feed was given by 36% of mothers and the most common PLF given was honey. Similar finding was reported by Dixit et al.,[(9)]Himadri et al[(15)] and Verma et [al(16)].

VI. Conclusion

The above study shows that exclusive breastfeeding among infants in the age group of 0-6 months continues to be low in the urban slum. The urban slum population has very limited information about the appropriate breastfeeding practices and has a number of misconceptions. The factors such as educational level of the mother, socioeconomic status of family, religion, visit to antenatal clinics, counselling by health care provider during antenatal and postnatal period, institutional deliveries, and gender of the baby influences the practice of exclusive breastfeeding.The study emphasizes the need to address the problem related with EBF, especially issue of belief of insufficient milk and no milk ejection just after delivery by mothers. Improving educational status of mothers and hospital deliveries could improve EBF practices in this area. The trained local community health workers may bring favourable change in EBF practices by providing counselling regarding EBF, colostrum, proper attachment and support to lactating mothers, discouraging pre-lacteal feeds and should be more focused toward illiterate women.

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