

# Breastfeeding Empowerment Programme (BEP) on Knowledge, Self Confidence and Practice among Primiparous Mothers

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## Abstract

**Background:** Implementing a Breastfeeding Empowerment Program targeting three key domains in first-time mothers has proven advantageous for both the mother and the infant. Engaging in breastfeeding contributes to maternal and child health well-being while fostering economic development by reducing child mortality rates and boosting cognitive development in children.

**Methodology:** A quasi-experimental design following a post-test-only control group approach, employing a quantitative evaluative method, was utilised for this study. Information was gathered from 40 first-time mothers through purposive sampling, using a structured knowledge questionnaire, a modified self confidence scale, and a structured practice checklist to evaluate breastfeeding proficiency. The collected data underwent analysis and interpretation using descriptive and inferential statistical methods.

**Results:** The results indicated a high level of effectiveness in the breastfeeding empowerment program for first-time mothers. The research suggests the importance of implementing awareness initiatives targeted at primiparous mothers to encourage successful exclusive breastfeeding for their newborns.

**Conclusion:** The study confirms the positive impact of the Breastfeeding Empowerment Programme (BEP) on primiparous mothers' breastfeeding knowledge and practices. There is a critical need for widespread awareness about exclusive breastfeeding, starting from antenatal visits, to improve outcomes for first-time mothers.

**Keywords:** Breastfeeding Empowerment Programme, Knowledge, Self Confidence, Practice, Primiparous

## 1. Introduction

Breastfeeding constitutes a fundamental human behaviour crucial for the well-being of both infants and mothers. Its significant economic implications extend to households and societies at large [1]. The World Health Organization (WHO) advises exclusive breastfeeding for six months of a new-born's life to ensure optimal growth, development, and health. Subsequently, infants are encouraged to receive nutritious and safe complementary foods while breastfeeding for at least two years [2]. Breastfeeding is recognised as a human rights concern for both the mother and child, affirming children's entitlement to life, survival, development, optimal health, and access to safe, nutritious foods. Engaging in breastfeeding improves maternal and child health and contributes to economic growth by reducing child mortality and enhancing cognitive development in children [3].

### 1.1. Statement of the Problem

A study to assess the effectiveness of the Breastfeeding Empowerment Programme (BEP) on knowledge, self confidence and practice among primiparous mothers in selected hospitals, Bengaluru.

### 1.2. Objectives

- To evaluate the effectiveness of the Breastfeeding Empowerment Programme (BEP) on knowledge, self confidence, and practice among primiparous mothers between experimental and control groups.
- To find the correlation between knowledge, self confidence and practice among primiparous mothers in experimental and control groups.
- To determine the association between knowledge, self confidence

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and practice scores of primiparous mothers with selected sample characteristics in experimental and control groups.

### 1.3. Operational Definitions

#### 1.3.1. Breastfeeding Empowerment Programme (BEP)

Laptop-Assisted Teaching Program (LATP) using A.V aids which includes organized information on the structure and functions of the breast, problems of breast and nipple, mechanism of breast milk stimulation and production, breastfeeding techniques, problems of breastfeeding during the postnatal period, breastfeeding position aided with a demonstration using dummy, administered to mothers soon after the delivery, considering the day of delivery as day one. Each session was programmed for 30 minutes on a one-to-one basis for three consecutive days.

#### 1.3.2. Knowledge

Level of awareness regarding breastfeeding as measured using a structured knowledge questionnaire.

#### 1.3.3. Self Confidence

A feeling of trust or self conviction towards breastfeeding as measured using a standardized breastfeeding self confidence scale.

#### 1.3.4. Practice

Level of performance regarding breastfeeding as measured using a structured practice checklist.

#### 1.3.5. Primiparous Mothers

Female individuals admitted in postnatal wards who have delivered a live baby for the first time.

## 2. Methodology

The study employed Ludwig Von Bertalanffy General System Theory as its conceptual framework. A quasi-experimental post-test only control group design with a quantitative evaluative approach was chosen as the research design. The instrument included four sections:

- Section One: Gathered sample characteristics through an interview schedule.
- Section Two: Utilised a structured knowledge questionnaire,
- Section Three: Involved a modified self confidence scale and
- Section Four: Employed a structured practice checklist to assess breastfeeding proficiency.

Fifteen experts ensured content validity and reliability were established. A pilot study assessed the feasibility, and the final study involved 40 primiparous mothers selected through purposive sampling. Descriptive and inferential statistics were applied to analyse the collected data.

## 3. Results and Interpretation

### 3.1. Section I: Description of Sample Characteristics

In the experimental group, 50% of primiparous mothers were aged 20-25, with a similar percentage being Hindus. Regarding education, a quarter each had completed PUC, diploma, and graduate studies. The majority (85%) were homemakers, 60% underwent emergency LSCS, and 40% had a monthly family income of Rs.10001-20000. Around 70% received information from family and friends. Additionally, 65% had male babies, 80% had babies weighing 2.5-3.0 kg, and 95% had babies with an APGAR score of eight and above at 1<sup>st</sup> minute, and all babies scored eight and above at 5<sup>th</sup> minute.

In the control group, a little over half (55%) were aged 25-35, with 50% being Hindus. Less than half (35%) had graduated, and 75% were homemakers. About 60% had a normal vaginal delivery, and 50% had a family income of Rs. 20001-30000 per month. Information sources included family and friends (50%) and others (after admission to the hospital, 50%). More than half (60%) had female babies, while a little over half (55%) had babies weighing between 3.0 and 3.5 kg. Most (80%) of the babies had an APGAR score of eight and above at 1<sup>st</sup> minute, and all babies scored eight and above at 5<sup>th</sup> minute.

Regarding homogeneity of sample characteristics, both the groups were similar at baseline except for the birth weight of the baby in Kg.

### 3.2. Section II: Description of Post-Test Knowledge, Self Confidence and Practice Scores following the Breastfeeding Empowerment Programme (BEP) among Primiparous Mothers in the Experimental and Control Groups

In the experimental group, the majority (80%) of first-time mothers possessed sufficient breastfeeding knowledge, with just under a quarter (20%) having moderately adequate knowledge. Regarding confidence, most (65%) were very confident about breastfeeding, while around a fifth (20%) were confident, and 15% were occasionally confident. In terms of practice, the majority (85%) demonstrated adequate breastfeeding practice, while 15% exhibited moderately adequate practice. In the control group, the majority (65%) had moderately adequate breastfeeding knowledge, and 35% had adequate knowledge. Confidence levels varied, with most (60%) feeling confident about breastfeeding, a little over a quarter (30%) sometimes confident, and a few (10%) very confident. Regarding practice, most (60%) displayed adequate breastfeeding practice, while 40% demonstrated moderately adequate practice.

$n_1=20, n_2=20$							
<b>Post-Test Knowledge Score</b>							
Groups	Max. Score	Mean	Mean Difference	SD	Unpaired t-Value	df	Sig. (p-value)
Experimental Group	20	17.8	2.5	1.6	4.98	38	0.00007*
Control Group		15.3		1.6			
<b>Post-Test Self Confidence Score</b>							
Experimental Group	50	39.7	7.3	6.9	4.068	38	0.00001*
Control Group		32.4		4.1			
<b>Post-Test Practice Score</b>							
Experimental Group	20	17.4	1.2	1.4	2.309	38	0.026*
Control Group		16.2		2.0			
<b>Note: * refers to a significant difference at 95% CI</b>							$t_{38}'=2.024$

**Table 1:** Overall Mean, SD and unpaired 't' Value of Post-Test Knowledge, Self Confidence and Practice Scores on Breastfeeding between the Experimental and Control groups.

The data presented in the above table depicts that the average post-test knowledge score in the experimental group (17.8) is lower than that in the control group (15.3), resulting in a mean difference of 2.5. The computed unpaired 't' value is 4.98, surpassing the table value ( $t_{38} = 2.024$ ) at a significance level 0.05. Similarly, the average post-test self confidence scores in the experimental group (39.7) are lower than those in the control group (32.4), with a mean difference of 7.3. The calculated unpaired 't' value is 4.068, exceeding the table value ( $t_{38} = 2.024$ ) at a significance level of 0.05.

Furthermore, the mean post-test practice scores in the experimental group (17.4) are slightly lower than those in the control group (16.2), resulting in a mean difference of 1.2. The calculated unpaired 't' value is 2.309, higher than the table value ( $t_{38} = 2.024$ ) at a significance level 0.05. Hence, the research Hypotheses  $H_1$ ,  $H_2$ , and  $H_3$  are accepted, stating a statistically significant difference in post-test knowledge, self confidence and practice scores following the breastfeeding empowerment programme between experimental and control groups.

### 3.3. Section III: Correlation between Knowledge, Self Confidence and Practice Scores on Breastfeeding among Primiparous Mothers in Experimental and Control Groups

$n_1=20, n_2=20$				
Variables	Experimental Group ( $n_1$ )		Control Group ( $n_2$ )	
	r-Value	Inference	r-Value	Inference
Knowledge and Self Confidence	0.573	Moderately Positive Correlation	0.634	Moderately Positive Correlation
Self Confidence and Practice Score	0.502	Moderately Positive Correlation	0.389	Low Positive Correlation
Knowledge and Practice Scores	0.284	Low Positive Correlation	0.398	Low Positive Correlation

**Table 2:** Correlation between Knowledge, Self Confidence and Practice Scores on Breastfeeding among Primiparous Mothers in Experimental and Control Groups.

The data presented in the above table depicts that in the experimental group, there is a moderate positive correlation between knowledge and self confidence ( $r = 0.573$ ), self confidence and practice score ( $r = 0.502$ ), and a low positive correlation between knowledge

and practice scores ( $r = 0.284$ ). Similarly, in the control group, a moderate positive correlation is observed between post-test knowledge and self confidence ( $r = 0.634$ ). Additionally, there are low positive correlations between self confidence and practice

scores ( $r = 0.389$ ) and knowledge and practice scores ( $r = 0.398$ ).

Hence,  $H_4$ ,  $H_5$ , and  $H_6$  are accepted, stating that a statistically significant correlation exists between post-test knowledge, self confidence, and breastfeeding practices among primiparous mothers in experimental and control groups.

### 3.4. Section IV: Association between Knowledge, Self Confidence and Practice Scores on Breastfeeding among Primiparous Mothers in Experimental and Control Groups

In the experimental group, the computed chi-square (with Yate's Correction) value between the post-test knowledge scores, self confidence, practice and sample characteristics like age, religion, educational status, occupation, mode of delivery, family income per month, source of information, gender of the baby, birth weight of the baby (in kgs), APGAR Score at 1<sup>st</sup> minute were lesser than the corresponding table values, except for the APGAR Score at 1<sup>st</sup> minute with Self Confidence scores ( $\chi^2 = 5.964$ ), which is greater than the corresponding table values.

In the control group, the computed chi-square (with Yate's correction) value between the post-test knowledge scores, self confidence, practice, and sample characteristics like age, religion, educational status, occupation, family income per month, source of information, gender of the baby, birth weight of the baby (in kgs), APGAR Score at 1<sup>st</sup> minute was lesser than the corresponding table values, except for the mode of delivery with practice scores ( $\chi^2 = 4.592$ ) which is greater than the table values.

Hence,  $H_7$ ,  $H_8$ , and  $H_9$  are rejected, stating that there is no statistically significant association between the post-test knowledge, self confidence, and practice scores of breastfeeding among primiparous mothers with selected sample characteristics in experimental and control groups, except APGAR Score at 1<sup>st</sup> minute with self confidence in the experimental group and mode of delivery with practice score in the control group, which are greater than the corresponding table values.

## 4. Discussion

The findings of the studies are being discussed in contrast with similar studies in the section. A cross-sectional study was conducted by Dukuzumuremyi et al., to assess Knowledge, Attitudes, and Practice (KAP) towards exclusive breastfeeding and identify factors associated with the practice of exclusive breastfeeding [4]. The result indicated that most mothers, 84%, presented good knowledge, and 87% also showed a good attitude toward exclusive breastfeeding. Nearly 95.9% of the respondents understood the benefits of exclusive breastfeeding practice for at least six months. The findings of this study highly inform policymakers and healthcare providers to direct their efforts to provide evidence-based information and recommendations on the benefits of breastfeeding to promote the practice of exclusive breastfeeding [4].

Similarly, a prospective descriptive design study was conducted by Chezem et al., to explore relationships among breastfeeding knowledge, breastfeeding confidence, and infant feeding plans and their effects on feeding practices in first-time breastfeeding mothers [5]. The results indicated that breastfeeding knowledge was strongly correlated with breastfeeding confidence ( $r = .262$ ;  $p = .025$ ) and actual lactation duration ( $r = .455$ ;  $p = .0001$ ). Compared with women planning to breastfeed their infants exclusively, those planning to combine feed planned shorter breastfeeding duration ( $p = .022$ ), reported shorter actual duration ( $p = .004$ ), and were less likely to meet their breastfeeding goal ( $p = .034$ ). The study concluded that expectations and the actual breastfeeding experience differed among women planning to combine feed and those planning to breastfeed exclusively [5].

In another cross-sectional study done by Olayemi et al, among, 433 mothers of children between six and twenty-four months old was conducted in urban and peri-urban/rural parts of Zaria in Nigeria [6]. Results indicated that approximately 90% of all mothers interviewed had heard about exclusive breastfeeding. However, with variations in the exact definition of exclusive breastfeeding, many interpreted it to be just till the start of six months. The practice of exclusive breastfeeding is low. Inaccurate knowledge of exclusive breastfeeding, occupation, antenatal care attendance, age of mothers, and supportive environment from stakeholders are some factors associated with the practice of exclusive breastfeeding. The findings indicate that several factors affect the practice of exclusive breastfeeding in Nigeria. Improving the practice of exclusive breastfeeding in the country will require a multifaceted approach and concerted efforts from stakeholders to address the deterring factors limiting its practice [6].

- **Nursing Implications:** This study examines the Breastfeeding Empowerment Programme's impact on first-time mothers, offering insights into nursing in education, practice, administration and research.
- **Nursing Education:** Integrating current breastfeeding insights into nursing education is essential, ensuring nursing students can effectively address mothers' queries. Encouraging enrollment in short-term lactation courses equips nurses and midwives to provide comprehensive breastfeeding counselling.
- **Nursing Practice:** Nurses, following hospital protocols, should actively promote exclusive breastfeeding. Antenatal OPD sessions can offer routine breastfeeding counselling. Nurses must vigilantly identify and address breastfeeding issues, improper practices, and obstacles. Prioritizing education on breastfeeding for primiparous mothers in the early postnatal period is crucial, emphasising the dangers of pre-lacteal feeds and the benefits of exclusive breastfeeding.
- **Nursing Administration:** Hospitals should adhere to the Baby-Friendly Hospital Initiative, implementing regular refresher training for nurses. Designated breastfeeding areas with privacy and essential amenities should be established. General breastfeeding counselling can be provided through various communication

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methods, including screens in waiting areas and the distribution of pamphlets to pregnant mothers visiting the obstetrics OPD.

- **Nursing Research:** Further research is needed to promote exclusive breastfeeding and enhance mothers' satisfaction through evidence-based practices. Nurse researchers can develop and test interventions to support breastfeeding, disseminating findings through journal clubs, seminars, conferences, and various media outlets. The results of the current study will be shared through publications, conferences, and media distribution.

#### 4.1. Limitations

The study is limited to

- Breastfeeding Empowerment Programme (BEP), which was administered to primiparous mothers for three consecutive days only
- The selected hospitals only
- Primiparous mothers
- Post-test assessment is done only once on the third postnatal day

#### 4.2. Recommendations

Based on the findings of the present study, recommendations offered for future research are:

- A longitudinal study can be conducted with multiple assessments.
- A similar study can be repeated on a larger sample. To ensure that the results can be generalised,
- Postnatal mothers admitted to urban and rural hospitals can be compared similarly.
- A similar comparison between primiparous mothers and multiparous mothers can be made.
- During prenatal visits, an experimental study on the breastfeeding knowledge of expectant mothers can be done.
- An exploratory study of postpartum mothers can be conducted to identify the social, physiological, and physical barriers to exclusive breastfeeding,

#### 5. Conclusion

The study confirms the positive impact of the Breastfeeding Empowerment Programme (BEP) on primiparous mothers' breastfeeding knowledge and practices. There is a critical need for widespread awareness about exclusive breastfeeding, starting from antenatal visits, to improve outcomes for first-time mothers.

**Ethical Clearance:** Taken from the selected hospital's Institutional Ethical Review Board (IERB).

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