

Research Article

A quasi-experimental study on effect of clutch hold method of breastfeeding on comfort level of post caesarean mothers admitted in obstetrics unit of selected hospitals of Kanpur, U.P.

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ABSTRACT

Background: Caesarean section rates have increased substantially worldwide, making appropriate postoperative maternal care and successful initiation of breastfeeding important areas of maternal and newborn nursing practice.¹ Post-caesarean mothers may experience incisional pain and difficulty maintaining comfortable breastfeeding positions.^{2,3} The clutch hold, also known as the football hold, positions the infant beside and under the mother's arm and helps keep the infant's weight away from the abdominal incision.^{4,5} Therefore, appropriate breastfeeding positioning may help promote maternal comfort following caesarean birth.

Aim: To assess the effectiveness of the Clutch Hold Method (Football Hold) on comfort levels among post-caesarean mothers in selected hospitals at Kanpur, Uttar Pradesh.

Methods: A quantitative evaluative research approach with a quasi-experimental two-group pre-test and post-test design was adopted. The sample consisted of 60 primipara post-caesarean mothers, with 30 mothers each in the

experimental and control groups, selected using a non-probability sampling technique from A.H.M. Dufferin Female Hospital, Kanpur. Data were collected using a structured demographic questionnaire, a 15-item Observation Checklist to Assess Level of Comfort, and a Numeric Pain Rating Scale. The experimental group received instruction and assistance in the Clutch Hold Method during breastfeeding, while the control group received routine postnatal care. The intervention involved positioning the infant beside and under the mother's arm so that pressure on the caesarean incision was minimized.^{4,5}

Results: At pre-test, 80% of the Experimental group and 76.7% of the Control group reported Moderate to Severe Discomfort. Following the intervention, 70% of the Experimental group reached a Comfortable and Relaxed state, whereas 56.7% of the Control group remained in the Moderate Discomfort category. The mean comfort score in the Experimental group significantly increased from 37.9 ± 11.3 to 55.5 ± 10.7 ($t = 12.45$, $p < 0.05$). The Experimental group showed a 29.33% gain in comfort compared to 8.33% in the Control group ($t =$

4.31, $p < 0.05$). Significant associations were found between post-test comfort and Educational Status ($p = 0.014$) and Type of Pregnancy ($p = 0.033$) in the Experimental group. Based on these results, H1 and H2 were accepted, while H01 and H02 were rejected.

Conclusion: The Clutch Hold Method is a highly effective, safe, and non-invasive nursing intervention that significantly improves maternal comfort by protecting the surgical site during breastfeeding. It is recommended for integration into routine postnatal nursing protocols to enhance maternal well-being.

Keywords: *Clutch Hold Method, Football Hold, Post-Caesarean Mothers, Comfort Level, LSCS, Breastfeeding Positions, Maternal Well-being.*

INTRODUCTION

Caesarean section rates have increased substantially worldwide and in India, making postoperative maternal care and successful initiation of breastfeeding important areas of nursing practice. Although breastfeeding is essential for optimal infant nutrition, immunity, and maternal–infant bonding, post-caesarean mothers frequently experience difficulties in initiating and maintaining breastfeeding because of incisional pain, restricted movement, intravenous lines, urinary catheters, and discomfort during positioning.

The clutch hold, also known as the football hold, is an ergonomic breastfeeding position in which the infant is placed beside and under the

mother's arm, with the infant's weight supported away from the abdominal incision. This positioning may reduce pressure on the surgical wound, improve maternal comfort, facilitate proper latching, and support a more positive breastfeeding experience. In the busy obstetric settings of Kanpur, where standardized postnatal breastfeeding education may be inconsistent, evidence-based positioning techniques can provide a simple, practical, and low-cost nursing intervention. Therefore, the present study was undertaken to evaluate the effectiveness of the clutch hold method in improving maternal comfort during breastfeeding among post-caesarean mothers in selected hospitals of Kanpur.

NEED FOR THE STUDY

Breastfeeding is an important component of maternal and newborn care, providing essential nutritional, immunological and developmental benefits to the infant and supporting maternal–infant bonding. The World Health Organization recommends early initiation of breastfeeding and appropriate positioning and attachment to support successful breastfeeding.^{1, 2}

Caesarean section rates have increased considerably worldwide, making effective postoperative maternal care an important area of nursing practice.³ Although caesarean birth may be necessary for maternal or fetal indications, mothers commonly experience postoperative

pain, incisional tenderness, restricted mobility and difficulty in assuming comfortable breastfeeding positions.⁴

Following caesarean section, positioning the baby directly over the abdominal incision may increase maternal discomfort. Intravenous lines, urinary catheters, abdominal tenderness and limited mobility can further interfere with comfortable breastfeeding.^{4, 5} Appropriate breastfeeding support and positioning are therefore important during the early postoperative period.

The Clutch Hold, also known as the Football Hold, is a breastfeeding position in which the infant is placed beside the mother and supported under her arm. This position keeps the infant away from the abdominal incision and may reduce pressure on the surgical site, making it particularly useful for mothers recovering from caesarean section.^{5, 6}

STATEMENT OF THE PROBLEM

A quasi-experimental study on effect of clutch hold method of breastfeeding on comfort level of post caesarean mothers admitted in obstetrics unit of selected hospitals of Kanpur, U.P.

HYPOTHESIS

Null Hypothesis:

H₀₁: There is no significant difference on the level of mothers after breastfeeding in 'clutch hold method' between the experimental and control group.

H₀₂: There is no significant association between the comfort level of mothers after breastfeeding in 'clutch hold method' with their selected demographic variables in experimental and control group.

Positive Hypothesis:

H₁: There is a significant improvement in comfort level of post cesarean mothers after breastfeeding in 'clutch hold methods' between the experimental and control group.

H₂: There is a significant association between the comfort level of post cesarean mothers after breastfeeding in 'Clutch hold method' with their selected demographic variables.

METHODOLOGY

A quantitative evaluative research approach with a quasi-experimental pre-test and post-test control group design was adopted to assess the effectiveness of the clutch hold method of breastfeeding on the comfort level of post-caesarean mothers. The study was conducted among post-caesarean mothers admitted to the maternity ward of A.H.M. Dufferin Female Hospital, Kanpur, Uttar Pradesh. The accessible population comprised mothers who had undergone caesarean section and met the predetermined inclusion criteria.

A total sample of **60 post-caesarean mothers** was selected using **non-probability purposive sampling**, with **30 mothers in the experimental group and 30 in the control**

group. The participants were primipara mothers who had delivered a live baby within 48 hours of caesarean section, whose baby was staying with them, and who were able to breastfeed and communicate effectively. Mothers with serious postoperative complications, acute psychiatric conditions, or physical disabilities preventing the desired breastfeeding position were excluded.

Data were collected using a **structured socio-demographic and obstetric data sheet, a 15-item Observation Checklist to Assess Level of Comfort, and a Numeric Pain Rating Scale.**

The comfort checklist assessed maternal positioning, relaxation, and infant alignment during breastfeeding, with each item scored on a four-point scale from severe discomfort (1) to relaxed/comfortable (4), giving a total score of 15–60. Content validity was established through expert validation by experts in Obstetric and Gynaecological Nursing and clinical nursing. The reliability of the observation checklist was established using an appropriate reliability assessment, confirming its consistency and suitability for the study.

A pilot study involving approximately **10% of the sample** was conducted from **09-12-2025 to 20-12-2025** at Rama Hospital and Research Centre, Kanpur, to assess the feasibility, clarity, applicability, and practicality of the tools and intervention. The main data collection was carried out at A.H.M. Dufferin Female Hospital,

Kanpur, from **09-02-2026 to 02-03-2026**, following ethical clearance and permission from the concerned authorities. Written informed consent was obtained from all participants and confidentiality was maintained.

Baseline socio-demographic and obstetric data were collected, followed by a pre-test assessment of comfort and pain. The **experimental group received the clutch hold breastfeeding intervention**, in which mothers were demonstrated and guided to position the infant tucked under the arm to reduce pressure on the caesarean incision. The control group received routine postnatal care and conventional breastfeeding positioning. Post-test assessments were subsequently conducted using the same assessment tools.

The collected data were analyzed using **descriptive and inferential statistics.** Frequency and percentage were used to describe the sample characteristics, while mean and standard deviation were used to summarize comfort scores. **Paired t-test** was used to compare pre-test and post-test comfort scores within groups, **unpaired t-test** was used to compare post-test comfort scores between the experimental and control groups, and the **chi-square test** was used to determine the association between comfort level and selected demographic and obstetric variables. The level of statistical significance was set at **$p < 0.05$.**

Table 1: Study Design – Quasi-experimental Pre-test and Post-test Research Design with Control Group

Group	Pre-test	Intervention	Post-test
Experimental Group	O ₁ – pre-test comfort assessment	X – Clutch Hold Method administered	O ₂ – post-test comfort assessment
Control Group	O ₃ – pre-test comfort assessment	Routine postnatal care	O ₄ – post-test comfort assessment

DATA ANALYSIS AND INTERPRETATION

The findings are presented under four sections: Section I, demographic and clinical variables; Section II, pre-test and post-test comfort levels; Section III, effectiveness of the Clutch Hold Method; and Section IV, association between comfort levels and selected demographic variables.

SECTION I- DEMOGRAPHIC AND CLINICAL VARIABLES

Table 2: Frequency and Percentage Distribution of Post-Caesarean Mothers According to Demographic variables (N=60)

Variable	Experimental Group (n=30)	Control Group (n=30)
Age (years)	23–26 years most common (36.7%)	23–26 years most common (40.0%)
Religion	Hindu 70.0%; Muslim 23.3%; Christian 6.7%	Hindu 73.3%; Muslim 20.0%; Christian 6.7%

Variable	Experimental Group (n=30)	Control Group (n=30)
Residence	Rural 46.7%; Urban 53.3%	Rural 50.0%; Urban 50.0%
Education	Intermediate 40.0%; Graduate+ 30.0%	Intermediate 36.7%; Graduate+ 33.3%
Occupation	Housewives 63.3%; Professionals 16.7%	Housewives 63.3%; Professionals 20.0%
Family Type	Nuclear 50.0%; Joint 43.3%	Nuclear 46.7%; Joint 46.7%
Parity	Primipara 100%	Primipara 100%
Previous Incision	None 100%	None 100%
Indication for LSCS	Emergency 63.3%; Elective 36.7%	Emergency 66.7%; Elective 33.3%
Type of Incision	Low transverse 93.3%	Low transverse 90.0%
Pregnancy Type	Single 96.7%; Twins 3.3%	Single 96.7%; Twins 3.3%
Breastfeeding Experience	None 100%	None 100%
Gestational Age	40 weeks most common (46.7%)	40 weeks most common (46.7%)
Birth Weight	2.5 kg (40.0%); 3 kg (33.3%)	2.5 kg (36.7%); 3 kg (30.0%)
Feeding Complications	None 80.0%; Jaundice 13.3%	None 83.3%; Jaundice 10.0%

Table 2 explains that the experimental and control groups were broadly comparable in their socio-demographic, obstetric, and neonatal characteristics. Most participants were aged 23–26 years, Hindu, urban residents, and housewives. All participants were

primiparous with no previous breastfeeding experience or incision. Most underwent emergency LSCS with low-transverse incision, had singleton pregnancies, and delivered at 40 weeks of gestation. Overall, the two groups showed similar baseline characteristics.

SECTION II-PRE-TEST AND POST-TEST COMFORT LEVELS

Table 3: Maximum Score, Mean, SD, and Mean Percentage of Pre-test Comfort Scores of Post-Caesarean Mothers (N=60)

Group	Maximum Possible Score	Mean	SD	Mean Percentage (%)
Control Group	60	38.2	12.1	63.67%
Experimental Group	60	37.9	11.3	63.17%

The pre-test comfort scores were comparable between the two groups. The experimental group had a mean score of **37.9 ± 11.3 (63.17%)**, while the control group had a mean score of **38.2 ± 12.1 (63.67%)** out of 60. This indicates that both groups had a similar baseline level of comfort before the intervention.

Table 4: Frequency and Percentage Distribution of Pre-test Comfort Levels among Post-Caesarean Mothers (N=60)

Comfort Level (Pre-test)	Experimental (n=30)	Experimental (%)	Control (n=30)	Control (%)
Mild Discomfort	6	20.0%	7	23.3%
Moderate Discomfort	19	63.3%	17	56.7%
Severe	5	16.7%	6	20.0%

Comfort Level (Pre-test)	Experimental (n=30)	Experimental (%)	Control (n=30)	Control (%)
Discomfort				
Total	30	100%	30	100%

In the pre-test, the majority of mothers in both groups experienced **moderate discomfort**—63.3% in the experimental group and 56.7% in the control group. Severe discomfort was reported by 16.7% and 20.0% respectively, while mild discomfort was reported by 20.0% and 23.3%. Thus, both groups had a **comparable level of discomfort before the intervention**.

Table 5: Maximum Score, Mean, SD, and Mean Percentage of Post-test Comfort Scores of Post-Caesarean Mothers (N=60)

Comfort Level (Pre-test)	Experimental (n=30)	Experimental (%)	Control (n=30)	Control (%)
Mild Discomfort	6	20.0%	7	23.3%
Moderate Discomfort	19	63.3%	17	56.7%
Severe Discomfort	5	16.7%	6	20.0%
Total	30	100%	30	100%

Table 5 shows that the pre-test findings showed that **moderate discomfort was predominant** in both groups, with **63.3%** of mothers in the experimental group and **56.7%** in the control group. Mild discomfort was reported by **20.0%** and **23.3%**, while severe discomfort was reported by **16.7%** and **20.0%**, respectively. Thus, the pre-test comfort levels were **fairly comparable between the experimental and control groups** before the intervention.

Table 6: Frequency and Percentage Distribution of Post-test Comfort Levels among Post-Caesarean Mothers (N=60)

Comfort Level (Post-test)	Experimental (n=30)	Experimental (%)	Control (n=30)	Control (%)
Comfortable and Relaxed	21	70.0%	1	3.3%
Mild Discomfort	6	20.0%	8	26.7%
Moderate Discomfort	2	6.7%	17	56.7%
Severe Discomfort	1	3.3%	4	13.3%
Total	30	100%	30	100%

The post-test findings showed a marked improvement in comfort among mothers in the experimental group. **70.0%** of mothers in the experimental group were **comfortable and relaxed**, compared with only **3.3%** in the control group. Moderate discomfort was reported by **6.7%** of the experimental group compared with **56.7%** of the control group, while severe discomfort was reduced to **3.3%** compared with **13.3%** in the control group. These findings indicate a substantial improvement in post-test comfort following administration of the **Clutch Hold Metho**

Table7: Comparison of Pre-test and Post-test Comfort Scores within the Experimental Group (n=30)

Experimental Group	Max. Possible Score	Mean	SD	Mean Percentage (%)
Pre-test	60	37.9	11.3	63.17%
Post-test	60	55.5	10.7	92.50%
Mean Difference	—	17.6	—	29.33%

The experimental group demonstrated a substantial improvement in comfort scores following the intervention. The mean score increased from **37.9 ± 11.3 (63.17%)** in the pre-test to **55.5 ± 10.7 (92.50%)** in the post-test, showing a **mean increase of 17.6**

points (29.33%). This indicates a marked improvement in the comfort level of post-Caesarean mothers after administration of the **Clutch Hold Method**.

Table 8: Comparison of Pre-test and Post-test Comfort Scores within the Control Group (n=30)

Control Group	Max. Possible Score	Mean	SD	Mean Percentage (%)
Pre-test	60	38.2	12.1	63.67%
Post-test	60	43.2	11.4	72.00%
Mean Difference	—	5.0	—	8.33%

The control group showed a **modest improvement in comfort**, with the mean score increasing from **38.2 ± 12.1 (63.67%)** in the pre-test to **43.2 ± 11.4 (72.00%)** in the post-test, with a **mean difference of 5.0 points (8.33%)**. This indicates a slight improvement in comfort with routine postoperative care.

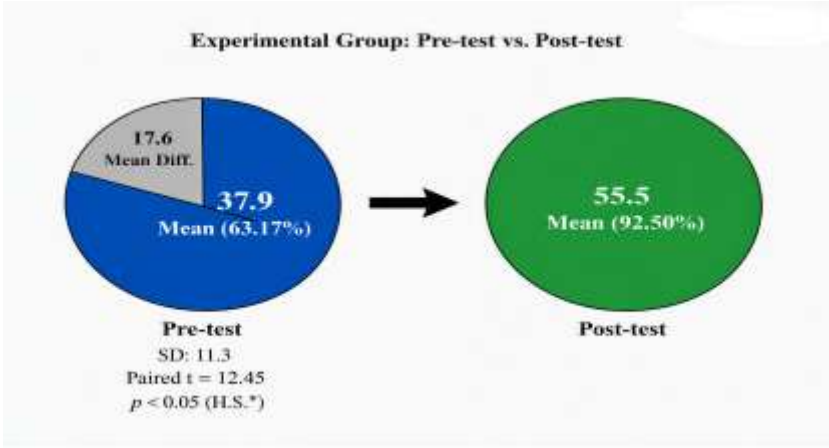
SECTION III-EFFECTIVENESS OF THE CLUTCH HOLD METHOD

Table 9: Effectiveness of Intervention: Comparison of Pre-test and Post-test Comfort Scores within the Experimental Group (n=30)

Experimental Group	Mean	SD	Mean Diff.	Mean %	Paired t value	p-value	Significance
Pre-test	37.9	11.3	17.6	63.17%	12.45	<0.05	H.S.*
Post-test	55.5	10.7	—	92.50%	—	—	—

H.S. = Highly Significant

*p < 0.0



The experimental group showed a **marked improvement in comfort**, with the mean score increasing from **37.9 ± 11.3 (63.17%)** in the pre-test to **55.5 ± 10.7 (92.50%)** in the post-test. The **mean difference was 17.6 points**, with a paired *t* value of **12.45 (p < 0.05)**, indicating a **highly significant improvement** in comfort following the intervention

SECTION IV, ASSOCIATION BETWEEN COMFORT LEVELS AND SELECTED DEMOGRAPHIC VARIABLES.

Table 10: Association Between Post-test Comfort Levels and Selected Demographic Variables in the Experimental Group

Demographic Variable	χ^2	p-value	Significance
Age	6.22	0.790	N.S.
Educational Status	16.30	0.014	S.*
Place of Residence	3.98	0.179	N.S.
Indication for LSCS	3.44	0.419	N.S.
Type of Pregnancy	30.00	0.033	S.*
Occupational Status	9.27	0.619	N.S.
Religion	5.10	0.603	N.S.
Type of Family	8.25	0.346	N.S.

Demographic Variable	χ^2	p-value	Significance
Type of Incision	4.52	0.517	N.S.
Gestational Age	5.96	0.581	N.S.
Birth Weight	9.21	0.214	N.S.
Feeding Restrictions	1.52	1.000	N.S.

There was a **significant association** between comfort level and **educational status** ($\chi^2 = 16.30$, $p = 0.014$) and **type of pregnancy** ($\chi^2 = 30.00$, $p = 0.033$). No significant association was found with the other demographic variables ($p > 0.05$).

DISCUSSION

The findings demonstrated that the **Clutch Hold Method significantly improved comfort among post-caesarean mothers**. The experimental group showed a marked increase in mean comfort score from **37.9 to 55.5**, compared with a smaller increase from **38.2 to 43.2** in the control group. The significant improvement in the experimental group supports the effectiveness of the Clutch Hold Method as a **simple, non-pharmacological nursing intervention** for reducing post-operative discomfort during breastfeeding. Significant associations were observed with **educational status and type of pregnancy**. These findings support the integration of the Clutch Hold Method into routine post-caesarean nursing care to promote maternal comfort and breastfeeding.

CONCLUSION

The findings of the study demonstrated that the Clutch Hold Method was effective in improving comfort among post-caesarean mothers. The experimental group showed a marked improvement in mean comfort scores from 37.9 in the pre-test to 55.5 in the post-test, with a mean difference of 17.6 and a statistically

significant paired t value of 12.45 ($p < 0.05$). In comparison, the control group showed only a modest improvement from 38.2 to 43.2. Post-test findings further revealed that 70% of mothers in the experimental group were comfortable and relaxed, whereas the majority of mothers in the control group continued to experience moderate discomfort. The significant difference between the groups ($t = 4.31$, $p < 0.05$) supports the effectiveness of the Clutch Hold Method in enhancing maternal comfort during breastfeeding after caesarean section. A significant association was also observed between post-test comfort levels and educational status and type of pregnancy in the experimental group. The findings suggest that the Clutch Hold Method is a simple, non-pharmacological, and nursing-led intervention that can reduce pressure on the abdominal incision and promote maternal comfort during breastfeeding.

IMPLICATIONS:

- **Nursing Practice**

Clutch Hold can be incorporated into routine post-caesarean breastfeeding care to improve maternal comfort.

- **Nursing Education**

Include Clutch Hold in nursing curriculum and skill-based training.

- **Nursing Research**

Conduct larger studies to assess its effectiveness and long-term breastfeeding outcomes.

- **Nursing Administration**

Develop protocols and provide necessary support for comfortable breastfeeding.

Financial support and sponsorship: Nil

Conflicts of interests : The author declare that they have no conflicts of interest with regard to the content of report.

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