

A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Breastfeeding Positioning Among Postnatal Mothers in Selected Community Areas in Kanpur

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Abstract

Breastfeeding plays a crucial role in promoting infant health by providing complete nutrition, enhancing immunity, and strengthening maternal–infant bonding. Despite its benefits, many postnatal mothers experience challenges, such as nipple pain, breast engorgement, fatigue, and ineffective feeding, often due to improper breastfeeding positioning and poor latching techniques. Limited awareness and lack of structured education further contribute to these difficulties. Educating postnatal mothers on correct breastfeeding positioning is, therefore, essential to improve their knowledge, encourage correct practices, and support successful breastfeeding outcomes. This study aimed to assess the pre-test and post-test knowledge of postnatal mothers regarding breastfeeding positioning, evaluate the effectiveness of a structured teaching program, and determine the association between pre-test knowledge scores and selected demographic variables. A quantitative pre-experimental one-group pre-test post-test design was adopted. The study was conducted among 40 postnatal mothers selected through purposive sampling from an urban area of Kanpur, Uttar Pradesh. Data were collected using a self-structured questionnaire to assess knowledge on breastfeeding positioning. Following the pre-test, a structured teaching program with demonstration was administered, and a post-test was conducted to evaluate knowledge gain. The findings revealed that most of postnatal mothers were aged between 20–25 years (60%), had primary level education (45%), were homemakers (80%), multiparous (65%), and belonged to joint families (65%). Most participants had normal vaginal deliveries (47.5%) and were residents of rural areas (70%). In the pre-test, 20% of mothers demonstrated poor knowledge regarding breastfeeding positioning, whereas in the post-test, 80% of mothers achieved good knowledge levels. The mean knowledge score increased from 13.45 in the pre-test to 22.42 in the post-test, with a mean difference of 8.97. The paired t-test value of 4.44 indicated a statistically significant improvement in knowledge following the structured teaching program. The study concluded that the structured teaching program was effective in improving the knowledge of postnatal mothers regarding breastfeeding positioning, thereby emphasizing the importance of educational interventions in promoting optimal breastfeeding practices.

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INTRODUCTION

“Breastfeeding is a mother’s gift to herself, her baby, and the earth.”

Breastfeeding is a critical component of maternal and child health, offering numerous benefits to both mothers and newborns. It encourages optimal infant nutrition, strengthens the immune system, and fosters a strong emotional bond between mothers and children. However, the effectiveness of breastfeeding is significantly influenced by proper positioning and attachment techniques, which ensure adequate milk transfer and prevent complications, such as nipple soreness, mastitis, and inadequate milk supply. Many postnatal mothers, particularly in urban settings, face challenges in adopting the correct breastfeeding positions due to a lack of knowledge, inadequate guidance, or cultural misconceptions. In urban areas such as Kanpur, Uttar Pradesh, where access to healthcare facilities and educational resources may vary, postnatal mothers often require structured interventions to enhance their breastfeeding knowledge and practices. A structured teaching program can serve as an effective tool to empower mothers with the necessary skills and confidence to breastfeed successfully. By addressing gaps in knowledge regarding breastfeeding positioning, such programs can improve maternal and infant health outcomes, reduce breastfeeding-related complications, and promote exclusive breastfeeding practices [1].

Breastfeeding provides essential nutrients and immunological protection to newborns. Although the importance of breastfeeding is well recognized, many postnatal mothers remain unaware of the correct techniques and positions that ensure comfort and effective feeding.

Improper breastfeeding positions can lead to fatigue, nipple pain, inadequate milk transfer, and early cessation of breastfeeding. These challenges are especially prevalent in urban areas, where fast-paced lifestyles and a lack of targeted health education can affect maternal practices. Structured teaching programs provide a systematic approach to enhancing maternal knowledge and promoting effective breastfeeding behaviors. By empowering postpartum mothers through education, these programs can bridge the gap between awareness and practice, ultimately contributing to better health outcomes for both mothers and children [2].

Need for the Study

Breastfeeding is a cornerstone of maternal and child health, contributing to optimal infant nutrition, immune system development, and maternal well-being. However, improper breastfeeding positioning is a significant barrier to successful breastfeeding, leading to issues such as inadequate milk transfer, nipple trauma, and early cessation of breastfeeding. In India, the National Family Health Survey (NFHS-5, 2019–2021) reports that only 63.7% of infants are exclusively breastfed for the first six months, with urban areas often showing lower adherence due to limited knowledge, lack of lactation support, and socio-cultural influences. In urban areas of Kanpur, Uttar Pradesh, postnatal mothers, particularly first-time mothers, often lack access to structured education on breastfeeding techniques, including proper positioning. This knowledge gap is compounded by reliance on informal advice from family or peers, which may perpetuate incorrect practices. Consequently, many mothers face challenges, such as breast engorgement, mastitis, or insufficient milk supply, which can undermine breastfeeding success and infant health outcomes.

Structured teaching programs have been recognized as effective interventions for improving knowledge and practices related to breastfeeding.

However, there is limited research on the impact of such programs in urban Kanpur, where unique socioeconomic and healthcare access challenges exist. This study is needed to evaluate the effectiveness of a structured teaching program in enhancing knowledge of breastfeeding positioning among postpartum mothers in this region. By addressing this gap, the study aims to empower mothers with evidence-based skills, promote exclusive breastfeeding, reduce breastfeeding-related complications, and contribute to improved maternal and infant health outcomes in alignment with national and global health goals [3].

Incorrect breastfeeding positions often result in maternal fatigue, nipple pain, poor milk transfer, and early discontinuation of breastfeeding. Many postnatal mothers experience these issues because of a lack of awareness and proper guidance on positioning techniques [4].

Although breastfeeding is a natural process, it requires appropriate knowledge and skills to ensure comfort and effectiveness. Postnatal mothers frequently face challenges in maintaining correct posture and positioning during breastfeeding, which not only affects their physical health but may also impact infant growth and satisfaction [5].

Objectives

- To assess the pre-test knowledge of postnatal mothers regarding breastfeeding positioning.
- To assess the post-test knowledge of postnatal mothers regarding breastfeeding positioning.
- To evaluate the effectiveness of structured teaching program regarding breastfeeding positioning among postnatal mothers.
- To determine the association between pre-test knowledge scores and demographic variables.

Hypothesis

H1: There will be a significant difference between the pre-test and post-test knowledge scores of postnatal mothers regarding breastfeeding positioning.

H2: There is a significant association between the pre-test score and the selected demographic variables.

Assumptions

- There will be less knowledge among postnatal mothers regarding breastfeeding positions.
- Mother may not naturally know the correct breastfeeding positions.
- Mothers may stop breastfeeding early if they face discomfort [6].

Operational Definition

Assess: To evaluate or determine the significance, quality, or effectiveness of the breastfeeding positioning intervention through systematic observation, measurement, and analysis [7].

In this study assessment means evaluating or making decisions on effectiveness of breastfeeding positioning.

Effectiveness: The degree to which the breastfeeding positioning intervention achieves its intended outcome of minimizing fatigue among postpartum mothers during breastfeeding, measured through predefined criteria and outcomes [8].

In this study, effectiveness refers to the process of assessing the desired result among postpartum mothers regarding breastfeeding positioning.

Breastfeeding: Breastfeeding involves feeding an infant breast milk directly from the breast, encompassing appropriate positioning, latch, and milk transfer [9].

In this study breastfeeding means feeding a baby with mother's milk from the breast.

Positioning: The specific technique or arrangement of the mother's and infant's bodies during breastfeeding to ensure effective milk transfer and comfort [10].

In this study, "positioning" refers to the manner in which a mother holds the baby during breastfeeding to ensure that the baby feeds properly and comfortably.

Postnatal mother: A woman who has recently given birth and is in the postpartum period, specifically during breastfeeding [11].

In this study, a "postnatal mother is defined as a woman who has recently given birth and is in the recovery and care period after delivery.

Structured teaching program: A structured teaching program (STP) is a systematically planned instructional method designed to enhance knowledge, develop skills, or change attitudes about a specific topic, using organized content, teaching strategies, time schedules, and evaluation methods to achieve educational objectives effectively [12].

In this study, STP refers to a planned series of teaching activities designed to provide information and improve understanding of a particular topic, using teaching aids, interactive methods, and evaluations, such as pre-test and post-test.

Delimitation

- The study will focus only on postnatal mothers in a particular area Kanpur.
- Only 40 mothers are included in the study due to time and resource constraints.
- The study is only for mothers who are breastfeeding.
- The study is done during a fixed period only.

Conceptual Framework

This study was guided by *Orem's self-care deficit nursing theory*, with a focus on the concepts of self-care agency, self-care deficit, and nursing system (Figure 1).

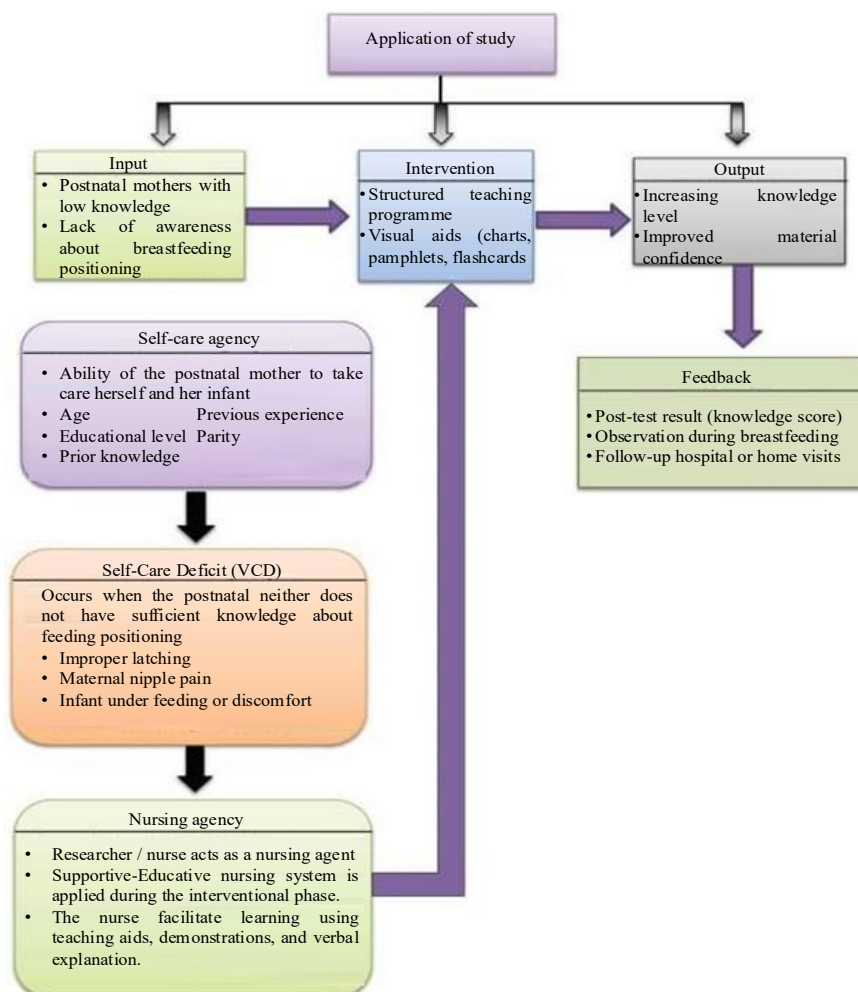


Figure 1. Conceptual framework is based on Dorothea Orem's self-care deficit theory.

Self-care agency (SCA): This refers to an individual's (postnatal mothers') ability to care for themselves and their infants. In your study, postnatal mothers may lack the knowledge to breastfeed correctly, thereby affecting both maternal and infant health.

Their ability to perform proper breastfeeding positioning is influenced by age, education level, parity, previous experience, and prior knowledge.

Self-care deficit (SCD): Occurs when the postnatal mother does not have sufficient knowledge about breastfeeding positions.

This knowledge gap may lead to:

Improper latching, maternal nipple pain or fatigue, and infant underfeeding or discomfort.

Nursing agency: The researcher/nurse acts as a nursing agent.

Assess the knowledge of mothers and provide appropriate teaching interventions to improve their understanding.

The nurse facilitates learning using teaching aids, demonstrations, and verbal explanation.

Nursing system applied: Supportive-educative system Orem categorizes nursing systems into:

- Wholly compensatory
- Partially compensatory
- Supportive-educative

Application of the Study

Input: The input phase in Orem's SCD nursing theory involves the identification of individuals unable to meet their self-care demands. In the context of this study, the input comprises postnatal mothers residing in selected urban areas of Kanpur who demonstrate a SCD related to breastfeeding practices.

This deficit is characterized by:

Inadequate knowledge regarding appropriate breastfeeding positions. Inability to apply correct breastfeeding techniques independently. Experience of physical discomfort or fatigue during breastfeeding. Limited SCA due to insufficient education, support, or awareness. Influencing demographic variables, such as age, parity, education, and socioeconomic status.

Intervention (Nursing system–supportive-educative approach): The supportive-educative nursing system is implemented when individuals have the capacity to perform self-care but require assistance in acquiring the necessary knowledge and skills. Within the scope of this study, the intervention comprised a STP developed to enhance postnatal mothers' understanding and application of appropriate breastfeeding positions.

This nursing intervention includes the following components:

Provision of evidence-based health education focusing on the principles and benefits of correct breastfeeding positioning. Demonstration of breastfeeding techniques through visual aids, models, and supervised practice sessions. Individualized guidance and reinforcement to ensure comprehension and skill acquisition. Supportive counseling to address fatigue, discomfort, and emotional concerns associated with breastfeeding. Encouragement of maternal participation in decision-making and self-care activities.

Output (Enhanced Self-Care Agency)

The output phase reflects the expected outcomes following the implementation of the nursing intervention, which is grounded in Orem's SCD nursing theory.

Post-intervention, the expected outcomes include:

Improved knowledge and understanding of proper breastfeeding positions among new mothers. Increased ability to apply correct techniques during breastfeeding without external assistance. Reduction in physical discomfort, contributing to a more positive breastfeeding experience. Promotion of maternal confidence and independence in performing self-care activities related to infant feeding.

Promoting safe, effective, and sustainable breastfeeding practices to support maternal and neonatal well-being.

Feedback/Evaluation

This stage involves systematic reassessment to verify whether the SCD has been resolved and whether the individual has achieved the desired level of SCA.

In this study, feedback is obtained through:

Post-test assessments evaluating the knowledge gained regarding breastfeeding positions. Observation of practical skills to ensure correct implementation of techniques taught. Self-reported experiences of mothers regarding fatigue reduction and breastfeeding comfort. Comparison of pre-test and post-test scores to measure improvement. Follow-up interactions to reinforce learning and provide additional support if needed.

REVIEW OF LITERATURE

A review of the literature is a summary of all reviews from various research literature related to the current study conducted by a researcher.

The review of literature is divided into two parts as follows:

1. Review of literature on effectiveness of breastfeeding positioning among postnatal mothers.
2. Review of literature on STPs regarding postnatal mothers.

Review of Literature on Effectiveness of Breastfeeding Positioning Among Postnatal Mothers

A cross-sectional study assessed breastfeeding positioning and attachment among 265 postnatal mothers. The findings revealed that 51.7% of mothers demonstrated correct positioning, while 75.8% had proper attachment. Factors, such as maternal education, parity, and prior breastfeeding education, were significantly associated with effective breastfeeding techniques [13].

A study conducted in a tertiary care hospital observed 99 postpartum mothers using a mixed-methods approach. Approximately 28.3% exhibited improper positioning, and 27.3% had poor attachments. Younger maternal age, being a housewife, infants younger than 10 days, and lack of breastfeeding counseling were associated with suboptimal techniques. Staff nurses highlighted the need for enhanced counseling and visual aids to improve practices [14].

A hospital-based mixed-methods study evaluated 114 postpartum mothers. The results indicated that 20.5% had improper positioning, and 21.4% demonstrated poor attachment. Primiparous mothers, infants < 15 days old, and the absence of breastfeeding counseling were associated with these challenges. Recommendations included increasing awareness of colostrum feeding and implementing targeted interventions [15].

An experimental study was conducted among 60 postpartum mothers in a tertiary care hospital to evaluate the effectiveness of a STP on breastfeeding positions. The study used a one-group pre-test post-test design. In the pre-test phase, only 28.3% of mothers demonstrated adequate knowledge of correct breastfeeding positions. After the implementation of a structured teaching session using charts and demonstrations, the post-test results showed that 86.6% of mothers acquired adequate knowledge. The study concluded that structured teaching significantly improved knowledge and awareness regarding breastfeeding positioning techniques [16].

A descriptive study conducted on 100 postpartum mothers in an urban maternity hospital showed that only 36% of mothers practiced correct breastfeeding positioning prior to any intervention. The research highlighted the gaps in health education and the need for structured programs. After providing targeted education, a follow-up assessment showed that 78% of the mothers applied the correct positions during breastfeeding [17].

A quasi-experimental study was conducted among 100 postpartum mothers in a community setting to assess the effect of proper breastfeeding posture. The Breastfeeding Observation Tool was used. Post-intervention, 85% of mothers showed improved positioning and reduced nipple trauma. The study concluded that correct positioning improves maternal comfort and breastfeeding success [18].

A community-based intervention study was conducted on 70 postpartum mothers at an outreach clinic. Initially, only 30% of the mothers could demonstrate the correct positioning. After a week-long structured education using charts and pamphlets, 81.4% of the mothers could independently demonstrate the correct technique [19].

An interventional study in a primary healthcare setting involving 45 postpartum mothers showed that after introducing structured flashcard-based teaching, correct positioning practice increased from 34% to 78%. Mothers also reported reduced pain and easier latching in post-intervention feedback [20].

A randomized controlled study involving 90 postpartum mothers compared standard education and structured teaching [21].

A descriptive cross-sectional study was conducted among 450 postpartum mothers in a government hospital in Maharashtra. The study aimed to assess knowledge and practices regarding breastfeeding positioning. Results showed that 58% of mothers had inadequate knowledge, and only 42% practiced correct positioning. The study concluded that antenatal education significantly impacts early breastfeeding behavior [22].

A community-based descriptive study was conducted in West Bengal with 500 lactating mothers. The study revealed that only 48% of mothers could demonstrate the correct positioning. It was observed that mothers with higher levels of education and those who attended antenatal classes showed significantly better practices [23].

Review of Literature on STP Regarding Postnatal Mothers

A quasi-experimental study was conducted in a community health center with a sample of 80 postpartum mothers to assess the impact of an educational intervention on breastfeeding positions. The pre-intervention knowledge level was low, with only 31.2% of mothers having adequate awareness. Following a structured teaching session using audiovisual aids and flashcards, the post-intervention assessment revealed that 90% of mothers correctly identified and demonstrated the appropriate breastfeeding positions. This indicated a notable gain of over 58% in knowledge scores [23].

A pre-experimental research design involving 40 postpartum mothers at a district hospital was undertaken to evaluate the effects of structured teaching on breastfeeding techniques. Initially, 35% of the mothers were knowledgeable about proper latching and holding positions.

After being educated through structured modules and pictorial pamphlets, the post-test data showed that 87.5% of the mothers could describe and demonstrate the correct positioning, thus indicating significant improvement in knowledge and application [24].

A randomized controlled trial conducted on 120 postpartum mothers in a multi-center hospital

evaluated the effect of structured health education on breastfeeding positioning. The experimental group (60 mothers) received a STP, whereas the control group received routine care. In the experimental group, only 30% of mothers had adequate knowledge in the pre-test, which increased to 91.6% in the post-test, whereas the control group showed only a marginal improvement from 32% to 41.6%. The study strongly supported the use of structured teaching to enhance breastfeeding techniques [25].

A quasi-experimental study conducted with 75 postnatal mothers in a rural health center used a pre-test/post-test design to examine the effect of a STP using visual aids. The baseline assessment revealed that only 22.6% of the mothers knew about different breastfeeding positions. After the intervention, 81.3% of the mothers demonstrated correct knowledge and practice. The study confirmed the effectiveness of visual-based education in low-literacy settings [26].

An evaluative research study was conducted on 50 primiparous mothers in a government health facility to assess their knowledge and practice of breastfeeding positions before and after structured teaching. Pre-test scores indicated that only 40% of the mothers had a basic understanding.

Post-test scores improved dramatically, with 88% showing good knowledge and 82% practicing effective positions. The study recommended integrating structured teaching into routine postnatal care [27].

A comparative cross-sectional study conducted on 60 postpartum mothers compared knowledge levels in urban and semi-urban settings. The urban (30 mothers) group had better awareness (63%) than the semi-urban group (35%). A structured teaching intervention was provided to both groups, after which knowledge improved to 92% and 85%, respectively, indicating the uniform effectiveness of such programs across diverse populations [28].

A pre-test/post-test study on 50 postnatal mothers using a structured teaching module, which included flashcards and real-time demonstrations, revealed an increase in knowledge from 42% to 89% after one teaching session. The study concluded that the practical component of education played a vital role in learning [29].

A cross-sectional survey conducted on 100 postpartum mothers across three urban hospitals showed that 48% lacked adequate knowledge of breastfeeding positions. Structured group teaching improved the correct knowledge level to 86% after the assessment [30].

A study in a maternal care center in Bangalore with 60 mothers showed that pre-test scores were low (37%) but increased to 93% after structured demonstrations and flashcard use. This improvement was statistically significant and sustained for 2 weeks [31].

RESEARCH METHODOLOGY

The article comprises the methodology of this study, the research approach design for the study, the setting, sample, techniques of the data collection, description of the tool, and pilot study. The methodology of research indicates the general pattern and empirical data for the problem under investigation (Figure 2).

Research Approach

The research approach adopted for this study is quantitative and pre-experimental in nature. It aims to evaluate the effectiveness of a STP by comparing pre-test and post-test knowledge scores among postnatal mothers.

Research Design

The selected research design for this study is a pre-experimental one-group pre-test post-test design, in which one-group of participants is observed before and after the intervention.

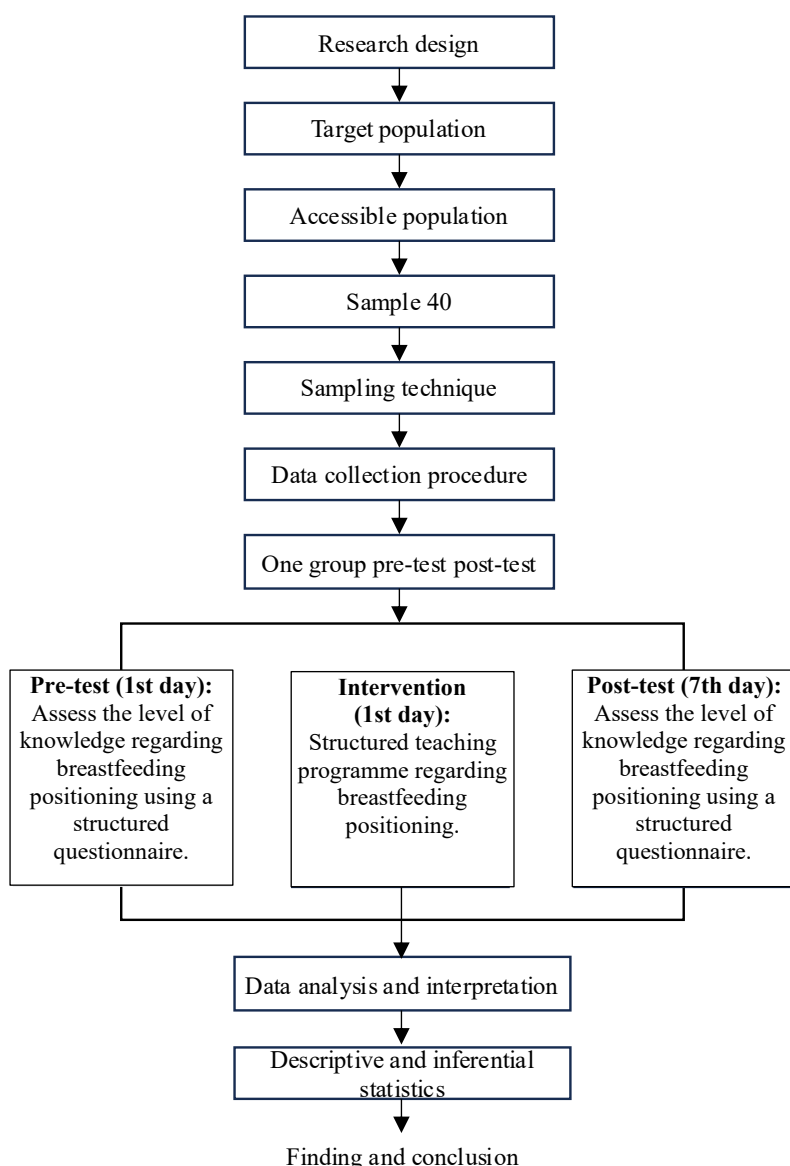


Figure 2. Flow chart of research methodology.

Table 1. Presentation of research design.

01	X	02
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01—Pre-test assessment of knowledge score regarding breastfeeding positioning.

X—Structured teaching program regarding breastfeeding positioning.

02—Post-test assessment of knowledge score regarding breastfeeding positioning.

Diagrammatic presentation of research design is shown in Table 1.

Variables

Independent variable: STP on breastfeeding positioning.

Dependent variable: Knowledge of postnatal mothers regarding breastfeeding positioning.

Setting of the Study

The study will be conducted in the selected community area of Shivli, Kanpur, where postnatal mothers can be accessed during the postnatal period.

Target Population

The target population for the study comprised mothers in the selected community area of Shivli, Kanpur.

Inclusion Criteria

- Mothers who can understand Hindi or English.
- Mothers are willing to participate and provide informed consent.
- Mothers who are breastfeeding their babies.

Exclusion Criteria

- Mothers with medical complications.
- Mothers whose babies are in neonatal intensive care unit or not breastfeeding.
- Mothers who are not willing to participate.

Sample Size

This refers to the number of samples or postnatal mothers to be selected for the research study sample size of the study, which consisted of 40 postnatal mothers who were in the Duffrin Hospital in Kanpur.

SAMPLE TECHNIQUE

Sampling is the process of selecting a portion of the population to represent the entire population. The convenient sampling technique will be used to select the sample based on the inclusion and exclusion criteria.

Description of the Tool

The tool consisted of two parts:

Section A: Sociodemographic variables of the postnatal mothers. The sociodemographic variables data consisted of baseline information on postnatal mothers regarding their age, education, occupation, parity, type of delivery, number of children, type of family, residence, etc.

Section B: Structured questionnaire on knowledge regarding breastfeeding positions (30 MCQs).

Each correct answer will carry 1 mark; incorrect or no response will carry 0 marks.

Committee Consideration

Approval will be obtained from the Institutional Ethical Committee. Minimizing harm and maximizing benefits. Privacy, confidentiality, and voluntary participation of the participants will be ensured.

Study

A pilot study is a small-scale preliminary study conducted to evaluate the feasibility, time, cost, risk, and adverse events involved in a full-scale research project. It helps to refine the data collection tools, methodology, and study design.

The pilot study will be conducted with 13% of postnatal mothers; the sample consisted of five participants (postnatal mothers) to test the feasibility of the intervention and the reliability of the data collection tools.

The mean pre-test score regarding knowledge of breastfeeding positioning was 12.6 after providing STP, and the mean post-test score was 22.8. The standard deviation of the pre-test knowledge was 2.87, and that of the post-test knowledge was 2.4.

Table 2. Level of knowledge.

Score	Knowledge category
0–10	Poor
11–20	Average
21–30	Good

Improvement in the level of knowledge was statistically tested by paired t-test. The calculated t-value 3.80 with the df 4 at 0.05 level of significance is higher than tabulated value 2.776.

Hence, it was proven that a STP was effective in increasing the level of knowledge among postpartum mothers (Table 2).

Validity of the Tool

The tool will be validated by a panel of experts, including doctors and Heads of Departments (HODs) in nursing and maternal health. Necessary modifications will be made based on their suggestions.

Reliability of the Tool

The reliability of the structured knowledge questionnaire was tested using the split-half method and the Spearman–Brown prophecy formula. A reliability coefficient of 0.80 or higher was considered acceptable.

Data Collection Procedure

Day 1: Pre-tests will be administered to assess baseline knowledge.

Immediately after: A STP will be provided using audiovisual (AV) aids (charts, flashcards, and pamphlets).

Day 7: Post-test will be conducted using the same structured questionnaire.

Plan for Data Analysis

Data will be analyzed using descriptive and inferential statistics, including mean, percentage, and standard deviation.

Inferential

Paired t-test: To assess the effectiveness of the intervention.

Chi-square test: To find associations between demographic variables and knowledge scores.

Analysis and Interpretation of Data

Analysis is the process of organizing data in such a way that research questions can be answered. Data analysis is the process by which the collected data are transformed into a numerical form by applying statistical techniques to illustrate recap and evaluate data.

The data presented in Table 3 show that the number of samples was 14 (35%) in the *age group* of 20–25 years, 24 (60%) in the group of 26–30 years, and 2 (5%) in the age group of 30–35 years.

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Regarding education: 11 (27.5%) were illiterate, 18 (45%) were primary level educated, 9 (22.5%) were secondary level educated, and 2 (5%) had a graduation degree.

Table 3. Frequency and percentage distribution of samples on selected sociodemographic variables.

S.N.	Demographic variables	Frequency	Percentage (%)
1.	Age group		
	a. 20–25 years	14	35
	b. 26–30 years	24	60
	c. 31–35 years	2	5
	d. More than 35 years	0	0
2.	Education		
	a. Illiterate	11	27.5
	b. Primary Education	18	45
	c. Secondary Education	9	22.5
	d. Graduate	2	5
3.	Occupation		
	a. Homemaker	32	80
	b. Agriculture	5	12.5
	c. Private job	2	5
	d. Government job	1	2.5
4.	Parity (No. of children)		
	a. Primipara (1st child)	6	15
	b. 2 children	26	65
	c. 3 children	8	20
	d. More than 3 children	0	00
5.	Type of delivery		
	a. Normal	19	47.5
	b. Vacuum	11	27.5
	c. C-section	10	25
	d. Vaginal birth after caesarean (VBAC)	0	00
6.	Type of family		
	a. Nuclear family	14	35
	b. Joint family	26	65
7.	Birth order of baby		
	a. First child	8	20
	b. Second child	28	70
	c. Third child	4	10
	d. Fourth or more	0	00
8.	Residence type		
	a. Urban	12	30
	b. Rural	28	70
9.	Monthly family income		
	a. Below 10000	15	37.5
	b. 10000–20000	18	45
	c. 20000–30000	7	17.5
	d. Above 30000	0	00

Regarding occupation: 32 (80%) were homemakers, 5 (12.5%) were engaged in agriculture, 2 (5%) had private jobs, and 1 (2.5%) had government jobs.

Regarding parity: 6 (15%) were primipara, 26 (65%) were multipara, and 8 (20%) were grand multipara.

Regarding type of delivery: 19 (47.5%) were normal delivery mothers, 11 (27.5%) were vacuum delivery mothers, 10 (25%) were C-section mothers.

Regarding type of family: 14 (35%) were nuclear families and 26 (65%) were joint families.

Regarding Birth order of the baby: eight (20%) were the first child, 28 (70%) were the second child, and four (10%) were the third child.

Regarding residence type: 12 (30%) were urban and 28 (70%) were rural.

Regarding monthly family income: 15 (37.5%) were below 10,000 income, 18 (45%) were 10–20,000 income, 7 (17.5%) were 20–30,000 income.

AGE

Graph (Figure 3) shows the age distribution of the participants, with the majority (24%) aged 26–30 years and (14%) aged 20–25 years. A smaller group (2%) falls in the 31–35 years range, while none are above 35 years (Table 4).

Education

Figure 4 presents the distribution of the education levels of the participants, showing the highest proportion (26%) of a particular qualification. Smaller groups include 8% and 6%, while some categories have no participants (Table 5).

Occupation

The graph shows (Figure 5) that most of participants are homemakers (32), followed by agriculture workers (5). Very few are in private (2) or government jobs (1), indicating a predominantly non-working population (Table 6).

Parity

Figure 6 shows that most mothers (65%) have two children, while 20% have three, 15% are primipara, and none have more than three children. This indicates a higher prevalence of two-child families in the group (Table 7).

Table 4. Frequency and percentage distribution of sample regarding age of people.

S.N.	Demographic variables	Frequency	Percentage (%)
a.	20–25 years	14	35
b.	26–30 years	24	60
c.	31–35 years	2	5
d.	More than 35 years	0	00

Table 5. Frequency and percentage distribution of samples regarding education of people.

S.N.	Demographic variable	Frequency	Percentage (%)
a.	Illiterate	11	27.5
b.	Primary Education	18	45
c.	Secondary Education	9	22.5
d.	Graduate	2	5

Table 6. Frequency and percentage distribution of sample regarding occupation of people.

S.N.	Occupation	Frequency	Percentage (%)
a.	Homemaker	32	80
b.	Agriculture	5	12.5
c.	Private job	2	5
d.	Government job	1	2.5

Table 7. Frequency and percentage distribution of sample regarding parity of people.

S.N.	Parity (No. of children)	Frequency	Percentage (%)
a.	Primipara (1st child)	6	15
b.	2 Children	26	65
c.	3 Children	8	20
d.	More than 3 children	0	00

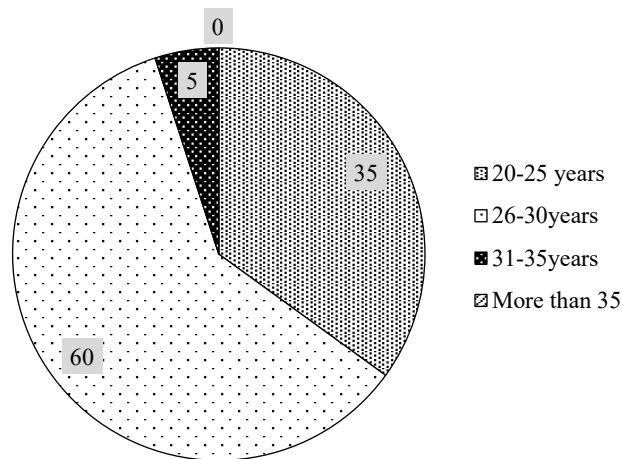


Figure 3. pie diagram showing frequency and percentage distribution of postnatal mothers regarding age.

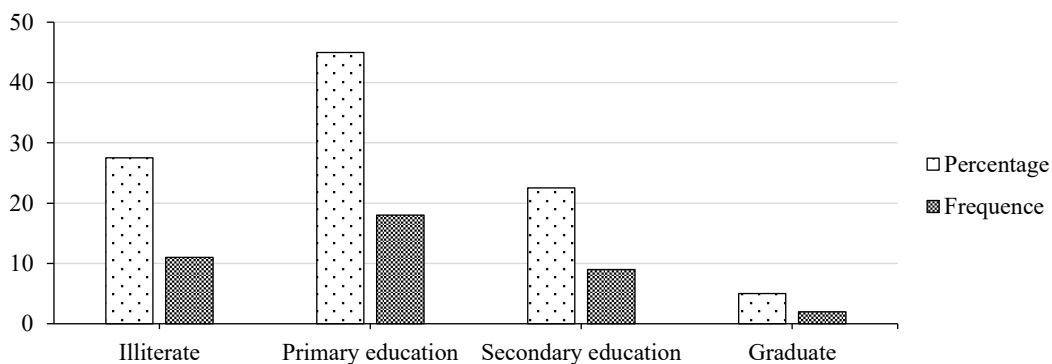


Figure 4. Bar diagram shows frequency and percentage distribution of postnatal mothers regarding education.

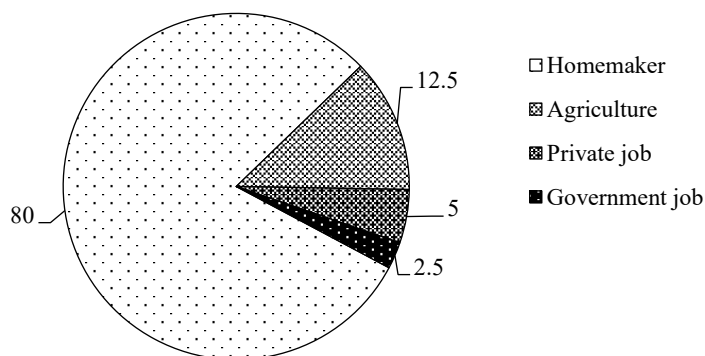


Figure 5. pie diagram showing frequency and percentage distribution of postnatal mothers regarding occupation.

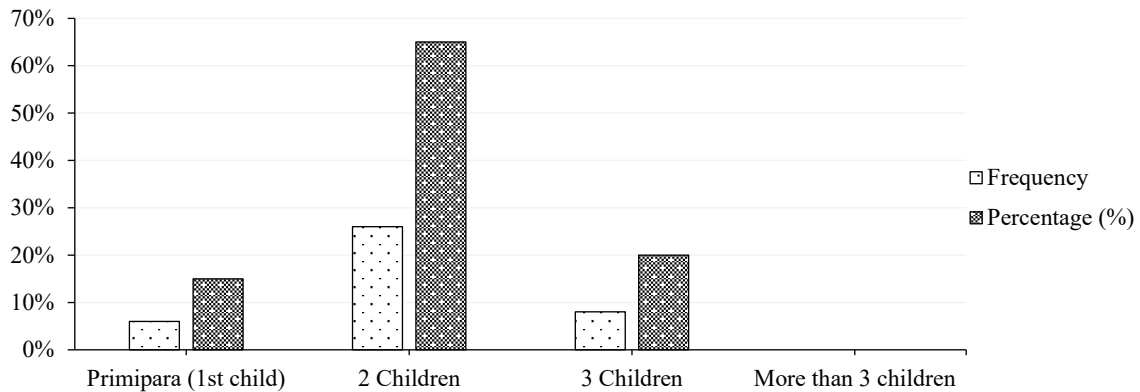


Figure 6. Bar diagram showing frequency and percentage distribution of postnatal mothers regarding parity.

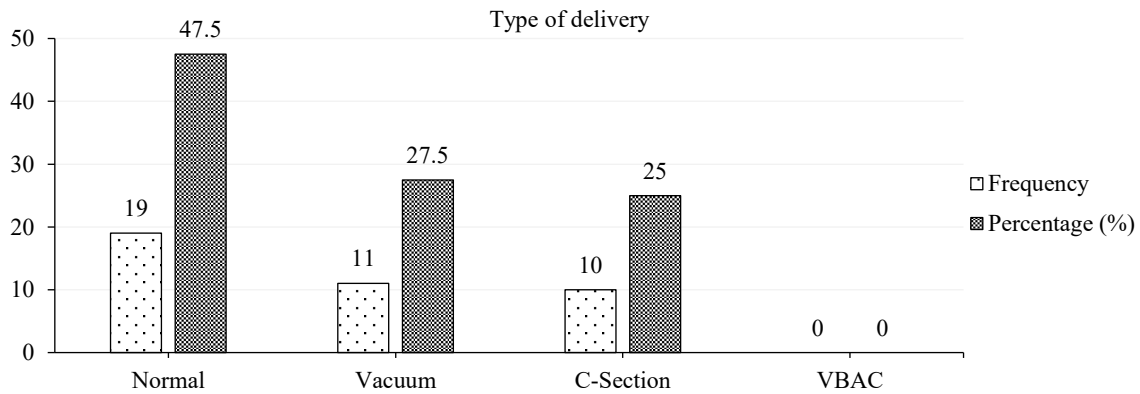


Figure 7. bar diagram showing frequency and percentage distribution of postnatal mothers regarding type of delivery.

Table 8. Frequency and percentage distribution of samples regarding type of delivery of people.

S.N.	Type of delivery	Frequency	Percentage (%)
a.	Normal	19	47.5
b.	Vacuum	11	27.5
c.	C-section	10	25
d.	Vaginal birth after caesarean (VBAC)	0	00

Type of Delivery

Figure 7 shows that 47.5% of mothers had a normal delivery, 27.5% had a vacuum-assisted delivery, 25% underwent a Cesarean section, and none had a vaginal birth after caesarean (VBAC). Normal delivery was the most common mode of birth (Table 8).

Type of Family

The graph (Figure 8) shows the distribution of families, with 35% (14) belonging to nuclear families and 65% (26) belonging to joint families. This indicates that joint families are more common in the sample (Table 9).

Birth of the Baby

Graph (Figure 9) shows that most of the babies were second-born (70%), followed by first-born (20%) and third-born (10%). No cases were reported for children born fourth or more (0%) (Table 10).

Residence

Table 11 shows that 30% (12) of the respondents were from urban areas, whereas 70% (28) were from rural areas. This indicates a higher representation of rural residents in the sample (Figure 10).

Monthly Income of Family

Table 12 and Figure 11 show that most families (45%) fall in the income group of ₹ 10,000–20,000, followed by 37.5% earning below ₹ 10,000. Only 17.5% have an income between ₹ 20,000 and ₹ 30,000, while none earn above ₹ 30,000.

Table 13 shows the frequency and percentage distribution of samples according to the pre-test knowledge score of postnatal mothers regarding postnatal mothers. It revealed that eight (20%) postnatal mothers had inadequate knowledge, and 32 (80%) postnatal mothers had no good knowledge regarding postnatal mothers (Figure 12).

Table 14 shows the frequency and percentage distribution of samples according to the post-test knowledge score of postnatal mothers regarding postnatal mothers. It revealed that 80% of the postnatal mothers had good knowledge regarding postnatal mothers (Figure 13).

Table 9. Frequency and percentage distribution of samples regarding type of family of people.

S.N.	Type of family	Frequency	Percentage (%)
a	Nuclear family	14	35
b	Joint family	26	65

Table 10. Frequency and percentage distribution of samples regarding birth of the baby of people.

S.N.	Birth order of baby	Frequency	Percentage (%)
a.	First child	8	20
b.	Second child	28	70
c.	Third child	4	10
d.	Fourth or more	0	00

Table 11. Frequency and percentage distribution of sample regarding residence of people.

S.N.	Residence type	Frequency	Percentage (%)
a.	Urban	12	30%
b.	Rural	28	70%

Table 12. Frequency and percentage distribution of sample regarding monthly income of family of people.

S.N.	Monthly family income	Frequency	Percentage (%)
a.	Below 10000	15	37.5
b.	10000-20000	18	45
c.	20000-30000	7	17.5
d.	Above 30000	0	00

Table 13. Frequency and percentage distribution of samples according to pre-test knowledge score of postnatal mothers regarding breastfeeding positioning.

S.N.	Level of knowledge	Frequency	Percentage (%)
1	Poor	8	20
2	Average	32	80
3	Good	00	00
Total		40	100

Table 14. Frequency and percentage distribution of samples according to post-test knowledge score of postnatal mothers regarding breastfeeding positioning.

S.N.	Level of knowledge	Frequency	Percentage (%)
1	Poor	0	00
2	Average	8	20
3	Good	32	80
Total		40	100

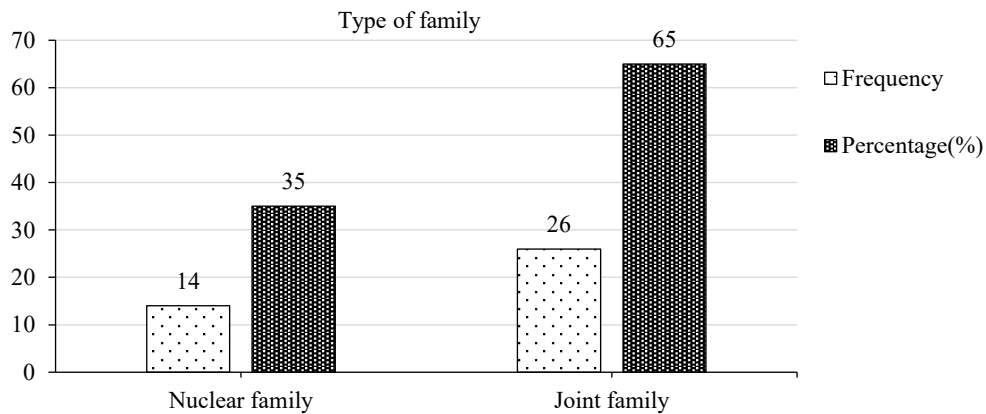


Figure 8. Bar diagram shows frequency and percentage distribution of postnatal mothers regarding type of family.

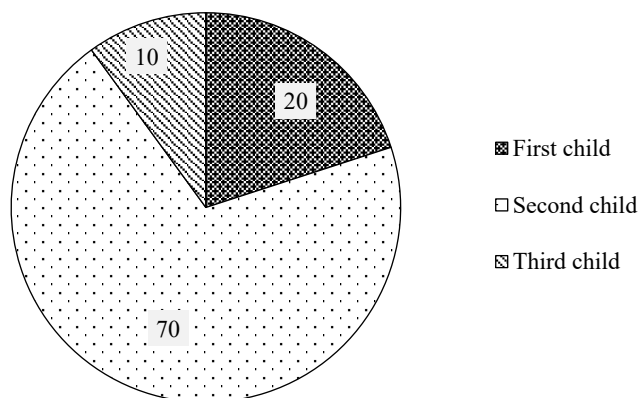


Figure 9. Pie diagram showing frequency and percentage distribution of postnatal mothers regarding Birth order of the baby.

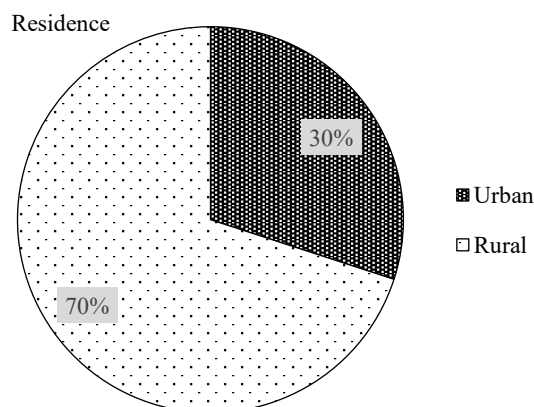


Figure 10. Pie diagram showing frequency and percentage distribution of postnatal mothers regarding Residence.

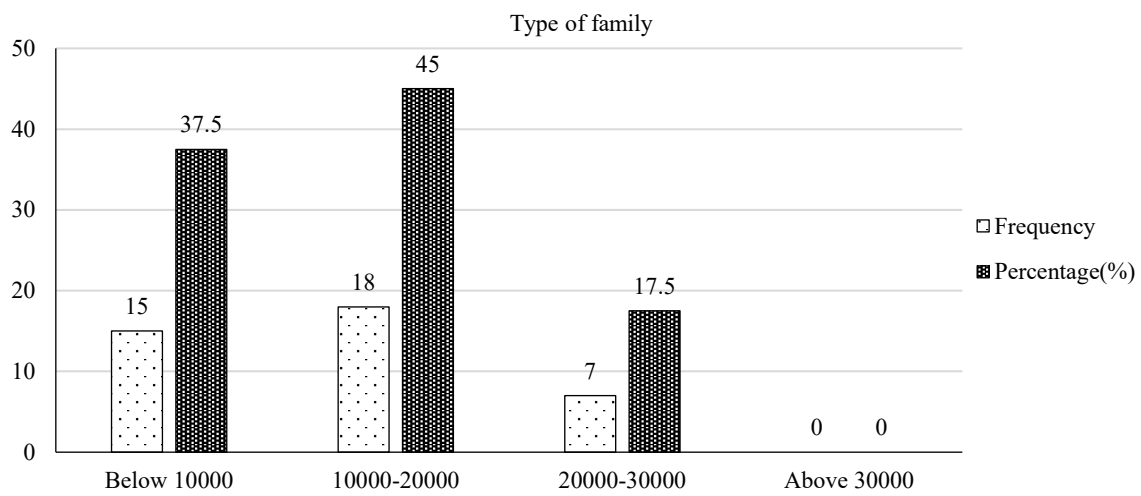


Figure 11. Bar diagram showing frequency and percentage distribution of postnatal mothers regarding Monthly income.

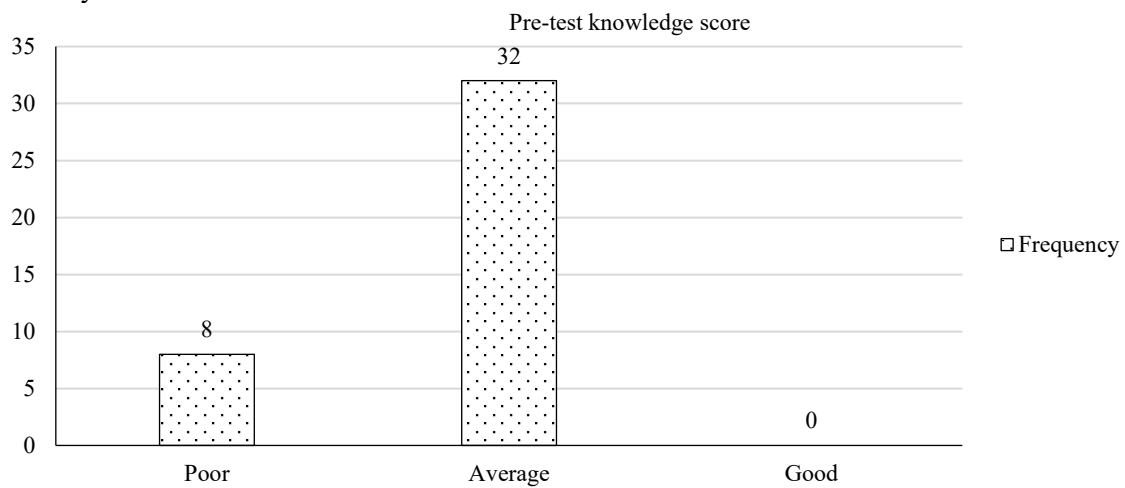


Figure 12. Bar diagram shows the knowledge of postnatal mothers in pre-test.

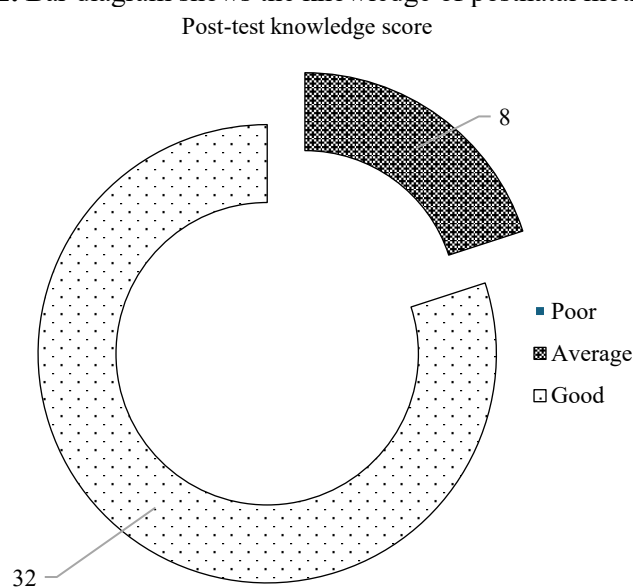


Figure 13. Pie diagram showing the knowledge of postnatal mothers in post-test.

Table 15. Mean and standard deviation for the pre-test score on knowledge regarding postnatal mother.

S.N.	Level of knowledge	Mean	Standard deviation
1.	Pre-test	13.45	3.58

Table 16. Mean and standard deviation for the post- test score on knowledge regarding postnatal mother.

S.N.	Level of knowledge	Mean	Standard deviation
1	Post-test	22.42	9.76

Table 17. Comparison between mean and standard deviation of pre- test and post-test knowledge regarding breastfeeding positioning among postnatal mothers.

S.N.	Level of knowledge	Mean	Mean %	SD	Mean difference	Df	Paired t-value	P-value	Table value
1.	Pre-test	13.45	33.62	3.58					2.021
2.	Post-test	22.42	56.05	9.76	8.97	39	4.44	P<0.05	

Table 15 shows that the overall mean of the pre-test knowledge regarding breastfeeding positioning among postnatal mothers was =13.45 and the standard deviation was =3.58.

Table 16 shows that the overall mean of the post-test knowledge regarding breastfeeding positioning among postnatal mothers was =22.42 and the standard deviation was =9.76.

Table 17 shows that the overall mean of the pre-test knowledge regarding breastfeeding positioning among the postnatal mothers was 13.45 with a standard deviation of 3.58, and the post-test knowledge regarding breastfeeding positioning among the postnatal mothers was 22.42 with a standard deviation of 9.76. The paired t-value shows that there is a significant difference between the pre-test and post-test knowledge scores.

The mean percentage between pre- and post-test was 8.97% knowledge. This shows that the STP on knowledge regarding breastfeeding positioning among postpartum mothers was effective in improving the knowledge of postpartum mothers in Shivli Community Health Center, Kanpur Dehat, Uttar Pradesh.

Chi-Square (χ^2)

Table 18 shows a significant association between education and parity regarding the breastfeeding positioning of postnatal mothers according to selected sociodemographic variables [32].

DISCUSSION

This study aimed to assess the effect of a STP on the knowledge of postnatal mothers regarding breastfeeding positioning at Shivli Community Health Center, Kanpur, Dehat.

Result

In terms of type of delivery, 19 (47.5%) were normal delivery mothers. Regarding family type, 26 (65%) came from joint families, and 28 (70%) were the second child of their mothers. Regarding residence, 28 (70%) of the mothers were from rural areas, and 18 (45%) of the postnatal mothers were engaged in breastfeeding positioning.

Among all demographic variables analyzed:

Education and parity (number of children) were significantly associated with pre-test knowledge scores ($p < 0.05$). Other variables, such as age, occupation, type of delivery, type of family, birth order, income, and residence, were not significantly associated. This suggests that educational background and number of children may influence participants' knowledge levels before the intervention.

Table 18. Analyzing the association between demographic variables and pre-test knowledge regarding breastfeeding positioning among postnatal mothers.

Demographic variable	Frequency	Pre-test knowledge score		Chi-square (χ^2)	p-Value	df	Table value
		Poor	Average				
Age	40						
20–25 years		3	11	0.527	p>0.05 NS	6	12.592
26–30 years		5	19				
31–35 years		0	2				
More than 35 years		0	0				
Education	40						
Illiterate		2	9	21.81	P<0.05 S	6	12.592
Primary		5	13				
Secondary		2	7				
Graduated		0	2				
Occupation	40						
Homemaker		7	25	0.775	p>0.05 NS	6	12.592
Agriculture		1	4				
Private		0	2				
Government		0	1				
Parity (no. of children)	40						
Parity		2	4	15.875	p<0.05 S	6	12.592
2 children		20	6				
3 children		0	8				
More		0	0				
Type of delivery	40						
Normal		5	14	0.125	p>0.05 NS	6	12.592
Vacuum		0	11				
C-section		3	7				
Vaginal birth after caesarean (VBAC)		0	0				
Type of family	40						
Nuclear		3	11	0.264	p>0.05 NS	2	5.991
Joint		5	21				
Birth of the baby	40						
First baby		1	7	1.7185	p>0.05 NS	6	12.592
Second baby		7	21				
Third baby		0	4				
Fourth baby		0	0				
Monthly income	40						
Below–10000		4	11	0.68	p>0.05 NS	6	12,592
10000–20000		3	15				
20000–30000		1	6				
More than 30		0	0				
Residence	40						
Rural		1	11	3.825	p>0.05 NS	1	3.841
Urban		7	21				

NS, not significant, S, significant, df, degree of freedom

Since the calculated t-value (4.44) is greater than the table value (2.021) at $df = 39$ and $P < 0.05$, we conclude that:

There was a significant difference between the pre-test and post-test knowledge scores. This indicates that the intervention or educational program was effective in improving the knowledge level of the participants.

A Previous study showed that after an educational intervention, 82% of postnatal mothers had adequate knowledge regarding breastfeeding positioning compared to only 28% in the pre-test. Education and parity were found to be significantly associated with pre-test knowledge, whereas other demographic factors showed no association.

CONCLUSION

The present study is undertaken to assess the level of knowledge regarding breastfeeding positioning among postnatal mothers in *Shivli Community Health Center, Kanpur Dehat*. Based on the study and findings of the study, it shows that the importance of STP regarding breastfeeding positioning among postnatal mothers was effective.

Implications

Nursing is a dynamic process that improves quality-based practice, scientific knowledge, and the translation of research into practice. Nursing professionals find that health promotion is very relevant and useful in a variety of settings; therefore, the present study has major implications in various areas of nursing to help postpartum mothers who have attended the Shivli Kanpur Dehat regarding breastfeeding positioning.

Nursing Practice

- Student nurses can use the planned health education program to teach mothers in the area.
- Student nurses can use the charts to provide further reference for postnatal mothers on breastfeeding positioning.
- Measures can be taken to prevent disease through mass media.

Nursing Education

- Nursing education should encourage nursing students to conduct health programs for postnatal mothers.
- Nursing educators should motivate the postnatal mothers to talk freely about breastfeeding positioning.

Nursing Administrator

- Nursing administrators can organize STPs on breastfeeding positioning for postnatal mothers to improve knowledge and practice.
- Teaching materials, time, and training opportunities should be provided to nurses to educate mothers effectively.

Nursing Research

- The study can be based in line for future studies to build up on.
- Further research should be done to identify the factors influencing breastfeeding positioning.

Recommendation

- A similar study can be conducted with large sample.
- Study can be done by using different teaching methods.
- Future studies can be conducted on knowledge and factor influencing.

CONCLUSION

A STP was found to be very effective in improving the knowledge of postnatal mothers regarding breastfeeding positioning in Shivli, Kanpur Dehat. Knowledge was improved through health teaching.

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