



## **A study to assess the factors affecting exclusive breastfeeding among mothers of children up to 6 months in a selected hospital, Bangalore**

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### **Abstract**

Exclusive breastfeeding (EBF) is one of the optimal infant and young child feeding practices. Globally <40% of infants under 6 months of age are exclusively breastfed which is far less than the 100% recommended by the United Nation Children Emergency Fund. This study was carried out to find out the factors that influence the practice of exclusive breastfeeding in selected Hospital Bangalore.

**Methodology:** A cross-sectional quantitative study was conducted using structured questionnaires. Nonprobability convenient sampling technique was employed to select 40 nursing mothers who visited paediatric department at selected Hospital and were available on the days of data collection. Data were analysed using descriptive and inferential statistics.

**Results:** There was a significant association between Socio-Demographic characteristics of mothers such as age, educational status, occupational status, religion, type of family, monthly income.

**Conclusion:** This study helped to identify the Reasons for initiating the mixed feeding, 13 (92.9%) were initiated mixed feeding due to insufficient milk production, 9(64.3%) mothers started due to child does not gain adequate weight as well as painful breast. 6(42.9%) mothers started due to child refuse to take breast milk, 4(28.6) due to continuous cry of the child even after breast feeding. Generalization of this finding is limited due to less sample size. Perception of insufficient milk is one of the reasons for early cessation of exclusive breast feeding which made mothers to start mixed feeding at earliest. Health care professionals can prepare the interventions related to improve the perceptions of mother on low milk supply which can help in increase the duration of exclusive breast feeding which is essential for infant health.

Most nursing mothers use infant formula feeds as either supplement or substitute for breast milk based on their perception that breast milk may not be sufficient for the babies despite the high cost of these artificial milk. This puts the babies at a higher risk of compromised health and malnutrition which has the potential of increasing infant mortality. Most of the mothers are not practicing exclusive breastfeeding because of insufficient milk production.

**Keywords:** Exclusive breastfeeding, mothers, formula feed, mixed feeding, factors affecting

### **Introduction**

Breast milk is the natural first food for babies. It provide all the energy and nutrients that the infants need for the first month of life and it continues to provide up to one third, the second year of life. Exclusive breastfeeding in the first six month of life stimulates baby's immune system and protect them from diarrhoea and acute respiratory infections. Exclusive breastfeeding for first six months of life is now considered as global public health goal that is linked to reduction of infant morbidity and mortality rate especially in developing countries.

Exclusive breastfeeding (EBF) is one of the optimal infant and young child feeding practices. EBF is feeding infants (0-6 months of age) exclusively with breast milk for the first 6 months. Such children may take only Oral Rehydration Salt (ORS), drops, and syrups (vitamins, minerals, and medicines) in addition to their mothers' milk.

A mixed-method of qualitative approach Study explored determines of Exclusive Breastfeeding among employed women. Data were collected and the study revealed that factors affecting Exclusive Breastfeeding among employed women were Workload, employment status, lack of moral and social support, other influences like mass media, friends, personal factors, lack of time due to work, Low food intake Increased workload, stress, Family pressure, Breast and nipple problems, Lack of proper knowledge on Breast feeding practices.

### **Materials and Methods**

A descriptive study to assess the factors affecting exclusive breastfeeding among mothers of children up to 6 months in a selected Hospital, Bangalore. This study mainly focused on to identify the association between selected demographic variables and exclusive breastfeeding practices and to

identify the different factors leading to initiation of mixed feeding before 6 month of age of infant.

**Research design**

The research design selected for the study was non experimental descriptive research design

**Setting**

The study was conducted in paediatric outpatient department in selected Hospital, Bangalore. The study was limited to 40 mothers.

**Variables**

Demographic Variables: Age, Education, Occupation, Place of Residence, Sources of Information, Religion, Type of Family, Family Income per Month  
 Dependent variables: Exclusive breastfeeding

**Population**

It includes the mothers who are undergoing exclusive breastfeeding for babies of 6 months or below in Vydehi Hospital, Whitefield, Bangalore.

**Sampling**

The sample chosen for the present study was breast feeding mothers with infant below six months visiting pediatric OPD, Vydehi Hospital, Bangalore.

**Sample size**

The sample size for present study was 40 mothers who are undergoing breastfeeding.

**Sampling technique**

- Non probability-Convenient Sampling Technique was used for selection of sample based on the criteria.

**Ethical consideration**

- Formal permission was obtained from the concerned authorities.
- Formal permission was obtained from the concerned authority in the selected Institute, Bangalore.

**Data gathering process**

A formal letter seeking approval to conduct the main study was taken from concerned authority of ethical committee. Data are observable and measurable facts that provide information about the phenomenon under study. Data collection is the “The identification of subjects and precise systematic gathering of information relevant to research purpose or the specific objectives, questions or hypothesis of study”. The data collection was carried out from 13/05/22-20/06/22 by interview technique after taking formal consent from sample group.

**Results**

**Table 1:** Chi-square association between Socioeconomic characteristics and EBP and non EBP mothers (n=40)

Variables	Characteristics	EBP				X <sup>2</sup> *	p
		Yes(n=26)		No(n=14)			
		N	%	N	%		
1. Age of mothers (years)	a.20-24	7	26.9	8	57.1	10.33	0.021a
	b.25-29	12	46.2	5	35.7		
	c.30-34	7	26.9	1	7.1		
	d.≥ 35	0	0.0	0	0.0		
2. Place of residence	Urban	17	65.4	7	50.0	0.897	0.005a
	Rural	9	34.6	7	50.0		
3. Education status of mother	Graduate and above	6	23.1	4	28.6	0.362	0.343
	Primary school	16	61.5	8	57.1		
	Secondary school	4	15.4	2	14.3		
	No formal education	0	0.0	0	0.0		
4. Occupational status of mother	Full time work	3	11.5	0	0.0	2.393	0.028a
	Part time work	0	0.0	0	0.0		
	Home maker	22	84.6	14	100.0		
	Self-employment	1	3.8	0	0.0		
5. Type of family	Nuclear family	16	61.5	2	14.3	4.477a	0.034a
	Joint family	10	38.5	12	85.7		
6. Religion	Hindu	21	80.8	11	78.6	0.588	0.027a
	Muslim	5	19.2	3	21.4		
	Christian	0	0.0	0	0.0		
	Others	0	0.0	0	0.0		
7. Monthly income of family	10,000-20,000	9	34.6	7	50.0	3.956	0.012a
	20,000-30,000	13	50.0	7	50.0		
	30,000 and above	4	15.4	0	0.0		
8. Mode of delivery (present)	Normal Vaginal delivery	19	73.1	5	35.7	3.956	0.042
	Cesarean section	7	26.9	9	64.3		
	Instrumental delivery	0	0.0	0	0.0		
9. Types of parity	Primiparous	10	38.5	8	57.1	1.283	0.001a
	Multiparous	16	61.5	6	42.9		
10. Gender of infant	Male	15	57.7	8	57.1	0.972	0.001

	Female	11	42.3	6	42.9		a
11. Birth weight of infant	<2500 gm	9	34.6	4	28.6	0.778	0.251
	2500-4000 gm	16	61.5	10	71.4		
	4000gm and above	1	3.8	0	0.0		
12. Mothers with illness	Yes	3	11.5	9	64.3	12.057	0.001
	diabetes	1	3.8	1	7.1		
	Hypertension	1	3.8	1	7.1		
	Thyroid	1	3.8	5	35.7		
	Sore nipple	0	0.0	0	0.0		
	Small nipple	1	3.8	1	7.1		
	Swelling of breast	0	0.0	1	7.1		
13. Age of infant in months	No	23	88.5	5	35.7	3.272	0.651
	One	3	11.5	3	21.4		
	Two	5	19.2	1	7.1		
	Three	4	15.4	1	7.1		
	Four	6	23.1	4	28.6		
	Five	2	7.7	3	21.4		
14. Experience of EBP education (in pregnancy)	Yes	12	46.2	10	71.4	4.952	0.27a
	No	14	53.8	4	28.6		
15. Sources of breast feeding information	Health worker	4	15.4	3	21.4	0.554	0.205
	News paper	0	0.0	0	0.0		
	Relative and family	8	30.8	7	50.0		
	others	0	0.0	0	0.0		
16. Practicing bed sharing	Yes	23	88.5	13	92.9	0.195	0.112
	No	3	11.5	1	7.1		
17. Infant age on initiation of mixed feeding	Less than one Month	0.0	1	7.1			
	1 month-2 months	0.0	4	28.6			
	2 months-3 months	0.0	3	21.4			
	3 months-4 months	0.0	0	0.0			
	4 months-5 months	0.0	5	35.7			
	5 months-6 months	0.0	1	7.1			
18. Reasons for mixed feeding	Painful breast	0.0	9	64.3			
	Child refused to take breast milk	0.0	6	42.9			
	Lack of time	0.0	0	0.0			
	No sufficient milk	0.0	13	92.9			
	Child not stopping the cry even after breast feeding	0.0	4	28.6			
	Child does not gain weight	0.0	9	64.3			
	No support from husband or family	0.0	0	0.0			

**Discussion**

- The age of mothers with 20-24 years who practice EBP with YES is 26.7% (N-07) and No is 58% (N-08).25-29years with Yes is 46.2% (N-12) and No is 35.7% (N-05), 30-34 years with Yes is 26.5% (N-07) and No is 7.1% (N-01) so majority of age group between 25-29 years were practicing exclusive breast feeding. Here  $\chi^2$  -10.33 and P- 0.021<sup>a</sup>.
- Place of residence of mothers in urban area with Yes is 65.4% (N-09) and No is 50.0% (N-07) Rural with Yes is 34.6% (N-09) and with No is 50% (N- 07) Here  $\chi^2$ - 0.897 and P- 0.005<sup>a</sup>.
- Regarding educational status of mothers in primary school with Yes is 61.5% (N-16) and No is 57.1% (N-08). Graduate and above with Yes is 23.1% (N-06) and No is 28.6% (N-04).Secondary school with Yes is 15.4% (N-04) and No is 14.3% (N-02). So majority of primary school completed mothers practiced EBF comparing to graduates which is supported by cohort study done by gagandeep *et al.* found that educated mothers were more likely to discontinue exclusive breast feeding than non-educated mothers. Here  $\chi^2$  -0.362 and P-0.343.
- Occupational status of mothers with full time work with Yes is 11.5% (N-03) and Home makers with Yes is 84.6% (N-22) and No is 100% (N-14) and with self-employment 3.8% (N-01) Here  $\chi^2$ - 2.393 and P-0.028a. So Non-working mothers were positively associated with exclusive breast feeding.
- Based on type of family, Nuclear family with Yes is 61.5% (N-10) and No is 14.3% (N-02) and in Joint family with Yes is 38.5% (N-10) and No is 85.7% (N-12). So mothers in joint family majority (85.7%) not practiced the exclusive breast feeding. The early cessation of exclusive breast feeding among mothers in joint family compared to nuclear family. Here  $\chi^2$  -4.477 and p-0.034<sup>a</sup>
- Religion of mothers in Hindu with Yes is 80.8% (N-21) and No is 78.6% (N-11), Muslims with Yes is 19.2% (N-5) and No is 21.4% (N-03) Here  $\chi^2$ -0.388 and P- 0.027<sup>a</sup>.
- Monthly income of family of Rs.10,000-20,000 with Yes 34.6% (N-09) with No 50.0% (N-07) and 20,000-30,000 with Yes is 50.0% (N-13) and No is 50.0% (N-07) and 30,000 and above with Yes is 15.4% (N-04). Here  $\chi^2$ -5.238 and P-0.012<sup>a</sup>.

8. Mode of delivery (present) in Normal vaginal delivery with Yes is 73.1% (N-19) and No is 35.7% (N-05) caesarean section with Yes is 26.9% (N-07) and No is 64.3% (N-09) Here  $\chi^2=3.956$  and  $P=0.042^a$ .
9. Type of parity is primi parous with Yes is 38.5% (N-10) and No is 57.1% (N-08), Multi parous parity with Yes is 61.5% (N-16) and No is 42.9% (N-06). So exclusive breast feeding were more common among multiparous compare to primi mothers. Here  $\chi^2=1.283$  and  $P=0.001^a$ .
10. Gender of infant male with Yes is 57.7% (N-15) with No is 57.1% (N-08) and female infant with Yes is 42.3% (N-11) and No is 32.9% (N-06) Here  $\chi^2=0.972$  and  $P=0.001^a$ .
11. Birth weight of infant <2500 gm with Yes is 34.6% (N-06) and No is 28.6% (N-04) and 2500- 4000gm with Yes is 61.5% (N-16) and No is 71.4% (N-10), 4000 gm and above with Yes is 3.8% (N-1) Here  $\chi^2=0.778$  and  $P=0.251$ .
12. Mothers with medical illnesses Total (Yes) section with Yes is 11.5% (N-03) and No is 64% (N-09) and No is 64.3% (N-09) and (No) section with Yes is 88.5% (N-23) and No is 35.7% (N-05). Diabetics with Yes is 3.8% (N-23) and No is 7.1% (N-01), Hypertension with Yes is 3.8% (N-01) and No is 7.1% (N-01), Thyroid with Yes is 3.8% (N-01) and No is 35.7% (N-05), small nipple with Yes is 3.8% (N-01) and No is 7.1% (N-01). Here  $\chi^2=12.057$  and  $P=0.001^a$ .
13. Age of infant in months in one month with Yes is 11.5% (N-03) and No is 21.4% (N-03), two months with Yes is 19.2% (N-05) and No is 7.1% (N-01), three months with Yes is 15.4% (N-04) and No is 7.1% (N-01), four months with Yes is 23.1% (N-06) and No is 28.6% (N-04), Five months with Yes is 7.7% (N-02) and No is 21.4% (N-03), six months with Yes is 23.1% (N-06) and No is 14.3% (N-02) Here  $\chi^2=3.272$  and  $P=0.651$ .
14. Experience of EBP education (in pregnancy) with Yes is 46.2% (N-12) and No is 71.4% (N-10) and (No) section with Yes is 53.8% (N-14) and No is 28.6% (N-04) Here  $\chi^2=4.952$  and  $P=0.27^a$ .
15. Source of Breastfeeding information through Health workers with Yes is 25.4% (N-04) and No is 21.4% (N-03), Relatives and family with Yes is 30.8% (N-08) and No is 50.0% (N-07). Here  $\chi^2=0.554$  and  $P=0.205$ .
16. Practicing bed sharing with total with Yes is 88.5% (N-23) of the mothers had bed sharing practice those who are continuing EBF and No is 92.90% (N-13), In (No) section with Yes is 11.5% (N-03) and No is 7.1% (N-01). So those who shared bed with baby also many of the mother not practiced EBF Since sharing bed with baby is normal Indian culture in major groups which did not influence much on EBF. Here  $\chi^2=0.195$  and  $P=0.112$ .
17. Majority (35.7%) of mothers initiated mixed feeding at 5<sup>th</sup> to 6<sup>th</sup> month of age.
18. In this study identified that Reasons for initiating the mixed feeding, mothers were allowed to mark multiple option which given by researcher, 13 (92.9%) were initiated mixed feeding due to insufficient milk production, 9 (64.3%) mothers started due to child does

not gain adequate weight as well as painful breast. 6 (42.9%) mothers started due to child refuse to take breast milk, 4 (28.6) due to continuous cry of the child even after breast feeding.

### Conclusion

The aim of the study was to assess the “factors associated with exclusive breastfeeding among mothers with infant below 6 months”. Data was collected from 40 mothers by using structured questionnaire. The data was analyzed by chi square and Multivariate logistic regression statistics and presented in the form of table, pie chart and graph. The study revealed that the several factors associated with Exclusive breastfeeding. Mothers age, Place of residence, Maternal educational status, Occupation status of the mother, Type of family, Religion, monthly income of the family, Mode of delivery, Parity, Mother with medical illness, Exclusive breast feeding education were associated with exclusive breast feeding practice. This study found that Reasons for initiating the mixed feeding, 13 (92.9%) were initiated mixed feeding due to insufficient milk production, 9 (64.3%) mothers started due to child does not gain adequate weight as well as painful breast. 6 (42.9%) mothers started due to child refuse to take breast milk, 4 (28.6) due to continuous cry of the child even after breast feeding. Generalization of this finding is limited due to less sample size. Perception of insufficient milk is one of the reasons for early cessation of exclusive breast feeding which made mothers to start mixed feeding at earliest. Health care professionals can prepare the interventions related to improve the perceptions of mother on low milk supply which can help in increase the duration of exclusive breast feeding which is essential for infant health

### Conflict of Interest

The authors have no conflicts of interest regarding this investigation

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