

A study evaluated the effectiveness of a planned teaching program on breastfeeding techniques for primi antenatal mothers at Selected Maternity Hospital

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Abstract: A quasi-experimental (pre/post-test) design was employed to accomplish the study's objective. This study was designed to assess the effectiveness of an intervention focused on a planned teaching program regarding breastfeeding techniques for primigravida antenatal mothers. A purposive sampling technique was utilized to select a total of 100(50/50) antenatal primigravida mothers at 28–40 weeks gestation, attending the Outpatient Department (OPD) and ward at the Government Maternity Hospital in Tirupati, Andhra Pradesh. Data collection was conducted using a structured questionnaire on breastfeeding techniques, and the data were analysed using descriptive and inferential statistics.

MAJOR FINDINGS OF THE STUDY

In the pre-test scores regarding breastfeeding techniques, among 50 antenatal mothers, 14 (28%) showed inadequate knowledge, 19 (38%) demonstrated moderate knowledge, and 17 (34%) possessed adequate knowledge of breastfeeding techniques. The mean and standard deviation of breastfeeding techniques among antenatal mothers in the pre-test were 2.06 and 0.793, respectively.

A scheduled planned teaching program was conducted among 50 antenatal (primigravida) mothers. After 7 days, a post-test was administered to the same sample.

In the post-test scores regarding breastfeeding techniques, among 50 antenatal (primigravida) mothers, 11 (22%) exhibited inadequate knowledge, 14 (28%) demonstrated moderate knowledge, and 25 (50%) had adequate knowledge of breastfeeding techniques. The mean and standard deviation of breastfeeding techniques among antenatal mothers were 2.28 and 0.809, respectively.

Among the 100 primigravida antenatal mothers, the mean score for breastfeeding techniques in the pre-test was 7.72, with a standard deviation of 2.540 and a standard error of 0.359. For the post-test knowledge scores on breastfeeding techniques, the mean was 12.30,

with a standard deviation of 2.597 and a standard error of 0.367. The t-value was 10.303, with a p-value of 0.000 (** indicates significance).

"In the pre-test, there exists a statistically significant association between socio-demographic variables and knowledge among primigravida antenatal mothers, particularly regarding income and area of living, which are highly significant at $p < 0.01$. Furthermore, the age of antenatal mothers, education, source of information, and family members also exhibit significance at $p < 0.05$. In the post-test, a statistically significant association between socio-demographic variables and knowledge among primigravida antenatal mothers is observed. Specifically, education, occupation, source of information, and area of living demonstrate significance at $p < 0.01$. Additionally, age, type of family, and income are significant at $p < 0.05$. The study concluded that the planned teaching program effectively enhanced the knowledge of breastfeeding techniques among primigravida antenatal mothers.

1.INTRODUCTION

Breast milk is the most nutritious food for babies. Proper breastfeeding techniques are essential for successful feeding. Exclusive breastfeeding can save many lives by preventing malnutrition and diarrheal diseases. Unfortunately, many mothers lack knowledge of correct breastfeeding techniques, leading to unnoticed and potentially harmful issues for both babies and lactating mothers ².

Breastfeeding offers a multitude of benefits. It not only enhances the health of both nursing parents and their babies but also significantly reduces the risks of sudden infant death syndrome (SIDS) by up to 64% and overall infant mortality rates by as much as 40% ¹¹.

Breastfeeding provides a range of protective benefits for babies, including defence against lower respiratory

tract infections, severe or persistent diarrhoea, asthma, eczema, Crohn's and ulcerative colitis, obesity, type 1 and 2 diabetes, and leukemia. Moreover, breastfed babies have a reduced risk of cancer and tend to exhibit higher IQ scores. Nutrition during the baby's first 1000 days is crucial, and breast milk is perfectly tailored to support optimal brain development and long-term health¹.

Indeed, the benefits of breastfeeding extend beyond the first year, and up to two years, with notable advantages for the health of the breastfeeding parent as well. Continuing breastfeeding can offer protection against conditions such as diabetes, high blood pressure, and cancers of the breast and ovaries⁶.

Breastfeeding stands as one of the most effective means to safeguard child health and ensure survival. Breast milk is rich in antibodies that provide protection against numerous common childhood illnesses. Furthermore, children who are breastfed tend to perform better on intelligence tests and are less likely to experience overweight or obesity later in life⁸. The American Academy of Paediatrics (AAP) recommends exclusive breastfeeding for the first six months of life and encourages continued breastfeeding after solid foods are introduced, as long as the baby desires, for 2 years or beyond³.

2.NEED FOR THE STUDY

The WHO defines exclusive breastfeeding as feeding the infant solely with breast milk (including expressed milk or from a wet nurse) for the first 6 months of life, except for oral rehydration solutions or drops/syrups of vitamins, minerals, or medicines. Factors such as the mother's attitudes and knowledge, which may negatively impact the continuation of exclusive breastfeeding up to 6 months, and any events that discourage its continuation, are considered. Barriers to exclusive breastfeeding within the health system, family, public places, or workplaces are also taken into account⁵.

Breastfeeding is essential for child survival and optimal health. Breast milk is a safe, natural, nutritious, and sustainable source of nourishment for babies. It aligns perfectly with the psychological and physiological needs of infants. Universally, it's agreed that breast milk is the preferred method of feeding newborns, providing them with the best possible start in life¹⁰.

The Global Breastfeeding Scorecard serves as a valuable tool in assessing breastfeeding practices worldwide, focusing on initiation timing, exclusivity in the first six months, and continuation up to two years of age. It also evaluates national efforts to protect and support breastfeeding. The 2023 Scorecard reflects both progress and challenges in improving breastfeeding practices, highlighting success stories in countries that have bolstered their breastfeeding policies and programs. Globally rates of exclusive breastfeeding in the first six months of life have increased by 10 percentage points over the past decade and are at 48% for 2023, close to the World Health Assembly target of 50% by 2025. The rate of exclusive breastfeeding is ten percentage points higher than a decade earlier, significant progress is possible and has occurred across regions and countries. The Global Breastfeeding Collective has set a target to reach 70% by 2030⁹.

In a cross-sectional study titled "Prevalence of exclusive breastfeeding for the first six months of an infant's life and associated factors in a low-middle-income country," researchers examined 1072 mothers who brought infants aged between 6 and 30 months to a community health centre (CHC) for routine vaccination in Central and North Vietnam. The study found that during the first six months, only 14.2% of mothers exclusively breastfed their infants. Multivariable logistic regression analysis revealed several factors significantly associated with exclusive infant breastfeeding. These included the highest maternal education level (university or postgraduate) (adjusted odds ratio (AOR) 2.55; 95% confidence interval (CI) 1.10, 5.91), male infants (AOR 1.72; 95% CI 1.11, 2.68), duration of skin-to-skin contact greater than 90 min (AOR 7.69; 95% CI 1.95, 30.38), receiving first breastfeeding during skin-to-skin contact (AOR 2.31; 95% CI 1.30, 4.10), completely feeding infant directly at the breast (AOR 1.65; 95% CI 1.00, 2.71), and exclusive breastfeeding intention during pregnancy (AOR 2.48; 95% CI 1.53, 4.00). The study concluded that the prevalence of mothers practicing exclusive infant breastfeeding during the first six months was low in the studied population⁴.

3.METHODS

3.1. RESEARCH DESIGN: The study adopted a quasi-experimental research design with a one-group pre-test and post-test, employing randomization.

3.2 SETTING OF THE STUDY: The study was conducted at the Government Maternity Hospital in Tirupati, Andhra Pradesh.

3.3 POPULATION: The population for the study consisted of antenatal primigravida mothers attending the maternity Outpatient Department (OPD) and ward.

3.4 SAMPLE SIZE: The sample comprised 50 antenatal primi mothers.

3.5 SAMPLING TECHNIQUE: A convenient sampling technique was utilized for participant selection in the study.

3.6 VARIABLES OF THE STUDY:

Independent variable: Structured teaching program on breastfeeding techniques for primigravida antenatal mothers.

Dependent variable: Knowledge of primigravida antenatal mothers on breastfeeding techniques.

Extraneous variables in the present study encompass specific sample characteristics, including the age, educational status, and occupation of the mother, family income, religion, area of living, type of family, and the source of information about breast feeding.

3.6 SAMPLING CRITERIA:

Inclusion criteria:

1. Availability at the time of data collection and willingness to participate in the study.
2. Ability to read and write Telugu and English.
3. Primigravida antenatal mothers.

Exclusive criteria:

1. Individuals who are unwilling to participate in the study.

2. Mothers who are multigravida.

ETHICAL CONSIDERATIONS:

- Ethical approval was obtained from the Institutional Ethical Committee for conducting the study.

- Written permission was obtained from the Medical Superintendent at the Government Maternity Hospital in Tirupati, A.P, India.

- Written informed consent was obtained from each participant.

3.7 DEVELOPMENT AND DESCRIPTION TOOL:

The collected data will be analyzed using descriptive and inferential statistics. A self-structured questionnaire was developed for data collection, organized into the following sections:

SECTION A: This section includes 9 questions related to socio-demographic variables.

SECTION B: This section comprises 20 knowledge questions concerning breastfeeding techniques. Each question has one correct answer. Each correct response is awarded one point according to the predetermined key sheet, while zero points are awarded for incorrect responses. The total score for all 20 items is 20 marks.

TABLE 1: SCORE INTERPRETATION

S.NO	LEVEL OF KNOWLEDGE	PERCENTAGE
1	Inadequate	<50%
2	Moderate	50-75%
3	Adequate	>75%

4.DATA ANALYSIS AND INTERPRETATION

SECTION-I: Frequency and percentage distribution of demographic variables among primiant natal mothers

Table:2 (N=50)

Demographic variables		Frequency	Percentage
Age	18 - 20 years	14	28.%
	21 - 23 years	18	36.%
	24 - 26 years	17	34.0%
	27 years and above	1	2.0%
	Total	50	100.0%
Educational status of the mother	Illiterate	10	20.0%
	Primary	17	34.0%
	Intermediate	16	32.0%
	Degree	7	14.0%
	Total	50	100.0%
Occupation of the mother	Homemaker	10	20.0%
	Daily Labouré	20	40.0%
	Self-Employee	15	30.0%
	Govt. Employee	5	10.0%

Occupation of the Husband	Total	50	100.0%
	Cultivation	10	20.0%
	Daily Labouré	16	32.0%
	Business/ Self-Employee	16	32.0%
	Govt. Employee	8	16.0%
Family Income	Total	50	100.0%
	Rs.10001 - Rs 20000	18	36.0%
	Rs.20001 - Rs 30000	15	30.0%
	> Rs. 30001	8	16.0%
Religion	Total	50	100.0%
	Hindu	13	26.0%
	Muslim	20	40.0%
	Christian	11	22.0%
	Others	6	12.0%
Area of Living	Total	50	100.0%
	Urban	19	38.0%
	Rural	19	38.0%
	Slum	12	24.0%
Type of family	Total	50	100.0%
	Nuclear	10	20.0%
	Joint	22	44.0%
	Extended Family	12	24.0%
	Broken Family	6	12.0%
Source of Information	Total	50	100.0%
	Mass Media	9	18.0%
	TV Internet	20	40.0%
	Friends & Relatives	18	36.0%
	Health care personnel	3	6.0%

SECTION II: Frequency and percentage Distribution of knowledge on Breast Feeding Techniques Among primi Antenatal Mothers in pretest.

Table:3

Pre-test knowledge on Breast Feeding Techniques Among Primi Antenatal Mothers	Frequency	Percentage	Mean	SD
Inadequate	14	28%	2.06	0.793
Moderate	19	38%		
Adequate	17	34%		
Total	50	100%		

Table 3: In the pre-test scores regarding breastfeeding techniques, out of 50 antenatal mothers:

- 14 (28%) exhibited inadequate knowledge,
- 19 (38%) demonstrated moderate knowledge,
- 17 (34%) had adequate knowledge of breastfeeding techniques.

The mean and standard deviation of breastfeeding techniques among antenatal mothers in the pre-test were 2.06 and 0.793, respectively (Fig:1).

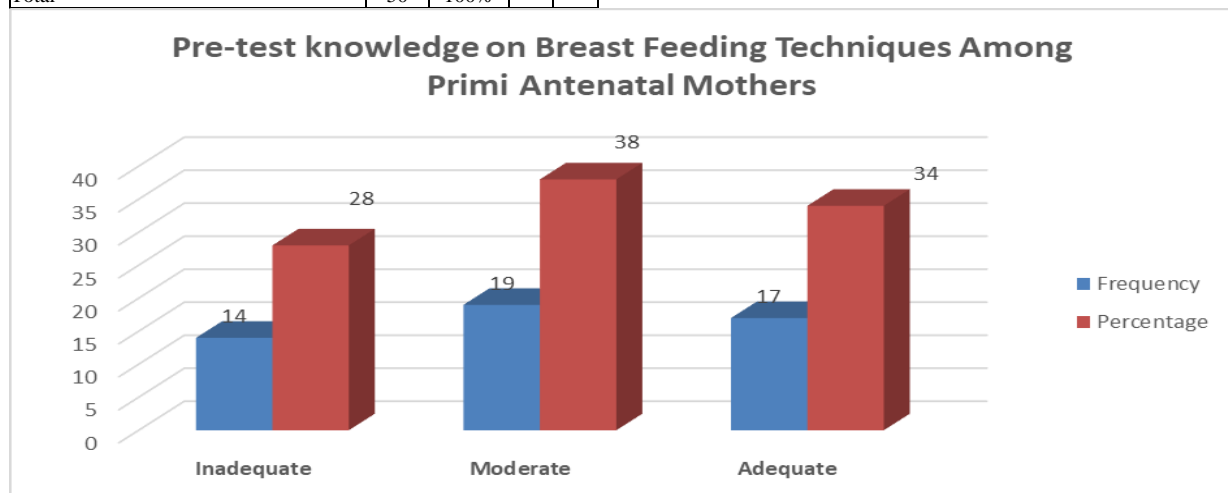


Fig:1

SECTION III: Frequency and percentage Distribution of knowledge on Breast Feeding Techniques Among Primi Antenatal Mothers in post test

Table:4

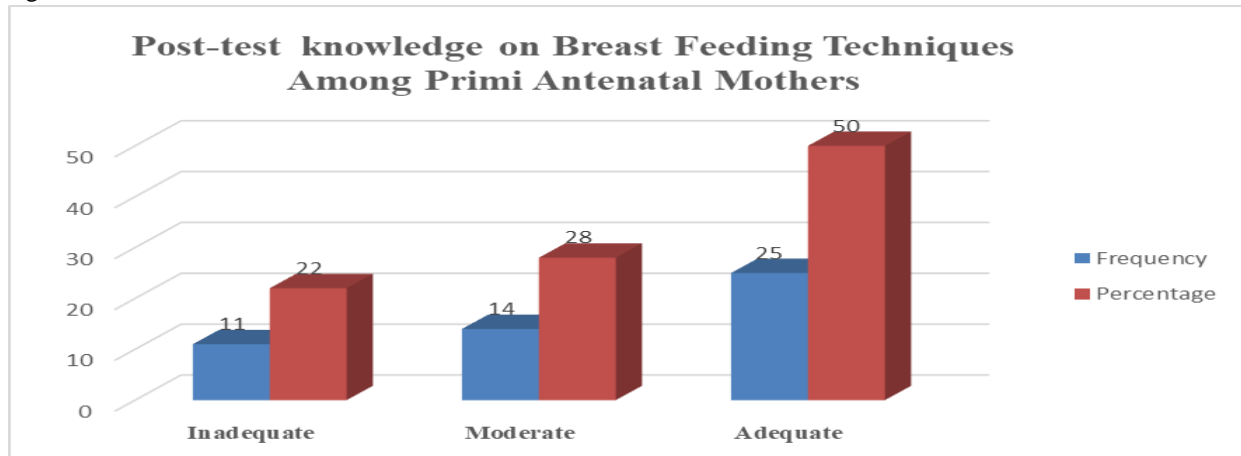
Post test knowledge on Breast Feeding Techniques Among Primi Antenatal Mothers	Frequency	Percentage	Mean	SD
Inadequate	11	22.0	2.28	0.809
Moderate	14	28.0		
Adequate	25	50.0		
Total	50	100		

In the post-test scores regarding breastfeeding techniques, out of 50 antenatal (primigravida) mothers:

- 11 (22%) exhibited inadequate knowledge,
- 14 (28%) demonstrated moderate knowledge,
- 25 (50%) had adequate knowledge of breastfeeding techniques.

The mean and standard deviation of breastfeeding techniques among antenatal mothers were 2.28 and 0.809, respectively (Fig:2).

Fig:2



SECTION IV: Distribution of paired t-test, mean and S.D of pre and post knowledge on breast feeding techniques.

TABLE 5: Paired Samples Statistics

	Mean	N	S.D	Std. Error Mean	t-value	Sig.
Pair 1	Pre Knowledge	7.72	50	2.540	10.303	0.000
	Post Knowledge	12.30	50	2.597		

**significant at 0.01 level;

Among the 100 primigravida antenatal mothers, the

mean score for breastfeeding techniques in the pre-test was 7.72, with a standard deviation of 2.540 and a standard error of 0.359. For the post-test knowledge scores on breastfeeding techniques, the mean was 12.30, with a standard deviation of 2.597, and a standard error of 0.367. The t-value was 10.303, with a p-value of 0.000 (** indicates significance) (Fig:3).

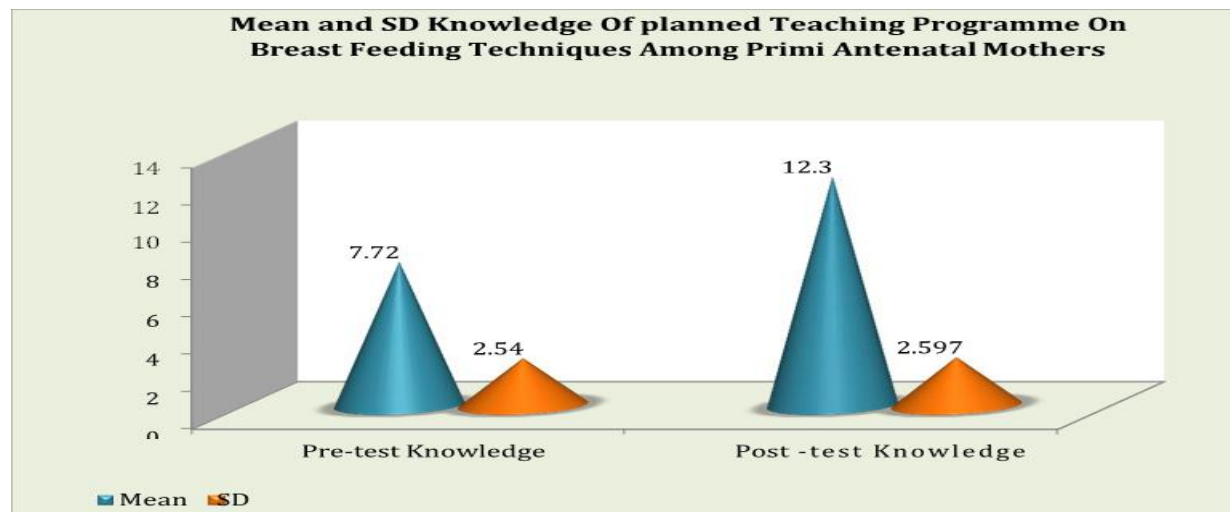


Fig:3

SECTION IV: Association between demographic variables and knowledge on breast feeding techniques among primi antenatal mothers

In the pre-test, there exists a statistically significant association between socio-demographic variables and knowledge among primigravida antenatal mothers, particularly regarding income and area of living, which are highly significant at $p < 0.01$. Furthermore, the age of antenatal mothers, education, source of information, exhibit significance at $p < 0.05$. In the post-test, a statistically significant association between socio-demographic variables and knowledge among primigravida antenatal mothers is observed. Specifically, education, occupation, source of information, and area of living demonstrate significance at $p < 0.01$. Additionally, age, type of family, and income are significant at $p < 0.05$.

SUMMARY AND CONCLUSIONS

The present study identified deficits in knowledge and practice regarding breastfeeding techniques among primigravida antenatal mothers. The planned teaching program proved effective in enhancing the knowledge of primigravida antenatal mothers concerning breastfeeding techniques. It emphasized the importance of educating mothers during the antenatal period itself, focusing on maintaining proper feeding positions, durations, and techniques. Such planned teaching programs are crucial for creating awareness among primigravida antenatal mothers about the significance of breastfeeding techniques.

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