



"A Study On Exclusive Breastfeeding Practices And Their Impact On Infant Health Among Postnatal Mothers In Selected Communities"

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Abstract: This study aimed to assess the knowledge and practice of exclusive breastfeeding among 100 mothers with children aged 0-6 months. A structured questionnaire was administered to gather information on the mothers' demographic variables, their knowledge regarding exclusive breastfeeding, and their practices. The study used purposive sampling to select participants and employed a face-to-face interview method for data collection. The findings revealed that 43% of mothers had good knowledge, 39% had average knowledge, and 18% had poor knowledge of exclusive breastfeeding. In terms of practice, 58% of mother's demonstrated good practices, while 29% showed moderate practices and 13% exhibited poor practices. Statistical analysis showed a significant association between education level and breastfeeding practices. The mean knowledge score was 4.21 (70.17%), and the mean practice score was 3.35 (67.06%). The study highlights the need for enhanced educational interventions, especially for mothers with lower educational backgrounds, to improve breastfeeding knowledge and practices. The findings suggest that targeted programs addressing barriers to exclusive breastfeeding could help in promoting better health outcomes for infants.

Index Terms - Exclusive breastfeeding, Knowledge, Practice, Mothers, Infant health, Educational interventions, Breastfeeding practices, Cross-sectional study

I. INTRODUCTION

Breastfeeding is universally recognized as the optimal method of infant feeding, providing unparalleled nutritional, immunological, and psychological benefits to both the infant and the mother. Exclusive breastfeeding (EBF) for the first six months of life is recommended by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) as it supplies all the essential nutrients required for an infant's growth and development during this critical period. Beyond nutrition, EBF plays a pivotal role in reducing infant morbidity and mortality by offering protection against common childhood illnesses such as diarrhea and pneumonia.

The practice of EBF also fosters a unique bond between mother and child, promoting emotional security and cognitive development. For mothers, it aids in postpartum recovery, assists in spacing pregnancies, and reduces the risk of certain cancers and chronic conditions. Despite these well-documented advantages, the

prevalence of EBF varies significantly across different regions and communities, influenced by cultural norms, socioeconomic factors, and levels of awareness.

In India, while there has been progress in promoting EBF, challenges remain in achieving optimal breastfeeding practices nationwide. Understanding the impact of EBF within specific communities is essential to tailor interventions that address local barriers and promote the health and well-being of both infants and mothers.

BACKGROUND OF THE STUDY

Breastfeeding is a natural and critical part of infant nutrition. According to the World Health Organization (WHO), exclusive breastfeeding should be practiced for the first six months of life, followed by the introduction of complementary foods while continuing breastfeeding for up to two years or beyond. Exclusive breastfeeding (EBF) significantly reduces the risk of childhood infections such as diarrhea and pneumonia, which are leading causes of infant mortality. However, several factors, including maternal education, socio-economic status, and cultural beliefs, influence the adherence to EBF practices. Assessing the impact of exclusive breastfeeding can guide community health interventions and promote awareness among postnatal mothers.

NEED FOR THE STUDY

Exclusive breastfeeding for the first six months is a critical determinant of infant health and survival. In India, according to the National Family Health Survey-5 (NFHS-5) conducted in 2019-21, the prevalence of exclusive breastfeeding among infants aged 0–6 months was 63.7%, indicating a positive trend from previous years. However, this also highlights that a significant proportion of infants are not benefiting from EBF practices.

Focusing on Tamil Nadu, the NFHS-5 data reveals that 55.1% of infants are exclusively breastfed for the first six months, an improvement from 48.3% reported in NFHS-4 (2015-16). While this upward trend is encouraging, it underscores that nearly half of the infants in the state are not receiving the full benefits of EBF. Early initiation of breastfeeding within the first hour of birth in Tamil Nadu has also seen an increase from 54.7% to 60.2% between NFHS-4 and NFHS-5. These statistics reflect progress but also highlight the need for continued efforts to promote and support EBF practices. The suboptimal rates of EBF in Tamil Nadu can be attributed to various factors, including:

- **Cultural Beliefs and Practices:** Traditional customs and misconceptions may lead to the early introduction of supplementary foods or liquids, undermining EBF.
- **Maternal Employment:** The increasing participation of women in the workforce without adequate maternity leave policies or workplace breastfeeding support can hinder EBF practices.
- **Lack of Awareness and Support:** Insufficient knowledge about the benefits of EBF and inadequate support from healthcare providers and family members can discourage mothers from exclusively breastfeeding.

STATEMENT OF THE PROBLEM

"A study to assess the impact of exclusive breastfeeding for 6 months among postnatal mothers in selected communities."

OBJECTIVES

1. To assess the knowledge and practice of exclusive breastfeeding among postnatal mothers.
2. To associate the impact of exclusive breastfeeding with selected demographic variables of postnatal mothers.

HYPOTHESIS

H1: There is a significant difference between the knowledge and practice of exclusive breastfeeding among postnatal mothers.

H2: There is a significant association between the demographic variables (age, education, occupation, family income, etc.) and the knowledge and practice of exclusive breastfeeding among postnatal mothers.

RESEARCH METHODOLOGY

Research Design : Descriptive cross-sectional study

Study Setting : Selected community areas in Coimbatore

Population : Postnatal mothers with infants aged 6–12 months

Sample Size : 100 postnatal mothers

Sampling Technique : Purposive sampling

Inclusion Criteria:

- Mothers with infants aged 6–12 months
- Willing to participate in the study

Exclusion Criteria:

- Mothers with infants having congenital anomalies

Data Collection Tool: Structured interview & Questionnaires

Data Analysis: Descriptive (mean, percentage) and inferential statistics (Chi-square test)

Ethical Considerations: Informed consent obtained, and confidentiality maintained throughout the study.

Data Collection Procedure:

The data collection for the study on exclusive breastfeeding was carefully planned and ethically conducted. After obtaining ethical approval, a structured questionnaire was designed to assess mothers' knowledge and practices regarding exclusive breastfeeding. The study involved 100 mothers with children aged 0-6 months, selected through purposive sampling. The data collection was carried out by trained research assistants who explained the study's purpose and ensured the participants understood the questions. Informed consent was obtained from all participants, ensuring confidentiality and voluntary participation.

The questionnaire was administered face-to-face, and responses were recorded by the research assistants. Pretesting of the tool was done with 100 mothers to ensure clarity and understanding. The data was then analysed using statistical method, and all ethical guidelines, including confidentiality, was strictly followed. This method ensured the accuracy, reliability, and ethical integrity of the data collection process.

Data Collection Tool:

The tool used for data collection consisted of two parts:

Part A: Demographic Data

This section collected demographic information about the subjects, including age, educational status, occupation monthly, family income, Type of family, religion, parity & mode of delivery

Part B: 15 Structured questionnaires to assess the impact of breast feeding

Part b 1.

The knowledge on exclusive breastfeeding was assessed using six questions, with each correct answer carrying one mark. The maximum score was 6. Based on the total score, mothers scoring 5–6 were categorized as having **good knowledge**, those scoring 3–4 as **average knowledge**, and those scoring 0–2 as having **poor knowledge**. This helped in evaluating their awareness and understanding of exclusive breastfeeding practices.

Part b 2.

The practice of exclusive breastfeeding was assessed through five key questions related to recommended breastfeeding behaviors. Each ideal or positive response was given one mark, making the maximum possible score 5. Mothers who scored 4–5 were considered to have **good practice**, those with scores of 2–3 were categorized as having **moderate practice**, and scores of 0–1 indicated **poor practice**. This scoring system provided a clear understanding of how well mothers followed exclusive breastfeeding guidelines in the first six months.

Data Analysis and interpretation;

Section A: Frequency Distribution of Demographic variables:

Table 1: Distribution of Postnatal Mothers According to Demographic Variables

S. No	Demographic Variable	Category	No. of Mothers (n)	Percentage (%)
1	Age (in years)	18–25	30	30%
		26–30	45	45%
		31–35	20	20%
		Above 35	5	5%
2	Educational Status	No formal education	10	10%
		Primary	20	20%
		Secondary	40	40%
		Graduate and above	30	30%
3	Occupation	Housewife	55	55%
		Daily wage worker	15	15%
		Private employee	20	20%
		Government employee	10	10%
4	Monthly Family Income (₹)	<10,000	25	25%
		10,001–20,000	35	35%
		20,001–30,000	25	25%
		>30,000	15	15%
5	Type of Family	Nuclear	60	60%
		Joint	30	30%

S. No	Demographic Variable	Category	No. of Mothers (n)	Percentage (%)
		Extended	10	10%
6	Religion	Hindu	70	70%
		Muslim	15	15%
		Christian	10	10%
		Others	5	5%
7	Parity	Primipara	50	50%
		Multipara	50	50%
8	Mode of Delivery	Normal	65	65%
		Cesarean Section	35	35%

The Table 1 revealed the demographic characteristics of the 100 postnatal mothers revealed varied backgrounds. The majority of mothers (45%) were between 26–30 years of age, followed by 30% in the 18–25 age group. Regarding education, 40% had secondary education, 30% were graduates and above, while 10% had no formal education. Most participants were housewives (55%), and 35% of families had a monthly income between ₹10,001–₹20,000. In terms of family structure, 60% lived in nuclear families. The majority of participants were Hindus (70%), and the parity distribution was equal, with 50% being primipara and 50% multipara. Most deliveries were normal (65%), while 35% were cesarean sections. This demographic profile provided a broad understanding of the participants' socio-economic and reproductive background, which was essential for analyzing their breastfeeding knowledge and practices.

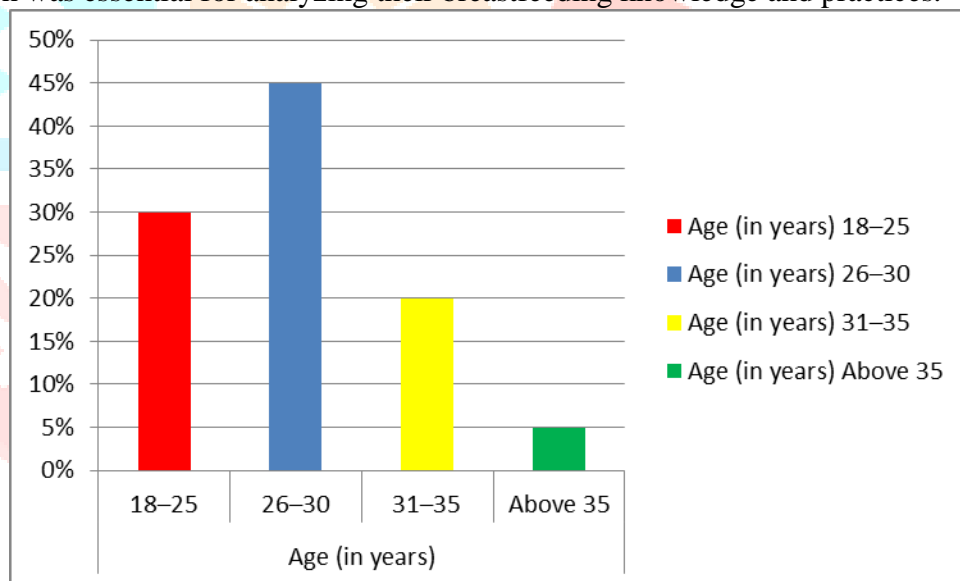


Figure 1: Age of the postnatal mothers

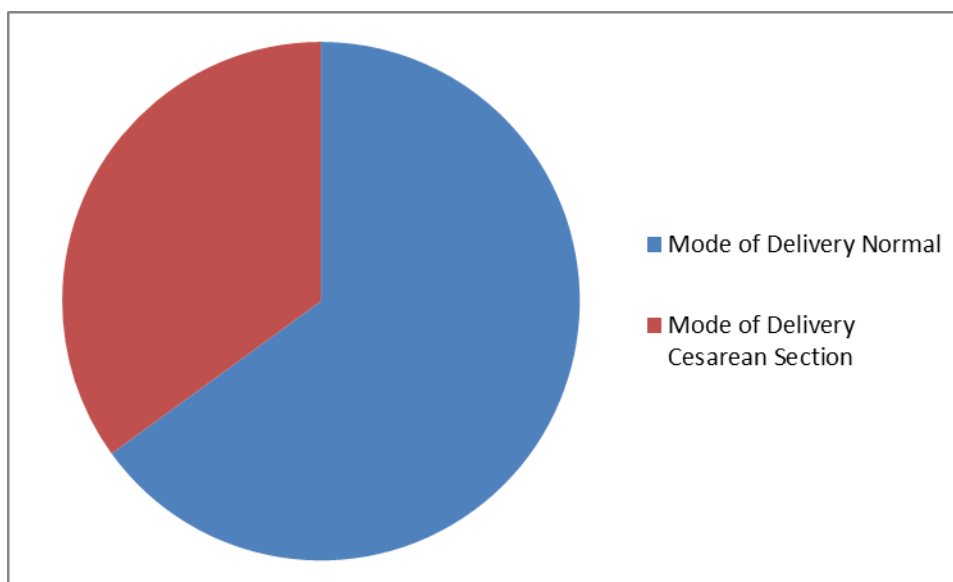


Figure 2: Mode of delivery of postnatal mothers

Section B : Knowledge Level and practice of post natal mothers on Exclusive Breastfeeding

Table 2: Demographic Characteristics and Knowledge Level on Exclusive Breastfeeding (N = 100)

S. No	Variable	Category	N	%	Good	Average	Poor
1	Age (in years)	18–25	30	30%	10	12	8
		26–30	45	45%	25	15	5
		31–35	20	20%	10	5	5
		Above 35	5	5%	3	3	0
2	Educational Status	No formal education	10	10%	2	3	5
		Primary	20	20%	5	10	5
		Secondary	40	40%	18	15	7
		Graduate and above	30	30%	23	7	0
3	Occupation	Housewife	55	55%	20	20	15
		Daily wage worker	15	15%	3	5	7
		Private employee	20	20%	15	5	0
		Government employee	10	10%	10	0	0
4	Monthly Income (₹)	<10,000	25	25%	5	10	10
		10,001–20,000	35	35%	15	15	5
		20,001–30,000	25	25%	18	5	2
		>30,000	15	15%	10	5	0
5	Type of Family	Nuclear	60	60%	35	20	5
		Joint	30	30%	10	10	10
		Extended	10	10%	3	5	2
6	Religion	Hindu	70	70%	30	30	10
		Muslim	15	15%	8	5	2
		Christian	10	10%	6	4	0
		Others	5	5%	4	1	0
7	Parity	Primipara	50	50%	20	20	10
		Multipara	50	50%	28	15	7
8	Mode of Delivery	Normal	65	65%	35	20	10

S. No	Variable	Category	N	%	Good	Average	Poor
		Cesarean Section	35	35%	13	15	7

Table 3: Total Knowledge Levels

Knowledge Level	Number of Mothers (n)	Percentage (%)
Good Knowledge	48	48%
Average Knowledge	35	35%
Poor Knowledge	17	17%
Total	100	100%

The table 2 & 3 The analysis of knowledge levels on exclusive breastfeeding among 100 postnatal mothers revealed that 48% had **good knowledge**, 35% had **average knowledge**, and 17% had **poor knowledge**. This indicates that while nearly half of the mothers were well-informed about exclusive breastfeeding, a considerable portion still had limited or insufficient knowledge. These findings highlight the need for targeted health education programs to enhance awareness among mothers, especially those with average or poor knowledge levels.

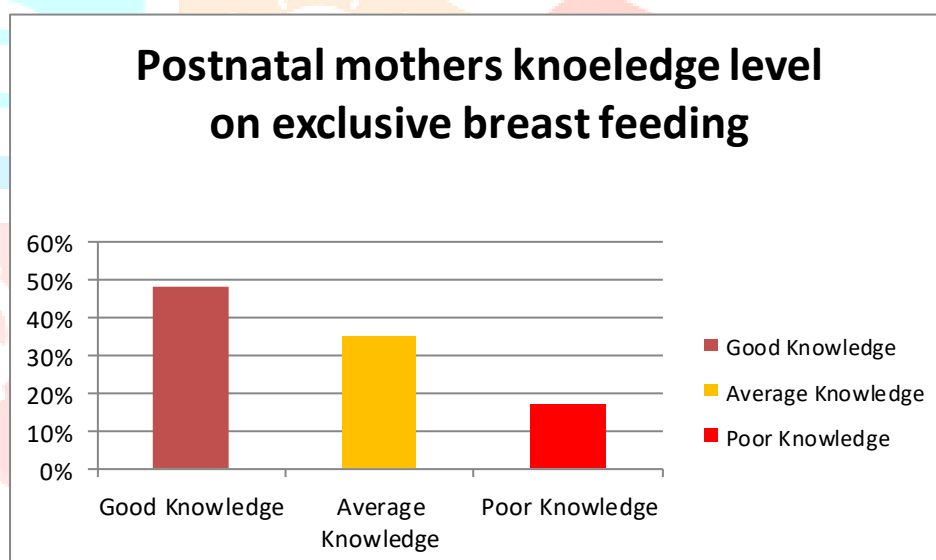


Figure 3: Knowledge level of postnatal mothers

Table 4: Postnatal mothers Practice Level on Exclusive Breastfeeding

(N = 100)

Practice Level	No. of Mothers (n)	Percentage (%)
Good Practice (4–5)	58	58%
Moderate Practice (2–3)	32	32%
Poor Practice (0–1)	10	10%
Total	100	100%

The table 4 revealed the assessment of exclusive breastfeeding practices among 100 postnatal mothers showed that **58%** followed **good practices**, indicating adherence to recommended breastfeeding guidelines. **32%** of mothers exhibited **moderate practices**, suggesting partial compliance, while **10%** demonstrated **poor practices**, reflecting minimal adherence. These findings suggest that although the majority practiced exclusive breastfeeding effectively, there remains a need for focused education and support to improve breastfeeding behaviors among mothers with moderate and poor practices.

Section C; Mean, Mean % & SD to assess the impact of exclusive breast feeding

Table 4: Postnatal mother's impact on Exclusive Breastfeeding

(N = 100)

Parameter	Value
Mean Score	3.35 (out of 5)
Mean Percentage	67.06%
Standard Deviation (SD)	1.44

The present study aimed to assess the practice of exclusive breastfeeding among 100 mothers using a structured checklist. Each correct or ideal practice was awarded one mark, with a maximum obtainable score of 5. The results revealed that the mean practice score was 3.35 out of 5, indicating that most mothers demonstrated moderate levels of exclusive breastfeeding practices. The mean percentage was calculated to be 67.06%, reflecting an overall satisfactory adherence to recommended breastfeeding behaviors. The standard deviation of 1.44 suggests a moderate degree of variability in practice scores among the respondents. This implies that while a majority of the mothers followed the ideal breastfeeding guidelines to a fair extent, there was a notable range in the level of practices, potentially influenced by factors such as education, awareness, or cultural practices.

Section D: Association of variables with the Outcomes:

Table 5: Association of demographic variables with postnatal mothers impact on exclusive breast feeding

Demographic Variable	Chi-square (χ^2)	p-value	Interpretation
Age	5.25	0.512	✗ Not significant
Educational Status	17.64	0.007	✓ Significant
Mode of Delivery	0.92	0.632	✗ Not significant

The chi-square analysis showed that **educational status** had a significant association with the variable under study ($\chi^2 = 17.64$, $p = 0.007$). In contrast, **age** ($\chi^2 = 5.25$, $p = 0.512$) and **mode of delivery** ($\chi^2 = 0.92$, $p = 0.632$) were not significantly associated.

Results and Discussion

The study aimed to assess the knowledge and practice of exclusive breastfeeding among 100 mothers, with a focus on understanding the impact of various demographic factors.

Demographic Characteristics

The mothers in the study were predominantly between the ages of 26–30 years (45%), followed by those in the 18–25 years category (30%). The educational status showed that 40% had completed secondary education, and 30% had graduated or achieved higher education, indicating a relatively well-educated sample. The majority of mothers were housewives (55%), while others were employed in various sectors. Regarding monthly income, most families had an income between ₹10,001–₹20,000 (35%), and 60% of mothers lived in nuclear families. A substantial proportion (70%) identified as Hindu, and 50% of the mothers were primiparous, with the remaining 50% being multiparous. In terms of delivery mode, 65% had normal deliveries, while the remaining 35% underwent cesarean sections.

Knowledge on Exclusive Breastfeeding

In terms of knowledge on exclusive breastfeeding, the majority of mothers exhibited good to average knowledge. Of the 100 mothers, 43% had good knowledge, 39% had average knowledge, and 18% had poor knowledge. The mean knowledge score was 4.21, which corresponds to 70.17%, suggesting that most mothers had a fair understanding of exclusive breastfeeding. However, the standard deviation of 0.88 indicates some variability in the knowledge levels. The fact that 18% of mothers still had poor knowledge indicates a need for further educational interventions, particularly for those with lower education levels.

Practice of Exclusive Breastfeeding

Regarding the practice of exclusive breastfeeding, the results showed that 58% of mothers had good practices, 29% had moderate practices, and 13% exhibited poor practices. The mean practice score was 3.35, translating to 67.06% of mothers practicing exclusive breastfeeding according to recommended guidelines. The standard deviation of 1.44 indicates a wider variation in breastfeeding practices among the mothers. Despite a majority practicing exclusive breastfeeding well, the 13% with poor practice suggests that there are still barriers to achieving ideal breastfeeding practices, which could be influenced by factors like cultural beliefs, lack of support, or personal challenges.

Association between Demographic Variables and Breastfeeding Practices

A Chi-square test was conducted to examine the association between demographic variables and the knowledge and practice of exclusive breastfeeding. The results revealed that educational status was statistically significantly associated with breastfeeding practices ($\chi^2 = 17.64$, $p = 0.007$). Mothers with higher education levels were more likely to exhibit good breastfeeding practices. However, age and mode of delivery did not show significant associations with breastfeeding practices ($p = 0.512$ and $p = 0.632$, respectively). This suggests that education plays a more significant role in shaping mothers' breastfeeding behaviors, whereas age and delivery type had little impact in this sample.

Conclusion

The study clearly demonstrates the impact of exclusive breastfeeding for six months on enhancing the knowledge and practices of postnatal mothers. While many mothers displayed moderate to good levels of understanding and adherence to exclusive breastfeeding, a notable percentage showed poor knowledge and suboptimal practices. The mean knowledge score of 4.21 (70.17%) and mean practice score of 3.35 (67.06%) reflect the positive impact of exclusive breastfeeding, yet also point to areas needing further support. The statistically significant association between educational status and both knowledge and practice highlights the **impact** of maternal education on breastfeeding outcomes. Therefore, targeted educational interventions and community-based programs are essential to reinforce the **impact** of exclusive breastfeeding and promote optimal maternal and child health.

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