

Factors Influence on Exclusive Breast Feeding (EBF) Practices among Mothers

Rajathi Sakthivel

Professor cum Head of Child Health Nursing Department, Arun College of Nursing, Vellore-01, India

Abstract: *The breast milk is unique gift from the mother to her baby; provides infants with defensive factors against many illnesses. Even with this significant, nearly 52% of infants are not receiving the EBF in Tamilnadu due to many other factors. Hence, the investigator decides to rule out the factors influence the Exclusive Breast Feeding (EBF) practices & associate with demographic variables of infant's mothers. The descriptive study design was adopted. Through the convenient sampling technique, 108 mothers who are all had infants in the age of 6 to 12 months were enrolled. The data were collected through structured interview method with the 18 questionnaire and analyzed by descriptive & inferential statistics. Out of 108 mothers, 53 % had the inadequate knowledge, 30 % moderate and remaining 17 % only had the adequate knowledge. The chi square value depicts that, the demographic variables of age, residence, parity, mode of delivery had significant association with the factors influencing of EBF practices at $P \leq 0.01$ and occupation, family type & support had significant association at $P \leq 0.001$. Hence, the poor knowledge and associated factors makes the mothers not to adopt the EBF practices for infants. Thus, there is an urgent need of educational instructional programs to increase the knowledge and pre & post-natal counseling to solve the issues must be a vital part to promote the 100% of EBF practices.*

Keywords: Factors, Influence, infants, Exclusive Breast Feeding (EBF) and Mothers

1. Introduction

The breast feeding is the natural step after the child birth and provides an inimitable bonding experience for the mother & the child. The breast milk is the inherent first food; gives all the energy and nutrients that babies need to survive & thrive in the first 6 months. It as well as protects the child against the infections which may also affect the health in their future [1]. The breastfeeding is the bond that sustains the mother and the child relationship; provides the perfect nutrition along with weaning, optimal physical and neurological development for the first years of infant's life too [2]. The International Organization of WHO and UNICEF recommends that, the initiation of colostrum within the first hour of life is the utmost food for the newborn and Exclusive breast feeding (EBF) for the infants, i.e. feeding only breast milk without any additional food or drink, not even water, for the first six months of life. They also recommend that the children can continue to breastfeed for the two years or beyond although receiving with age-appropriate complementary foods [3].

According to Global Breastfeeding Scorecard (2016), the mothers breastfeed their newborns within the first hour of birth is < 44%. The EBF rates in low & middle-income countries were 37% and only 23 countries reported that >60% specifically of Nepal, Peru, Rwanda, Sri Lanka, Swaziland, Uganda and Zambia. The overall global rate of EBF was 40% and the target to be achieved at the rate of 50 % in 2025. Although, the world Health Assembly (WHA) stressed the countries where the rate of EBF is 50% or more should aim to increase the rate by 1.2% every year [4]. In India, the percentage of infants received breastmilk within 1 hour of birth were 41.6% and the overall EBF of the infants were 54.9% (NFHS4). Among the South Indian states, the EBF rates were highest in Andhra Pradesh (71.1%) and other following states are Telangana (56.8%), Karnataka (54.2 %) and Kerala (53.3 %). The Meghalaya, Nagaland, Puducherry, Tamil Nadu & Uttar Pradesh was lower than

50%. In Tamil Nadu, only 48 % of infants were received EBF for 6 months and 55% newborns were breastfed in the first hour of life [5]. The India New born Action Plan (INAP-2014) also targeting the initiation of breastfeeding within an hour of birth 90% in 2025 [5,6].

1.1. Need for the study

The breastfeeding is a safe, unequalled way of providing ideal food and cornerstone for child survival. It as well serves as a baby's first immunization and offers a child protection against the respiratory, gastro intestinal infections, non-communicable diseases and the other potentially life-threatening ailments [7]. The breastmilk is associated with 64% reduction in the incidence of non-specific gastrointestinal infections and 30% lower risk of rotavirus diarrhea. There is also a residual protective effect for up to two months after discontinuation of lactation. On the other hand, exclusively the formula fed infants have an 80% increase in the risk of diarrhea [8]. Globally, the suboptimal breastfeeding could cause for 8,04,000 or 11.6% of total child mortality. The simple intervention of breastfeeding within an hour of birth could prevent 20% of the newborn deaths; Infants who are not breastfed are 15 times more likely to die from pneumonia and 11 times from diarrhea than the children who are exclusively breastfed [9].

The World Breastfeeding Trend Initiative (WBTI, 2015) also addressed to ensure that every child is placed to breast immediately after birth and EBF during the first six months of life. It also suggests that, the scaling up EBF to a near-universal level could prevent annually 8,23,000 deaths in under 5 children and 20,000 deaths from breast and ovarian cancer [10]. Even though breastfeeding is a natural act, but the milk has not begun to flow regularly hence the several factors that pushes the breastfeeding percentage down. It includes pre-lacteal feeds limit the frequency of sucking by the infant, lack of designated places for women to feed the child, poor knowledge, work stress, not understanding of the concept and family pressure makes the mother to feed in sub

optimal breast feeding[11]. Hence, the investigator has planned to identify the factors that influence of EBF and its associated variables of mothers/infants to end with sub optimal breast feeding. This study also aims to achieve the global target of 5 i.e., to increase 50% of EBF rates by 2025.

2. Materials & Methods

The necessary ethical and administrative permission was obtained. The descriptive cross-sectional study design was carried out in outpatient department of Arun specialty hospital, Vellore, district. The non-randomized, convenient sampling technique was used to select the samples of 108 mothers. Based on the inclusion criteria the following participants were enrolled in the study. They are,

2.1 Inclusion Criteria

The mothers who are,

- Had infants of >6 months to 12 months of age (up to the age of 1 year)
- Had newborn in the normal weight and free from congenital anomalies.
- Apparently healthy.
- Knows Tamil and English.
- Willing to participate.

2.2. Exclusion criteria

The mothers who are,

- Taking long term drugs (psychiatric and HIV medications)
- Had preterm and sick newborns.
- Not co-operative.

After getting the informed consent, approximately 25-30 minutes was used to collect the data from the participants by structured interview method without having any possible interaction with other participants.

2.3. Description of Instrument

The structured interview questionnaire was prepared; based on the WHO guidelines of EBF (2017) updates, extensive review of literatures, expert's opinions and investigators personal experiences. The Performa has III sections.

Section I: It consists of demographic variables of mother's age, infants' sex, education, working status, religion, type of family and residence

Section II: It comprises of background variables of parity and mode of delivery.

Section III: It contains the structured questionnaire related to knowledge EBF (8) and breast-feeding practices(10). Regarding the knowledge wise scoring key was interpreted as, Inadequate (0-50%), Moderate (51-75%) and adequate 76-100%.

3. Data analysis and Interpretation

The collected data were analyzed by using the descriptive & inferential statistics and based on objectives the results were discussed as follows,

3.1. Regarding the demographic and background variables

The number and percentage wise distribution of demographic and background variables of mothers were illustrated in table I. The mean age of mothers were 25.08 ± 0.29 years and concerning with infant's sex females (53%) were little more when compare to males (47%). Considering with educational status, nearly half of mothers i.e., 48% were completed the higher secondary education and 32% were only employed. Regarding the socio- economic status, nearly 60% were in class II. In regard to the religion, 50% of mothers belongs to Hindu and next half of mothers were equally divided in to Muslim and Christians. The majorities i.e., 72% were living in nuclear family and 62% resided in urban areas. Apart from this, more than 65% of mothers had no parity and normal vaginal delivery. Similarly, Liben ML., (2016) stated that among 346 study participants 82 % of mothers were in the age group of 20–34 years and 24.3 % were household heads.¹² In the other study, intended of 38,854 participants the mean (\pm SD) age of the mothers was 25.08 years (\pm 6.65) and majority of 98.4% had normal vaginal delivery [13].

Table 1: shows Number and percentage wise distribution of demographic and background variables of the mothers

S.No.	Variables	Response	No.	%
1	Mother's age (years)	18- 21	25	23.1
		22-25	30	27.7
		26-29	40	37.1
		>30	13	12.1
2	Infants sex	Male	51	47.2
		Female	57	52.8
3	Educational status	Primary	4	3.7
		Secondary	31	28.7
		H. secondary	52	48.2
		Graduate	21	19.4
4	Working status (up to first 6 months)	Employed	35	32.4
		Unemployed	73	67.6
5	Socio economic status (modified Kupuswamy scale)	Class II	65	60.2
		Class III	32	29.6
		Class IV	11	10.2
6	Religion	Hindu	54	50
		Christian	28	25.9
		Muslim	26	24.1
7	Type of family	Nuclear	68	72.2
		Joint	40	27.8
8	Residence	Urban	68	62.9
		Rural	40	37.1
9	Parity	0	69	63.9
		1	39	36.1
10	Mode of delivery	Normal	67	62.1
		LSCS	41	37.9

3.2 The first objective was to assess the knowledge of EBF among mothers

Regarding the level of knowledge among 108 mothers, 57 mothers had inadequate knowledge, 33 mothers were moderate and 18 mothers had adequate knowledge. The level of knowledge regarding EBF of mothers in percentage wise depicted in figure 1. The similar findings were seen in **Al-Mutairi(2017)** revealed that, out of 252 mother's the excellent knowledge was observed only in 12.7%, good knowledge 57.1% and unsatisfactory level in 30.2% [14]. In other study, the mothers residing in Abha city reported that, the knowledge of EBF was excellent in 30.7%, good 55.3% and unsatisfactory 14%. It revealed that, still there is a need for better educational programs in order to increase the awareness of EBF & its benefits especially to the mothers. [15]

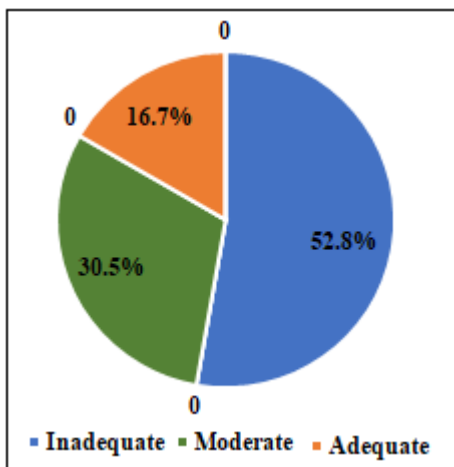


Figure 1: Knowledge regarding EBF of mothers in percentage wise

3.2.1. To assess the level of EBF practice and its factor influencing among the mothers

The EBF practice is the golden standard of the infant feeding up to 6 months. In Table 2 depicts the number and percentage wise distribution of EBF practices among the mothers in this study. Regarding the initiation of breast feeding as soon as birth, nearly half of percentage infants i.e., 52% only had breast milk within 1/2 to 1 hour, majority 86% of infants were not received pre-lacteal feeds of sugar water & honey and 94% of the infants were received colostrum. But the remaining 6% of infants were not received the colostrum due to various maternal and fetal causes. The similarity of the result was found in **Adugna et al.**, study reveals that, more than three-fourth (89%) of mothers provided colostrum to their infants while others discarded the first milk until the white milk was produced and large number of mothers (42.8%) started breastfeeding one hour after childbirth. [13] In south Ethiopia, the cross-sectional survey identified that 25.5% infants were exposed to top two pre-lacteal feeds especially of Boiled water (36.8%) and fresh butter (32.2%) [16]

Table 2: Shows number and percentage wise distribution of EBF practices among mothers

S.No.	Questionnaires	Response	No.	Percentage
1	Initiated time of breast feeding?	Within 1/2-1 hour	56	51.9
		1-2 hours	44	40.7
		>2 hours	8	7.4
2	Pre-lacteal feeds given?	Yes	15	13.9
		No	93	86.1
3	Colostrum given?	Yes	102	94.4
		No	6	5.6
4	How often did you breast feed for first 6 months?	1-3times/day	19	17.6
		4-6times/day	21	19.4
		on demand	68	63
5	What are all given in the first 6 months of life?	Exclusive Breast milk	53	49.1
		Water/ gripe water	14	12.9
		Cow's milk	12	11.1
		Formula feeds	13	12.1
		others	16	14.8
6	Duration of EBF	1month	96	88.8
		2 months	90	83.3
		3 months	78	72.2
		4 months	65	60.1
		5 months	57	52.7
7	Family members	Supportive	81	75
		Non supportive	27	25
8	Source of knowledge	Health care professionals	71	65.7
		Family members	22	20.4
		Mass medias	15	13.9

Next, the majority 63% of the mothers were fed their infants on demand and remaining the 37% mothers breastfed their infants 1-6 times/day. These infants' mothers continued the breast feeding along with formula feeds, water, juice, dhal water, tender coconut water in first four months of life itself and some infants received the commercial weaning products at starting of 5th month onwards. Nearly 49% mothers only EBF their children up to six months and the duration of EBF rates are low as infants are progressing in their age. The similar findings were in **Setegn et al.**, (2012) revealed that, the median duration of EBF was three months and mean frequency of breastfeeding was six times per day [17]. In other study of **Nyanga** (2012) stated that, rate of EBF decreased with an increase of infant age [18].

UNICEF (2015) report stated that, the infants aged less than 2 months were seven times more likely to had EBF. It revealed that, as the age of the infant approached to 6 months the rate of EBF decreased significantly and hampered by traditional feeding practices of giving water and food supplementation prior to 6 months. It also depicted that, 70% of the mothers were perceived even the children less than 6 months of age would be thirsty especially in summer and therefore they should be fed water. Hence, the individual and the group counselling of mothers with the family members are needed to enhance EBF practices [19]. In the present study, the majority of 75% mothers were had family supports for EBF practices and 66% of mothers were had information through the health care professionals during ante/postnatal counselling & regular checkup for infants when compared to family members and medias. This study findings are similar with **Singh J et al.**, revealed that, out of 350 participants 320 (91.4%) lactating mother had information about EBF in which their main source of information were health professionals (57.4%) [20]. The

contra verse view in other study stated that, out of 277 participants most of the people choose the electronic media

209 (53.2%) as compared to health professionals 135 (34.4%) as their major source of information[21].

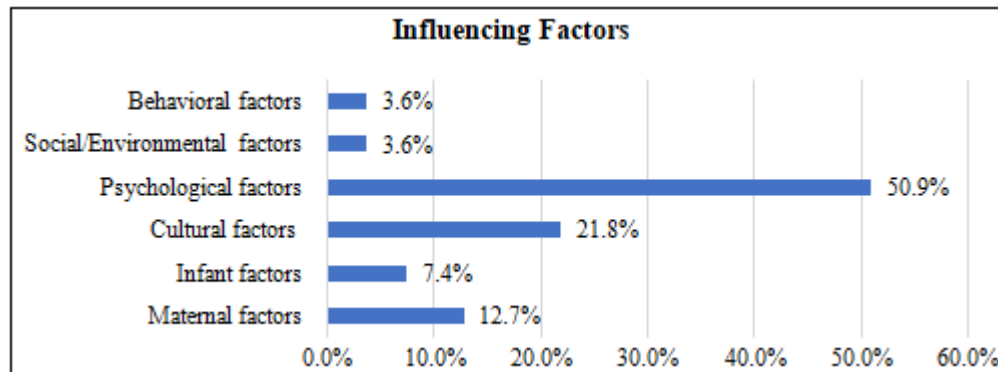


Figure 2: Depicts the percentage wise distribution of factors influencing on not practicing of EBF

The EBF is not easy to achieve, there are many reasons / factors behind low rate EBF in India. In figure ii depicts that, the percentage wise distribution of the factors influencing for not practice EBF in this study. Among the 55 mothers, the half (51%) of mothers were influenced by major factor of psychological issues due to family unsupportiveness, postnatal stress and depression causes inadequate milk secretion /no milk secretion. The next major factor of cultural influences of pre-lacteal feeds/gripe water for giving unreasonable cry makes to 22%. Next, the maternal (12.7%) causes were LSCS/sterilization/cracked nipples and not able to sit & feed whereas the infant (7.4%) factors are unreasonable cry, ear infection and swallowing difficulties makes non EBF practices. The equal percentage i.e., 3.6% of social/ environmental/ behavioral factors like going for job/ceremonies or temple and refusal of feed makes also to not adopt the EBF practices.

This similar study findings are supported by, **Kimani-Murage et al** reported that, the mothers and social workers belief of giving water and sugar/glucose and/or salt or commercially prepared mixture of water (gripe water) to protect the baby from stomach problems that affects the duration of EBF. The behavior change communication on appropriate EBF practices is highly recommended[22]. In other similar study, **Mututho LN** found out that low commitment level, lack of social support and lack of prior exposure to breastfeeding were risk factors for abandoning EBF (13). In other study among the 312 women found that, the socio-economic factors influencing EBF were, 53% were unable to exclusively breastfed their babies due to large family sizes, 72.6% due to poor income and occupation [23]. **Nkala TE**, done the study in Tanzania revealed that, the mothers who have problems of cracked/sore nipples were likely to affect their EBF practices [24].

3.3. To associate EBF practices with the selected demographic variables of mothers

The breast milk is the natural first food and as well as act as a vaccine, for protecting the infants from potentially dead diseases, promotes sensory and cognitive development and giving them all the nourishment, they need to survive and thrive. Hence, significant predictable/associate factors are essential to enhance and enrich the EBF practices. The table iii shows the associate factors of EBF practices with

demographic variables of the mothers in this present study. Regarding association, nearly 74% mothers in the age of 25 years and above were only followed the EBF practices when compared to 18-25 years hence the knowledge level of EPF practices of mothers were increased in the age of 25 years and above when compare to younger age groups. It was supported by, prospective cohort study in the African sites, identified the associated risk factors of EBF were higher in <20 years or >35 years of maternal age. Conversely, younger mothers were more likely to practice EBF as reported by Ogada [25].

Table 3: Shows the associate factors of EBF practices with demographic variables of mothers

S.No.	Variables	EBF(%) 53	Non-EBF(%) 55	X ²	
1	Age of mother	18-25 years	14 (26.4)	41 (74.6)	9.58 P=0.01**
		25 and above	39 (73.6)	14 (25.4)	
2	Working status	Employed	3 (5.6)	32 (58.2)	5.94 P=0.01**
		Unemployed	50 (94.4)	23 (41.8)	
3	Family type	Nuclear	16 (30.2)	52 (94.5)	10.39 P=0.001***
		Joint	37 (69.8)	3 (5.5)	
4	Residence	Urban	14 (26.4)	50 (90.9)	7.65 P=0.01**
		Rural	39 (73.6)	5 (9.1)	
5	Parity	0	40 (75.5)	19 (34.5)	6.69 P=0.01**
		1	13 (24.5)	36 (65.5)	
6	Delivery mode	Normal	39 (73.6)	28 (50.9)	7.91 P=0.01**
		LSCS	14 (26.4)	27 (49.1)	
7	Family members	supportive	50 (94.3)	16 (29.1)	14.29 P=0.001***
		Non supportive	3 (5.7)	39 (70.9)	

** high significant at $P \leq 0.01$, *** very high significant at $P \leq 0.001$

Regarding the working status, nearly 58% of the mothers were not following EBF because of their employment especially in private sectors. Similarly, it was supported by **Chekol DA et al.**, the exclusive breastfeeding was higher among unemployed 48.0% with 95% Confidence Interval (CI) (42.0%, 54.0%) than employed (20.9%) with 95% CI (16.0%, 25.0%) [26]. In other study stated that, housewives had the significant longer duration of EBF (4.68+-1.97) when compared to the mothers with either part time (4.21+-2.01) or full time jobs (4.02+_2.12). The households in which only one parent is a financial contributor are more likely to adopt EBF at 83.9% vs 66.7% at $p < 0.05$ [27]

In regard to parity, 76% primipara mothers were able to feed their infants exclusively and it was reinforced with normal vaginal delivery(74%)when compare to caesarian section (26%) since they have enough time to feed their children exclusively for up to 3 months and then need supportiveness with family members to continue the EBF.In converse, the **Patel** Reveals thatthe primiparous mothers are less likely to practice exclusive breastfeeding throughout 6 months and less likely to breastfeed for 2 years and more [28].In the other study, the practice of EBF increases as the baby's rank is high, rising from 73.3% for the first children to 83% for the children of 4th rank or higher [29].

Considering with the family type and supportiveness the 70% of the mothers who are in all joint family and 94% family member supportiveness influence more to adopt the mothers of EBF and it was significant at $p=0.001$. The similar findings are seen in, **Aghaji** revealed that among 312 women in Nijeria, 53% were unable to EBF babies due to large family sizes and family support [30]In contrast, the other study revealed that 68.3% were able to feed their babies even in small family size [31]

4. Recommendations

Breastfeeding is an unequalled way of providing ideal food for the healthy growth anddevelopment of the infants; it is also an integral part of the reproductive process with important implications for the health of mothers too.As the scope for the future research; it is recommended that,

- A well-drafted IEC (Information, Education and Communication) activity specifically targeting to adolescent girls and antenatal mothers can be implemented.
- Impart community education regarding EBF and its importance in both genders especially postnatal counselling.
- School based health education programs should be carried out to higher classes of late adolescents especially about avoidance of pre lacteal feeds and importance of EBF
- Community-based interventions can be implemented for promoting breastfeeding and providing counselling to support the mothers to breastfeed their children.
- Each woman needs her unique situation to be understood, empathized and supported by trained counselors,” who supports mothers for early and EBF by face to face counseling at healthcare.
- Comparative study can be conducted with Rural and urban mothers
- Qualitative study can be conducted regarding the barriers of knowledge and attitude of EBF among mothers to be identified and addressed.
- The pre and postnatal counselling including of the human milk collections, storage and educational interventional programs are needed in both urban and rural areas can help to minimize the associated factors and promote psychological aspects of the mothers.
- Based on potential barriers the need based interventional programs can be planned at community and National level.

5. Conclusion

The breastfeeding is a natural act but it is also a learned behavior. The early and essential breastfeeding initiation is a simple intervention that has the potential significant to improve neonatal health outcomes. It also provides the essential irreplaceable nutrition, rich in antibodies and enzymes that inclines the child to gain better weight, higher IQ, acquire immunity, less prone to allergies and reduces the risk of ovarian & breast cancer in the mothers.This study findings revealed that,breastfeeding is not only a mother's responsibility, there is need to counsel forother members in the family and all sectors of the society to make EBF successful.To achieve these rates, there is a need to increase the knowledge regarding EBF in the community and creating andenabling the environment for mothers, especially the working mothers through education and support makes to reduce the infant's mortality and morbidity with in early life.

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Author Profile



Dr. Rajathisakthivel completed the graduation, post-graduation, doctoral studies in The Tamilnadu Dr.M.G.R. Medical University, Guindy , Chennai, Tamilnadu, India. she also completed M.A (Psychology), PG Diploma in Hospital Management (PGDHM) from Annamalai University, M.Phil (Guidance and counseling) in Mother Theresa Women's University in Kodikananl, and PG dipoma in Yoga education from Allagapa University in Tamil Nadu. She rendered the clinical services for 2 years as ICU staff nurse at Apollo hospitals; more than 13 years of academic services and hold various posting like lecturer, associate professor and professor in Sree Balaji College of Nursing, Chennai and guided for many students in UG, Post B.sc & PG students for their research work. Right now, working as professor cum HOD of Child Health Nursing in Arun college of Nursing, Vellore. Till now credited with many publications in indexed journals (24 articles) and presented 8 scientific papers in state, national and international conferences.