

Facilitators and Barriers of Exclusive Breastfeeding Practices among mother of infants in selected district

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Abstract - Background: Breastfeeding provides the finest nutrients for nourished babies. It is the ideal diet for a child's growth and development. Despite the well-publicized importance of EBF in developing nations, many communities continue to have the highest percentage of illness burden due to inadequate breastfeeding.

Objectives: To determine the mother perception on facilitators and barriers of EBF practices in Kancheepuram district Sriperumbudur, Taluk

Design and Methods: This research used a community-based cross-sectional study. The samples were gathered using a targeted sampling strategy. The data was acquired using an interviewer-administered structured questionnaire. Spss gathered and tabulated the information. The Statistical method was adopted for the study was descriptive and inferential statistical This research used a community-based cross-sectional study. The samples were gathered using a targeted sampling strategy. The data was acquired using an interviewer-administered structured questionnaire. Spss gathered and tabulated the information. The Statistical method was adopted for the study was descriptive and inferential statistical

Result: The barriers for EBF result were mother are having more percentage of barrier score for the statement concern that certain food mother eat will make the baby sick 77.50% and less barrier score for the statement of score or painful nipples (22.00%). The percentage of mean score was 33.50% of physical barrier and 60.20% of psychological barrier and knowledge barrier were 55.71%

The association of demographic, maternal and infant variables was confirmed by using one way analysis of variance 'F' test and student independent 't' test

Conclusion: These findings revealed that the need to modification of hospital practices such as decreasing the number of 'c' section and use of infant formula as well as support for initiation of breast feeding immediately after birth of the baby and continuation of EBF by health care workers and family members, could help increase breast feeding practices

Key words: EBF, Facilitators, Barriers, Mother and infants

1. Introduction

Breast milk provides the ideal nutrition for infants, It has a nearly perfect mix of vitamins, proteins and fat everything your baby needs to Grow [1] Breastmilk contains antibodies that help your body fight off viruses and bacteria, Breast feeding lowers baby's risk of having asthma or allergies.[2]

The WHO recommends “breastfeeding within one hours of birth (timely initiation), and exclusive breast feeding (EBF) during the first six months of an infants like with continued breast feeding along with appropriate complementary feeding to two years of age or beyond [3]

Today only 38% of infants around the globally are exclusively breast fed for 6 months of life [1,2]. In India according to NFHS (National Family Health and survey) reported that 26 million babies are born annually out of which 20 million infants do not receive EBF[4]

In Tamilnadu according to NFHS 2019 reported that early initiation and exclusive breast feeding practices within one hour of birth was 58.8% children under age 6 months exclusively breast fed was 48.3% [4,5]

The WHO outlines a number of measures to contribute to the initiation and continuation of breast feeding, both within the health system and at the community level, in which physical, social, psychological, emotional, social factors can influence the type of feeding the mother offers to the baby (3).

The type of infant feeding is associated with health inequalities, socio cultural issues, societal norms and public policies administered through the perception of low milk supply or low quality of human milk are common reasons for unsuccessful breast feeding

Therefore the aim of this study was to find out the facilitators and barriers of EBF practices among mothers of infants understanding these facilitators and barriers of EBF practices at individual and community levels could informs the designing at effective intervention specific for this and other similar population .This has the potential to reduce the burden of poor infant nutrition by promoting the uptake of EBF to the who recommended target of at least 50% by 2025[7].

2.Subjects and methods:

This community based cross sectional study was conducted in Sriperumbudur Taluk, Kancheepuram district, Tamilnadu between June 2021 to August 2021

2.2 Development and validation of questionnaire:

The study used interviewer administered structured questionnaire which was developed based on previous literature reviews. The total was translated into the local language. The toll was validated by peer review and reliability

Established from review by the subject experts. It comprised of five sections viz Demographic variables, Maternal variables, Infant variables, check list on facilitators and barriers of EBF practices. In facilitators there were 14 items which was related to breast feeding separately for working and non-working women. There were 20 items in barriers for EBF like physical, Psychological, social and knowledge.

Data was analyzed using spss version 15.0 primary demographic, maternal and variable problem were expressed in frequency and percentage. Mean and SD was used to determine the facilitators of EBF practices. One way ANOVA ‘F’ test was used to associate between facilitators and their variable like demographic, maternal and infant variables proforma.

2.3 Study subject and data collection method

The study population included infants aged 6 months to one year, mother attended the immunization clinic. The exclusion the biological mother and any major congenital malformations. The present study a total of 80 mothers of infants were interviewed Data was collected using purposive sampling technique. The participants were selected with the help of community health workers, Auxiliary, nurse midwives Anganwadi workers and village health nurse.

An interviewer administered questionnaire which was translated to the dominant local language tamil was used to collect data from the mothers then back to English for consistency. Key informant interview guides were also designed to cater for both English and tamil speaking participants. The questionnaire for mothers contained some questions adopted from the Iowa Infant Feeding Attitude Scale (IIFAS).

The research instruments were pretested for validity, reliability and clarity. Face to face interviews were carried out in a secluded place or private room to promote confidentiality. Researchers continued to visit the clinic or hospital or EPIO point for interviews on immunization days until the sample size specifically calculated for the health facility was reached.

2.4 Variables of the study

The dependent variable was practicing EBF which refers to feeding the baby on breast milk only from birth up to the age of six months. Mothers who reported correctly practicing EBF were coded ‘EBF’ whilst those who did not were coded ‘non-EBF’. The independent variables for the study were categorized into demographic data like Age of the mother, Religion, Occupational status, Education and maternal factors (Age at menarche, Type of delivery, mode of delivery), infant factors (age, sex, birthweight, Weaning factors).

Mothers with infants 6–12 months of age visiting the immunisation facilities during the period of the study were approached for interviews. A written consent form was issued to mothers who met the inclusion criteria and only those who consented to participate in the study were interviewed. Caregivers who were not the mother of the baby and mothers who refused to consent for interviews were also excluded from the study.

Data analysis

The collected quantitative data were entered and cleaned using Epi Info version 7 before analysis whilst qualitative data was collected from the key informants through use of open-ended questions in the interviewing tool used. The qualitative data obtained were analyzed according to major themes raised during the interviews. Frequencies, means and percentages were used to describe maternal and infant demographic characteristics, knowledge and attitudes on EBF. In measuring maternal knowledge, a correct response was awarded a score of one and an incorrect answer a zero out of a total score of five.

Descriptive statistics, bivariate and multivariate analysis were done in order to ascertain the association between the dependent and independent variables. Multivariate analysis was carried out to measure the strength of interrelationships of several variables at once. Variables such as maternal age, marital status, mode of delivery were inputted simultaneously and compared. A resulting *p* - value of less than 0.05 was considered to be statistically significant.

Results

Socio demographic characteristics

Table 1 shows the maternal socio demographic characteristics for mothers who participated in the study. The mean age was 26 ± 6 years and 67% of the study participants were in the age group 20–30 years and 64% did not practice EBF. Most mothers were married and had one or two children. The majority were educated to secondary school level, were unemployed and resided in rural areas. Partners/husbands were the major income source in nearly three quarters of the study sample and more than half of the women gave their infants plain water before the age of six months. The majority (99.6%) of the participants in this study fed their babies on breast milk but the EBF rate was low (36%).

Table 1: MOTHERS DEMOGRAPHIC VARIABLE

N=80

Variables Of The Study		Number of mothers	%
1.Age of the mother	< 20 years	28	35.00%
	21 -30 years	33	41.25%
	>30 years	19	23.75%
3. Educational Status	Illiterate	10	12.50%
	Primary	13	16.25%
	High school	16	20.00%
	Higher secondary	30	37.50%
	Graduate & Above	11	13.75%
4. Occupational Status	Home maker	30	37.50%
	Private Employee	18	22.50%
	Government employee	3	3.75%
	Business	7	8.75%
	Coolie	22	27.50%
5. Monthly income of the family	Below 5000	18	22.50%
	Rs.5001 – Rs.10000	34	42.50%
	Rs.10001-Rs.20000	20	25.00%
	Above Rs.20000	8	10.00%
6. Type of family	Joint	34	42.50%
	Extended	12	15.00%
	Nuclear	34	42.50%

Table 2: MATERNAL VARIABLES

N=80

Maternal variables		Number of mothers	%
1.AGE AT MARRIAGE	18-23 years	56	70.00%
	24-29 years	17	21.25%
	30-35 years	7	8.75%
	>35 years	0	0.00%
2.Parity	One	61	76.25%
	Two	17	21.25%
	Three	2	2.50%
	>Three	0	0.00%
3. No of ANC visits	0 -4	50	62.50%
	5 -8	27	33.75%
	9 -12	3	3.75%
	>12	0	0.00%
4.Gravida	One	27	33.75%
	Two	42	52.50%
	Three	11	13.75%
	>Three	0	0.00%
4A.Place of delivery	Home delivery	13	16.25%
	Hospital	67	83.75%
4B.Type of delivery	Normal vaginal delivery	55	68.75%
	Caesarean section	20	25.00%
	Instrumental delivery	5	6.25%
5.Dietary pattern	Vegetarian	20	25.00%
	NonVegetarian	60	75.00%
6. No of children	One	61	76.25%
	Two	18	23.75%
	>Two	0	0.00%

Above table shows the maternal information of mothers those who are participated in this study. Regarding age at marriage 70% were in 18- 23years , 21.75% were in 24- 29 years, 8.75% were in 30- 35years . concerning parity 76.25% were in one, 21.25% were in two, 2.50% were in three, regarding to no of ANC visit 62.50% were in 0-3%, 33.75% were in 5-8 , 3.75% were in 9-12. Regard to Gravida 33.75% were in one , 52.50% were in two, 13.75% were in three. Concerning place of delivery 16.25% were in home delivery, 83.75% were in hospital. Regarding type of delivery 68.75% were in normal vaginal delivery , 25% were in instrumental delivery 6.25% were in caesarean section. Regard to dietary pattern 25% were in vegetarian ,75% were in non- vegetarian. Concerning no of children 76.25% were in one, 23.75% were in two.

Table3 : Domainwise Checklist on Facilitators for Exclusive Breastfeeding among Mothers of Infants

N=80

Items	Maximum score	Mean	SD	% of mean score
For not working women	10	7.09	1.42	70.90%
For working women	4	2.51	1.07	62.75%
Overall	14	9.60	1.75	68.57%

70.90% of the not working mothers are Exclusive Breastfeeding and whereas only 62.5% of the working mothers are practicing Exclusive Breastfeeding , 68.57% were in overall.

Table 4 : Domainwise Barriers for Exclusive Breastfeeding among Mothers of Infants

N=80

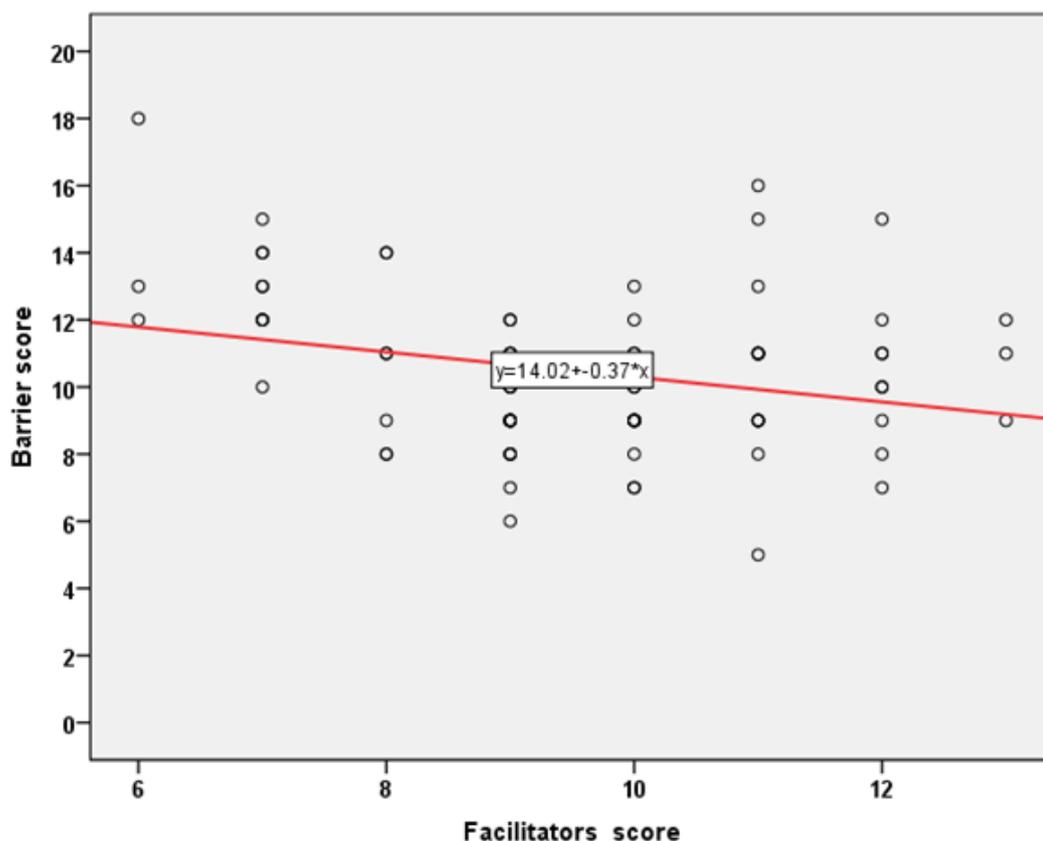
	Maximum score	Mean	SD	% of mean score
Physical Barrier	4	1.34	1.18	33.50%
Psychological Barrier	5	3.01	1.07	60.20%
Social Barrier	4	2.16	1.06	54.00%
Knowledge Barrier	7	3.90	1.21	55.71%
Overall	20	10.41	2.40	52.05%

Mothers are having more percentage of barrier score for the domain psychological barrier and they are having less percentage of barrier score for the domain Physical Barrier

Table 5: Correlation between facilitators score and Barrier score for exclusive breast feeding practice among mothers of infants

N=80

Correlation between	Mean score Mean±SE	Karl pearson Correlation coefficients	Interpretation
Facilitators score Vs Barrier score	9.60±1.74 10.41±2.40	r= 0.34 P=0.01**	There is a significant negative , fair correlation between Facilitators score Vs Barrier score. It means Facilitators score increases their barrier score decreases fairly



Scatter diagram with regression estimate shows the Fair negative correlation($r=0.31$ $P\leq 0.01$) coefficient between Facilitators score Vs Barrier score among mothers of infants

Discussion

The aim of this study was to determine the mother perception on facilitators and barriers of EBF practices in Kancheepuram district Sriperumbudur, Taluk. We also sought to determine the different maternal, infant, household, environmental, psychosocial and cultural factors influencing EBF practice in this district.

The majority (99.6%) of the participants in this study fed their babies on breastmilk although the EBF rate was low (36%). This EBF rate was lower than the national EBF rate (40%) reported in the Multiple Indicator Cluster Survey (MICS) findings of 2019. The lower estimates of EBF observed in this study were due to the differences in the definitions of EBF since the national surveys used 24 h reporting period rather than the birth to six months period used in this study. The EBF rate we found was higher than studies in Ethiopia (26.4%) and Brazil (15.2%). Variations in sociodemographic characteristics and cross-cultural preferences may be the cause of differences in the EBF rates.

The interviewed women were knowledgeable on EBF practices, despite the low EBF rate in the community. This finding explains why having the knowledge of EBF does not necessarily translates to EBF practice. In most cases, social pressure to introduce complementary feeds tends to outweigh the mother's knowledge of EBF benefits [8].

Mothers who had one or two children were less likely to exclusively breastfeed their babies when compared to mothers with three or more children. This finding was consistent with study findings in a Jordan study where they concluded that multi-parity was a major predictor of exclusive breastfeeding [2,9]. Being a novice mother was also found out to be a threat to EBF in two studies conducted in Brazil [10]. The increase in maternal confidence with several prior pregnancies could be due to previous positive experiences in breastfeeding as well as previous negative outcomes observed with early introduction of complementary foods.

Young mothers (less than 25 years of age) were less likely to practice of exclusive breastfeeding in Kancheepuram District. This finding was similar to observations in a Chinese study where mothers of the age group 15–24 years were less likely to practice EBF due to general traditional practice of prelacteal feeding especially in rural areas [11]. Similarly, a Brazilian study concluded that adolescent mothers were less likely to EBF when compared with older mothers [12]. Being an older mother comes with previous experience, added conviction and commitment to motherhood hence an increased likelihood to EBF the infant [13].

Women who lived in fewer rooms (one or two) were less likely to practice exclusive breastfeeding when compared to those who had and used more than three rooms. Living in fewer rooms can limit the mother's privacy. Some African cultures view the female breast as a part of a women's identity and femininity which must remain private, and it is a taboo to expose one's breasts or openly talk about the breasts [14]. Thus, breastfeeding in the presence of the in-laws or any other respected elders can be viewed as contemptuous behavior. Thus, mothers may not be able to frequently breastfeed in the presence of in-laws or elders due to the limited privacy.

Mothers who were financially independent were more likely to exclusively breastfeed their babies in Kancheepuram District (OR 0.4; 95% CI 0.21, 0.79; $p = 0.007$). This finding was contrary to studies in which EBF rates were lower among employed mothers when compared to unemployed dependent mothers. Dependence limits the mother's sense of autonomy. Dependent women often adhere to family opinions on infant feeding because their in-laws or partners dictate what can be given to the baby thus, it is difficult for them to adhere to EBF principles [15].

Babies who had low birthweight (below 2500 g) were 4% less likely to be EBF when compared to babies who had a normal birthweight. This was consistent with a South African study results in which they cited the maternal desire for the infant to gain weight prompting mother's decision to add complementary feeding before the age of six months [16]. The percentage of children who were given plain water before the age of six months was 58% which is significantly higher than the 28%. Our finding was consistent with a study, where mothers gave their young babies plain water with the belief that water would not affect the practice of exclusive breastfeeding.

When approaching EBF related issues, health workers need to take into consideration all the perceived threats, barriers and benefits associated with the complex decision to EBF for six months. Such an approach has the potential of improving maternal and infant wellbeing in the District and other similar settings.

Study strengths and limitations

By collecting data from mothers with infants who were 6 to 12 months of age, the researchers reduced recall bias. Collecting data from both facilities and the community resulted in more representative data and the use of trained as well as experienced research assistants helped in preserving the quality of the obtained data whilst ensuring proper ethical standards are followed.

The use of Purposive sampling method interfered with the representativeness of the collected data and self-reporting may have introduced recall bias to the study. The study was also vulnerable to social desirability bias in which some mothers may have felt EBF to be a more socially acceptable hence, felt compelled to respond positively towards EBF practices. Using the cross-sectional research design made it challenging for the researchers to establish causality.

Conclusion

The exclusive breastfeeding rates were low despite the mothers' high knowledge levels and positive attitudes towards the practice. In addressing the multiple factors influencing the cost effective practice, there is need to channel supportive measures through a system wide approach. This can be achieved by realigning breastfeeding policy directives as well as community attitudes and values towards the exclusive breastfeeding. Collaborated efforts from both the healthcare sector and society are vital in promoting and sustaining the optimal breastfeeding practice. This has the potential to improve child health and reducing infant morbidity and mortality in this district.

Availability of Data and Materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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