



## Correlation of Breast Feeding Self Efficacy with Maternal Breastfeeding satisfaction

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### KEYWORDS:

Breastfeeding, Breast Feeding Self-Efficacy, Maternal Breastfeeding Evaluation Scale, Primi postnatal mothers.

### ABSTRACT

Breastfeeding Self-Efficacy enhances breastfeeding satisfaction which comes from the interaction and cooperation between the mother and baby. We aimed to determine the relationship between Breastfeeding Self-Efficacy and satisfaction among primi breastfeeding mothers. This study used the cross-sectional design. One hundred and seventy postnatal mothers were recruited using convenient sampling technique. The study participants completed the questionnaire on Breast Feeding Self-Efficacy and Maternal Breastfeeding Evaluation Scale. We identified that, out of 170 mothers, majority of them 61.2% had moderate level of breastfeeding self-efficacy and 38.8% of mothers showed high level of breastfeeding self-efficacy. For the Maternal Breastfeeding Evaluation Scale, 77.6% of postnatal mothers perceived high level of breastfeeding satisfaction and 22.4% of them perceived moderate level of breastfeeding satisfaction. The breast feeding self-efficacy and the breastfeeding satisfaction were correlated positively ( $P < 0.001$ ). The previous information about breastfeeding showed a statistically significant association ( $P < 0.001$ ). The study concludes that breastfeeding self-efficacy of the mother enhanced breastfeeding satisfaction.

### INTRODUCTION

Breast milk is a baby's "first immunization". Optimal breast feeding of the baby benefits the infants with adequate nutrition and allows the child to grow healthy. Exclusive Breast Feeding (EBF) is given for the first 6 months of life. It helps to protect against causes of diarrhoea, ear and chest infections, and other health problems in infants (UNICEF) [1]. Moreover, EBF prevents obesity and the risk of hypertension in later period of life [2]. Breastfeeding is one of the best and leading intervention for reducing mortality rate of under-five children [3]. Also, mothers are benefited from EBF in terms of reduction in the risk of diabetes, breast cancer, and ovarian cancer [4]. Various factors like less support for breastfeeding in the workplace, insufficient knowledge regarding exclusive breastfeeding among women and family members, and increasing advertisements of formula feed, impedes exclusive breastfeeding practices [5].

Lack of social support, culture and many other factors can directly lead to the discontinuation of the breastfeeding practice [6]. Mother's perception of

breastfeeding self-efficacy is a vital factor, which includes her feelings towards breastfeeding, how much effort she takes to breastfeed her baby, whether she is emotionally prepared to breastfeed, the initiation and duration of breastfeeding, and how she copes with difficulties while breastfeeding [7]. Satisfaction in breast feeding comes from achieving and fulfilling maternal expectations and infant's needs [8]. A newborn baby has only three main demands - warmth from the mother, food from her breasts, and feeling of security. Breast feeding can provide satisfaction regarding all of these demands of an infant [9]. The National policy implemented several strategies for promoting, protecting, and supporting breastfeeding [10]. The nurse plays a vital role in the advancement of breastfeeding through education [11]. Only 40 % of infants (0-6 months) in the world receive Exclusive Breast Feeding [12]. The WHO and UNICEF's Exclusive Breast Feeding target is at least 70% in 2030 [13]. National Health survey phase II in 2021 revealed that the prevalence of exclusive breastfeeding in India is 64%, whereas in Puducherry it is 45.5% [14].



According to Bandura, self-efficacy is the belief in one's ability to organize and execute the necessary courses of action to manage possible situations [15]. The breastfeeding self-efficacy means the ability of the mothers to breast feed their baby with confidence.

Recently, in the COVID 19 pandemic, the entire globe imposed lockdown and restrictions which created anxiety in antenatal and postnatal mothers in terms of care and breast feeding of their babies. Few of the related studies during pandemic period showed that the breast feeding outweighs the risk of COVID in newborn and the guidelines recommended to continue breast feeding with COVID precaution [16].

This highlights the need for health professionals to modify the interventions to improve breastfeeding outcomes [17]. Very minimal studies had been carried out regarding factors associated with breastfeeding satisfaction. Few studies identified skin-to-skin contact between mother and infant, early initiation of breastfeeding, encouraging breastfeeding on demand, and absence of breastfeeding-related problems promoted maternal self-esteem [18,19].

Hence, the aim of the study was to investigate whether breastfeeding self-efficacy correlates with maternal breastfeeding satisfaction in pandemic period. Further we aimed to identify whether the breastfeeding self-efficacy and maternal breastfeeding satisfaction were influenced by baseline variables.

## Purpose

This study aimed to identify the relationship between breastfeeding self-efficacy and satisfaction. The study also identified the factors associated with breastfeeding satisfaction and breastfeeding self-efficacy.

## METHODS

### Design

This study was approved by Institutional Ethical Committee (Ref. No. VMCNPDY/IEC2021/021). The descriptive study was conducted to identify the correlation between breastfeeding self-efficacy and maternal breastfeeding satisfaction among postnatal mothers. Data were collected from 1<sup>st</sup> April 2021 to 30<sup>th</sup> April 2021 from postnatal mothers who seeks postnatal services from selected Primary Health Centres (PHC), Puducherry.

### Criteria for Sample selection

The post natal mothers who were primi in the age of 18 years or older, having 0-6 months of infants, breastfeed their baby, not with any communication problem and seek services from PHCs were included as study participants. The postnatal mothers with identifiable breastfeeding problems were excluded from the study.

### Sample size estimation:

The sample size was estimated with 88% of proportion, alpha error 0.05 and with marginal error of 0.05, a total of 163 samples which was rounded to 170 samples for the present study.

## Measures

The questionnaire includes baseline variables of the mother and infants, Breastfeeding Self Efficacy scale-Short Form (BFSE-SF), and the Maternal Breastfeeding Evaluation Scale (MBFES). Author's permission was obtained to modify and use the scale for our study. The scales were translated into Tamil language and the same was retranslated to English. The baseline variable of the mother includes the age of the mother, education of the mother, occupation of the mother, religion, and previous information regarding breastfeeding. The variables of the baby include the gender of the baby and gestational age at birth.

BFSE scale is meant to gauge the extent to which mothers perceive themselves as satisfactory while breastfeeding. The original scale developed by Dennis has 33 items and was revised in 2003 to generate BFSE-SF with 14 items and the scale reliability was 0.94. It is a five point scale in which all items are positive and the options are not at all confident (score 1), not confident (score 2), some extent confident (score 3), confident (score 4) and always confident (score 5). The score ranges between 14 to 70 and the score above 56 was considered as high breastfeeding self-efficacy whereas, the score between 56-43 as moderate self-efficacy and below 43 was considered as low breastfeeding self-efficacy [20].

The Maternal Breast Feeding Evaluation Scale (MBFES) was developed by Leff, in the early 90s to enumerate maternal breastfeeding satisfaction. It is a five point likert scale with 30 items and options are strongly disagree, disagree, no opinion, agree and strongly agree. The revised scale has 3 subscales-maternal role attainment (14 items), infant's satisfaction (8 items), maternal body image (8 items) and the scale reliability was 0.87. The item numbered 3,5,8,13,14,15,19,22,27,28,29 (11 items) were negative statements and item 1,2,4,6,7,9,10,11,12,16,17,18,20,21,23,24,25,26,30 (19 items) were in positive statement. The scores are reversed for the negative items. The raw scores were linearly transformed to the scale of 0-100 and arbitrarily classified as low maternal breastfeeding satisfaction (<50), moderate maternal breastfeeding satisfaction (51-75) and high maternal breastfeeding satisfaction (>75) [21].

## Data collection

At the registration desk, the eligible study participants were identified from their medical records and informed about the purpose of the study and obtained written



consent. The details like gestational age of the baby at birth and its immunisation status were collected from their medical records. The growth parameters of the baby were assessed using infant-meter and electronic weighing scale and the measures were plotted in their growth chart. In the waiting area, before they meet the physician, a self-report questionnaire was distributed to the study participants and asked to provide the answers appropriately. The investigator collected the filled-in questionnaire from the participants after completion.

### Data Analysis

The collected data was entered in the excel sheet and the compiled data were analysed using SPSS 22.0 version. The normal distribution of the data was assessed using normality test. Frequency and percentage distribution were used for description of categorical variables. Mean, median, and standard deviation were used for description of continuous variable. Pearson's correlation coefficient was used to identify the correlation between breastfeeding self-efficacy and satisfaction. A Chi-square test was used to identify the factors influencing breastfeeding self-efficacy and satisfaction. With 95 % of Confidence interval and  $p < 0.05$  level of significance, the results were interpreted.

### RESULTS

A total of 170 primi breastfeeding mothers participated in this study. It was detected that 30.6 % of mothers were between 28 -32 years of age, 48.2% of mothers had a Diploma/higher education, 58.8 % of mothers were homemakers, 154 90.6 % of mothers belong to the Hindu religion, and 31.8 % of them got previous information regarding breastfeeding from nurses. It was determined that 51.8% of mothers had male babies and 93.5 % had full-term babies.

We investigated the level of breastfeeding self-efficacy and found that the majority of mothers (61.2 %) had a moderate level of breastfeeding self-efficacy and,

38.8% of mothers had a high level of breastfeeding self-efficacy. None of them showed a low level of breastfeeding self-efficacy. Similarly, when we assessed the level of breastfeeding satisfaction, we could find 61.1 % had a moderate level of satisfaction in maternal role attainment and 38.8 % had a high level of satisfaction in maternal role attainment. Whereas 61.8% showed a high level of infant satisfaction, 37.6% had a moderate level of infant satisfaction and only 0.6% had a low level of infant satisfaction. While regarding maternal body image, 83.5% had a moderate level of satisfaction, 12.9% had a low level of satisfaction and only 3.5% had a high level of satisfaction. However, the majority of mothers (77.6 %) perceived a high level of overall breastfeeding satisfaction, and 22.4% of them perceived a moderate level of satisfaction overall (Table 1).

The correlation between breastfeeding self-efficacy and maternal breastfeeding satisfaction of primi mothers showed a statistically high significant correlation at  $p < 0.001$  level of significance which infers that high breastfeeding self-efficacy resulted in high maternal breastfeeding satisfaction in primi mothers. The other aspects didn't correlated (Table 2).

When we assessed the association of the selected demographic variables with breastfeeding self-efficacy, it showed that previous information about breastfeeding had a statistically significant association at  $p < 0.001$  level of significance. The association of selected demographic variables and breastfeeding satisfaction also showed a statistically significant association at  $p < 0.001$  level of significance to the previous information on breastfeeding. It infers that the previous information on breastfeeding improves the breastfeeding self-efficacy as well as the breastfeeding satisfaction of primi mothers.

**Table 1: Frequency and percentage distribution of level of Maternal Breastfeeding Evaluation**

Aspects of Maternal Breastfeeding Evaluation Scale	Level of satisfaction					
	Low satisfaction <50		Moderate satisfaction 51-75		High satisfaction >75	
	F	%	f	%	f	%
Maternal role attainment	-	-	2	1.2	66	38.8
Infants satisfaction	1	0.6	64	37.6	105	61.8
Maternal body image	22	12.9	142	83.5	86	3.5
Overall satisfaction	-	-	38	22.4	132	77.6

**Table 2: Correlation between Breastfeeding self-efficacy and maternal role attainment of primi mothers**

Breastfeeding self-efficacy			Maternal role attainment			Correlation coefficient r-value	P-Value
Mean	Standard deviation	Standard deviation error	Mean	Standard deviation	Standard deviation error		
50.61	3.944	0.302	65.29	5.124	0.393	0.612	0.000



## DISCUSSION

The purpose of our study was to correlate the relationship between breastfeeding self-efficacy and breastfeeding satisfaction among primi breastfeeding mothers. We used MBSEF Scale to measure both the negative and positive feelings of mothers' and infants' physical and emotional satisfaction regarding breastfeeding. Also used the Breastfeeding self-efficacy scale to rule out the breastfeeding confidence level of the mothers. Surprisingly, we found the majority of mothers had a high level of breastfeeding satisfaction. In this study, we found that 104 (61.2%) mothers had a moderate level of breastfeeding self-efficacy. Most of the findings of our study were consistent with previous study findings. Based on the statistical testing we found a positive correlation between breastfeeding self-efficacy and breastfeeding satisfaction. It indicates that high breastfeeding self-efficacy resulted in high breastfeeding satisfaction in primi mothers. Our result is in line with a previous randomized controlled trial done by Gonzales emphasized that there is a positive correlation between maternal breastfeeding satisfaction evaluation scale scores and breastfeeding self-efficacy scores at 1 month, 2 months and 3 months [22]. Besides this Awaliah conducted a cross-sectional study, among 204 breastfeeding mothers highlighting that breastfeeding self-efficacy is a dominant factor for breastfeeding satisfaction.

We found that the maternal breastfeeding satisfaction was not associated with maternal age, education of mother, occupation of mother, and religion of the mother. On the other hand, Ericson states that there is a positive association between maternal age and breastfeeding satisfaction [23]. Another study reported that younger adults had low breastfeeding satisfaction and require additional training regarding breastfeeding [5]. Our study did not show an association as previous studies reported between maternal age and breastfeeding satisfaction [24]. A Brazilian study supports our findings which reported maternal age and breastfeeding satisfaction were not associated [25]. We speculate that factors influencing the perception of breastfeeding may vary from place to place.

Although, the researcher declares that education also impacts positively on maternal breastfeeding satisfaction [26]. Our findings were incongruent with the study, which shows no association between the education of the mother and breastfeeding satisfaction. Ericson also showed that education has not influenced breastfeeding satisfaction which strongly supported our study results [23]. In general, timely support and promotion of breastfeeding may lead to breastfeeding satisfaction rather than the level of education.

Nonetheless, Awaliah claims that mothers with higher household incomes are more likely to have breastfeeding satisfaction than mothers with less income [5]. Similarly, another researcher reported that housewives had high breastfeeding satisfaction [27]. However, our findings did not show the influence of occupation on the level of breastfeeding satisfaction. Indian women get a total of six months of paid maternity leave which paves a way to foster the connection between mother and child. We assume mothers spend maximum time with their newborn child which could help them attain a higher level of breastfeeding satisfaction.

The present study did not confirm the association reported previously with breastfeeding self-efficacy and maternal age [28,29], education of mother [30], occupation of mother [26,28,30,31], and religion of the mother. Whereas, Gumussoy's finding supported our study which reported no association between breastfeeding self-efficacy and income [32]. Similarly, Hediye reported no effect of a mother's occupation and education level on breastfeeding self-efficacy [31].

However, we found that mothers who received previous information regarding breastfeeding had breastfeeding satisfaction as well as breastfeeding self-efficacy. Correspondingly, a study reported that the guidance received by the mothers was the factor shown to promote breastfeeding [23]. A longitudinal quasi-experimental study found that support from the family and peer-led education had a positive impact on breastfeeding [24]. In light of this fact, several interventional studies have been carried out to improve breastfeeding satisfaction and breastfeeding self-efficacy and found to be effective [3,10,11,17,33]. In contrast, a study reported that receiving previous information regarding breastfeeding had no impact on BFSE scores [31]. We speculate that the maternal age, education, occupation and religion may not be a matter of breastfeeding self-efficacy rather early initiation of breastfeeding, promotion of exclusive breastfeeding and prevention of breastfeeding problems may aid mothers in increased breastfeeding self-efficacy.

Studies reported that the gender of the child had a significant effect on breastfeeding [12]. Whereas, another researcher found the gender of the baby had less impact on breastfeeding [34]. A longitudinal cohort study performed to find associating factors of breastfeeding satisfaction showed that preterm infants had less breastfeeding satisfaction [23]. Nevertheless, our study does not support these claims but rather found no association between the gender of the baby and the gestational age of the baby with breastfeeding satisfaction and breastfeeding self-efficacy. This result





may be related to the fact that the majority of the mothers had full-term babies in our study.

The assumption was made as the higher the breastfeeding self-efficacy, the higher the level of breastfeeding satisfaction. The main strength of this study was, that we could able to factualise that mothers were having a moderate level of breastfeeding self-efficacy and a high level of breastfeeding satisfaction.

Despite all the implications, this study has limitations. Present study did not generalise the findings. Only primi mothers were included in the study and we could not collect the data immediately after the delivery.

### CONCLUSION:

This study provides further evidence of a relationship between breastfeeding self-efficacy and maternal satisfaction. The correlation showed that high breastfeeding self-efficacy resulted in high maternal breastfeeding satisfaction of primi mothers. The association of breastfeeding self-efficacy and breastfeeding satisfaction identified that the previous information on breastfeeding improves the breastfeeding self-efficacy and satisfaction of primi mothers. The promotion of breastfeeding remains a vital public health strategy to prevent many childhood illnesses and achieve UNICEF's targets.

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