- *Basic Research*

Effect of Topical Application of Fresh Breast Milk on Episiotomy Healing, Perineal Pain and Postpartum Comfort among Primiparous Women

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Abstract

Background: The therapeutic qualities of fresh breast milk facilitate the healing of episiotomy wounds and alleviate perineal discomfort, thereby enhancing the postpartum comfort level of postnatal women. Simple, cost-free, and risk-free, topically applying fresh breast milk is a great option ***Aim:*** To evaluate the effect of topical application of fresh breast milk on episiotomy healing, perineal pain and postpartum comfort among primiparous women. ***Design:*** A quasi-experimental research design (two groups "control/study" pre-post-test research) was utilized to achieve the aim of this research. ***Settings:*** The study was conducted at the postnatal inpatient ward and the obstetrics and gynecological outpatient clinic at Benha University hospitals in Qaliobya governorate, Egypt. ***Study Sample:*** From the aforementioned research settings, a purposive sample of (100) postnatal women was selected. ***Tools:*** A structured interviewing questionnaire, the standardized REEDA scale, the pain visual analogue scale, and the postpartum comfort questionnaire were the four data collection tools used. ***Results****:* All components of the REEDA scale, perineal pain intensity, and postpartum comfort level were statistically significantly different between the study and control groups following the interventions, with the study group exhibiting a better outcome. ***Conclusion:*** An alternative approach to the wound healing process following an urgent episiotomy is the topical application of fresh breast milk. Primiparous women reaped the benefits in terms of decreased perineal pain and enhanced postpartum comfort. ***Recommendations:*** Advice primiparous women to apply fresh breast milk to accelerate the healing process of episiotomy, decrease perineal pain and enhance postpartum comfort.

Keywords: Episiotomy Healing, Fresh Breast Milk, Perineal Pain, Postpartum Comfort, Primiparous Women, Topical Application

Introduction

Multiple factors contribute to the character of childbirth. One of them is the damage caused by an episiotomy on the genital organs , which can result in perineal pain ***(Oralgazyevna et al., 2024).*** An episiotomy, a second-stage vaginal delivery incision in the posterior vaginal wall and perineum (pudenda cutting), is done by an obstetrician to help with labour and delivery and to avoid a potentially dangerous procedure that can damage the anal sphincter ***(Houlbracq et al., 2025).*** The World Health Organization strongly urges all nations to follow a selective episiotomy practice and suggests that a 10% episiotomy rate is "a good goal to pursue" ***(World Health Organization, 2018).***

A variety of episiotomy incision that can be conducted is the midline (or median) episiotomy. Starting from the posterior fourchette, it extends downward in the sagittal plane from 0° to 25° and commences within three mm of the midline. In a mediolateral episiotomy, a posterior fourchette is orientated laterally towards the ischial tuberosity, initially within 3 mm of the midline and at an angle of at least 60° from the midline. In addition to J-shaped incision which is began in the center or the fourchtte and directed posteriorly in the midline for about 2 cm and then directed towards 7 on the clock to avoid the anus and lateral incision begins about a centimeter away from the center of the fourchette and extends laterally ***(Schmidt and Fenner, 2024).***

In the field of midwifery, episiotomy is the most common obstetric surgical procedure. High rates of episiotomies are frequently associated with short birth intervals, oxytocin use, primiparity, and perineal tears. Fetal macrosomia, breech presentation, shoulder dystocia, meconium-stained amniotic fluid, and fetal distress are additional concerns ***(Alrida et al., 2024).*** An episiotomy is primarily indicated to: assist in the birth if the second stage is being delayed due to extremely hard perineal tissue, minimize prolonged "pushing" by the woman when she has hypertension or serious heart problems, increase the rate of spontaneous vaginal birth when there is a suspicion of fetal compromise, and alleviate the risk of severe perineal trauma during instrumental birth (ventouse or forceps) ***(Webb and Thakar, 2024).***

Episiotomy-induced tears in the birth canal cause alterations in the vulva and vagina during labor. Numerous postpartum women are apprehensive about participating in early mobilisation as a result of the distress they endure from perineal ulceration. Initial mobilization is vital in order to facilitate the discharge of lochia, prevent thrombophlebitis, expedite wound recuperation, prevent wound infection, and ensure a seamless involution process, as well as to enhance blood circulation ***(Usman et al., 2024).*** Episiotomy may result in adverse effects that are comparable to those of any surgical incision, such as postpartum haemorrhage, perineal pain, injury to the mucosa and anal sphincters, urinary retention, wound dehiscence, fever, rupture, erythema, oedema, and wound infection. In contrast, the long-term repercussions include severe weeping, dyspareunia, anorectal incontinence, scar tissue formation, and post-traumatic stress disorder ***(Radner et al., 2024).*** Maternal morbidity is significantly influenced by perineal pain, which is diagnosed as a medical condition ***(Alirezaei et al., 2024).***

Nowadays, perineal pain from episiotomy is a major concern in obstetric care which negatively impacted on woman's health, postpartum comfort and quality of life, more than 90% of perineal pain can occur in the first day of childbirth and 25% of women continue to experience pain until the end of puerperium ***(López-Campos et al., 2025).*** Perineal pain is the most prevalent minor discomforts that occur after giving birth and can cause stress, sleep disturbances, fatigue, anxiety, hinder proper breastfeeding, as well as disturbance in the emotional relationship between mother and baby. The woman's postpartum adjustment and recuperation might be greatly impacted by receiving timely and effective care to address these issues during and after delivery ***(Ahmed et al., 2024).***

There are a number of approaches to cure episiotomy wound in order to hasten the healing and enhancing posrtpartum comfort. Basic care includes keeping the perineum clean and the wound dry as well as using of both pharmacological and non-pharmacological treatment ***(Alirezaei et al., 2024).*** The natural antibacterial and anti-inflammatory properties of woman's breast milk can facilitate the healing of wounds and tears as well as numerous skin disorders. The healing process is expedited by the antibody Immunoglobulin A (IgA), which prevents microorganisms from thriving on the lesion. Breast milk contains a diverse array of nutritional components, such as antibodies, omega-3 fatty acids, and stem cells. However, they can be advantageous when employed in alternative methods ***(Patel et al., 2023).***

Hence, breast milk can greatly improve wound healing and lower the risk of infection since it is abundant in essential nutrients and bioactive compounds including growth factors and antibodies. This straightforward, affordable method makes use of the inherent qualities of breast milk and fits in with the expanding movement of easily accessible postpartum care solutions, which appeals to new mothers. There is an urgent need for efficient treatment alternatives because episiotomies and related consequences are common. Breast milk is a practical option for postpartum care because it is easily accessible to new mothers ***(Hosseini et al., 2024).***

During the postpartum period, effective management of episiotomy is a critical component of nursing healthcare, has the potential to improve the well-being of women when performed with precision. Nurses and midwives who specialize in maternal care following episiotomies offer comprehensive wound recovery and perineal pain management. This includes assess the ongoing healing and distress of wounds, implement management protocols for episiotomy wounds, and provide postpartum women with education on self-assessment and perineal care.Furthermore, there is a pressing need for efficient treatment options. Breast milk is readily available to new mothers, making it a practical choice for postpartum care which improve postpatum comfort for the women ***(Akhtar et al., 2024; Hosseini et al., 2024).***

Significance of the research

Episiotomy is a life-saving and essential procedure when it is indicated. Episiotomy procedures may induce acute postpartum pain, residual dyspareunia, and incision infection in women ***(Manouchehri et al., 2024)***. A mother's seating, movement, micturition, and defecation are adversely affected by perineal pain, particularly during the initial three postpartum days.

To be more specific, over one-third of women reported experiencing moderate to severe perineal pain, particularly while strolling (33%), or setting (39%). The daily activities of women and their lactation behavior are influenced by perineal pain ***(Bilgin and Küçükoğlu, 2024).***

Globally, the prevalence of episiotomies varied between 6% and 10% for multiparous women and between 27% and 54% for nulliparous women. Nonetheless, between 30% and 50% of women still have episiotomies in impoverished nations like Egypt. After many deliveries, the rate of spontaneous tears decreases, falling from 90.4% for primiparous to 68.8% for multiparous women giving delivery normally ***(Mohamed et al., 2024).*** In addition, a higher prevalence of episiotomy is reported as 67% in The Middle East ***(Alrida et al., 2024).*** It is 41.7% prevalent in Africa ***(Alirezaei et al., 2024).***

Today, as a result of the global economic crisis, especially in developing countries such as Egypt, which has led to the financial inability of many families to purchase expensive medicines, There is a global trend toward traditional treatments. The episiotomy incision can be healed using a variety of alternate techniques as breast milk. Breast milk can effectively maintain a clean wound environment and promoting faster healing compared to traditional antiseptics as therapeutic properties found in breast milk help in the healing of episiotomy wound source ***(Hosseini et al., 2024).*** Moreover, topically applying fresh breast milk to episiotomy is safe, easy, accessible, trustable, affordable, readily available, noninvasive and involves no negative side effects, due to its inherent anti-inflammatory properties and production within the woman body ***(Patel et al., 2023).*** This study set out to estimate the efficacy of a topical applicatiom of fresh breast milk in reducing perineal pain, promoting episiotomy regeneration in order to promoting postpartum comfort among primiparous women.

Aim of the study:

To evaluate the effect of topical application of fresh breast milk on episiotomy healing, perineal pain and postpartum comfort among primiparous women.

Research hypotheses:

H1: Primiparous women who will topically apply fresh breast milk will exhibit more effective episiotomy healing than those who don't.

H2: Primiparous women who will topically apply fresh breast milk will exhibit less perineal pain intensity than those who don't.

H3: Primiparous women who will topically apply fresh breast milk will exhibit improved postpartum comfort than those who don't.

Conceptual definitions:

- **Topical application:** refers to the route by which the fresh breast milk is administered directly to a spot on the outer surface of the perineum area for the local action to enhance episiotomy healing and alleviate perineal pain

- **Episiotomy healing:** the process of becoming well again and restore to original integrity of episiotomy incision which performed during childbirth.
- **Perineal pain:** refers to the pain that associated with episiotomy as one of most common postpartum complications which result in anxiety and discomfort among primiparous women.
- **Postpartum comfort:** the immediate experience of being fortified by the satisfaction of their demands for relief or transcendence, which is crucial for women to identify and resolve issues, and thereby expedites the adaptation process during the postpartum period.

Subjects and method

Research Design:

A quasi-experimental research design (two groups "control/study" pre-post-test research) was utilized to achieve the aim of this research.

Study Settings:

At Benha University hospitals in Qaliobya governorate, Egypt, the investigation was conducted at the postnatal inpatient ward and the obstetrics and gynaecological outpatient clinic. This location was selected due to its status as the main maternity health facility in Benha City and the fact that episiotomies are typically performed on all primipara who undergo a standard vaginal delivery.

Sampling:

Sample type, size, criteria and technique: A purposive sample of (100) postnatal women were selected from the above-mentioned study settings for six months; according to following ***inclusion criteria:***

- Aged 18 - 35 years old.
- Primipara during the first two hours following delivery.
- Undergone full term singleton normal vaginal delivery with episiotomy.
- Do not take any medication that reduces pain, as this could negate the effectiveness of the intervention.
- Normal breast feeding.

The exclusion criteria were:

- Having lactation failure.
- Breast problems such as mastitis and abscesses have been identified.
- Diagnosed with urogenital infection.
- Having perineal tear during delivery.
- Having labor or postpartum complications like puerperal sepsis, postpartum hemorrhage.
- Having medical disorders like diabetes, coagulation related disorders and anemia.

The sample was randomly divided into two groups. In the **study group**, 50 women received topical application of fresh breast milk on episiotomy, Additionally, receiving routine postnatal care. The **control group** was composed of fifty women who exclusively received routine postnatal care. In order to reduce bias during data collection, postnatal women who were confined to the postnatal ward were randomly divided so that one woman was placed in the study group, while the next was placed in the control group. This process was repeated until the predetermined duration for collecting the study sample was reached.

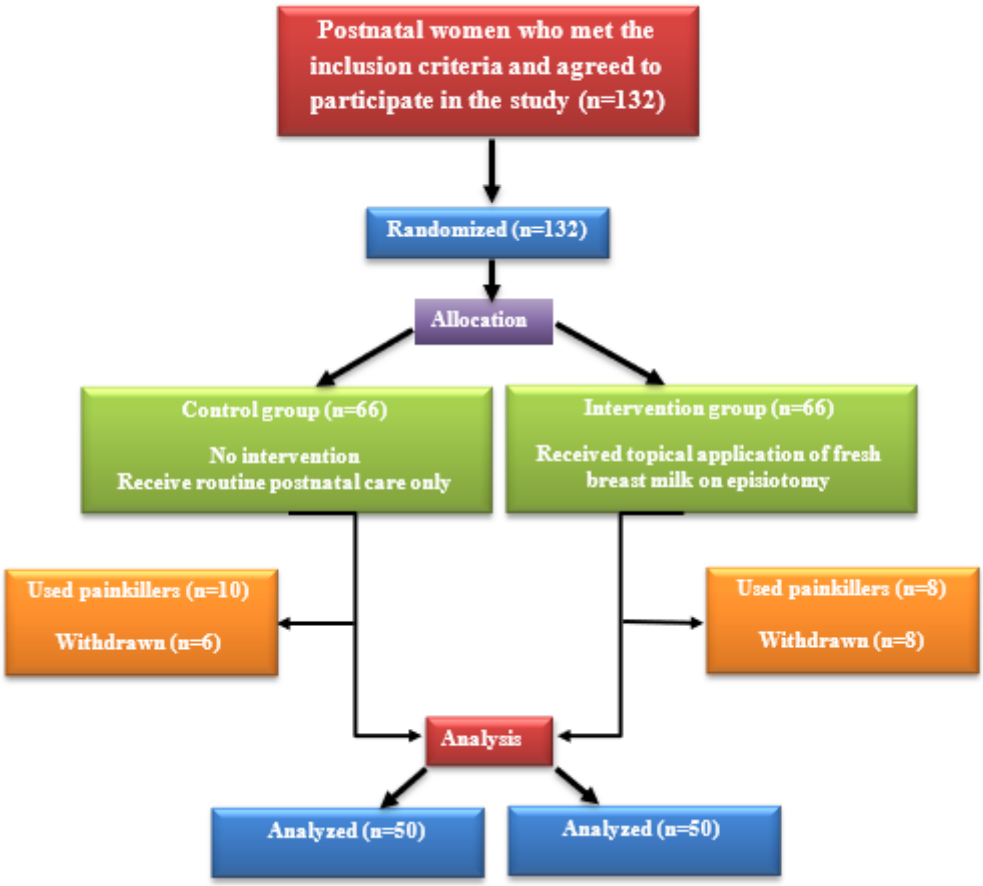

Figure (1): Flow chart of postnatal women's recruitment process

Tools of data collection:

Four tools were used for data collection:

Tool I: A structured interviewing questionnaire: After conducting a review of pertinent literature, researchers developed it and translated it into Arabic. It included two parts:

Part (1): Personnel characteristics of postnatal women: it comprised of 5 items which were (age, education, residence, occupation and monthly income).

Part (2): Obstetric history: it comprised of 3 items which were s (gravida, type of episiotomy and type of suture).

Tool II: The Standardized REEDA Scale (REEDA): Initially, it was developed by ***(Reeda, 1974).*** Then it was adapted by ***(Alvarenga et al., 2015)***. Episiotomy wound healing is assessed using an established checklist of observation. It can assess any type of perineal trauma that may occur after giving birth. It consists of five parts: redness, edema, ecchymosis, discharge, and approximation of the wound edges. The scores of each component are assigned on a scale of 0 to 3:

a) ***Redness***: 3 = severe beyond 0.5 cm of incision bilaterally, 2 = moderate within 0.5 cm of incision bilaterally, 1 = mild within 0.25 cm of incision and 0 = none.

b) ***Edema***: 3 = severe perineal and\or vulvar, greater than 2 cm from an incision, 2 = moderate perineal and\or vulvar, between 1 and 2 cm from the incision, 1 = mild perineal, less than 1 cm from the incision and 0 = none.

c) ***Ecchymosis***: 3 = severe greater than 1 cm bilaterally or 2 cm unilaterally, 2 = moderate between 0.25 and 1 cm bilaterally or between 0.5 and 2 cm unilaterally, 1 = mild within 0.25 cm bilaterally or 0.5 cm unilaterally0 = none
d) ***Discharge***: 3 = bloody, purulent, 2 = serosanguinous, 1 = serous and 0 = none).
e) ***Approximation***: 3 = severe skin and subcutaneous fat and fascial layer separation, 2 = moderate skin and subcutaneous fat separation, 1 = mild skin separation of 3mm or less and 0 = closed)

The possible total REEDA scores are from 0 to 15. When it comes to wound healing, a lower score means good healing and a higher score means poor healing. This is how the REEDA scale's total score was classified:

- ***Poor healing*** (Not healed) from 9 to 15
- ***Mildly healing*** from 6 to 8
- ***Moderately healing*** from 3 to 5
- ***Completely healing*** from 0 to 2

Points	Redness	Oedema	Ecchymosis	Discharge	Approximation
0	None	None	None	None	Close
1	Within 0.25 cm of the incision bilaterally	Perineal, less than 1 cm from incision	Within 0.25 cm bilaterally or 0.5 cm unilaterally	Serum	Skin separation 3 mm or less
2	Within 0.5 cm of the incision bilaterally	Perineal and/or between 1 to 2 cm from the incision	Between 0.25 cm to 1 cm bilaterally or between 0.5 to 2 cm unilaterally	Serosan-guinous	Skin and subcutaneous fat separation
3	Beyond 0.5 cm of the incision bilaterally	Perineal and/or vulvar, greater than 2 cm from incision	Greater than 1 cm bilaterally or 2 cm unilaterally	Bloody, purulent	Skin, subcutaneous fat and fascial layer separation
Score					
				Total	

Figure (2): Redness, oedema, ecchymosis, discharge and approximation of the edges of the lesion assessment scale (REEDA)

Tool III: Pain Visual Analog Scale (VAS): this tool was adopted from (***Katz and Melzack, 1994)*** to assess the intensity of the pain. A horizontal line is employed to assess the subjective level of pain that women experience in this self-reported scale. The pain severity is scaled on a 10-point numerical scale, with zero denoting no pain and 10 representing the most severe degree of pain.

- A score of 0 indicate ***no pain.***
- Scores 1, 2, and 3 indicate ***mild pain***.
- Scores 4, 5, and 6 indicate ***moderate pain.***
- Scores 7, 8, and 9 indicate ***severe pain.***
- A score of 10 indicates ***the worst unbearable pain.***

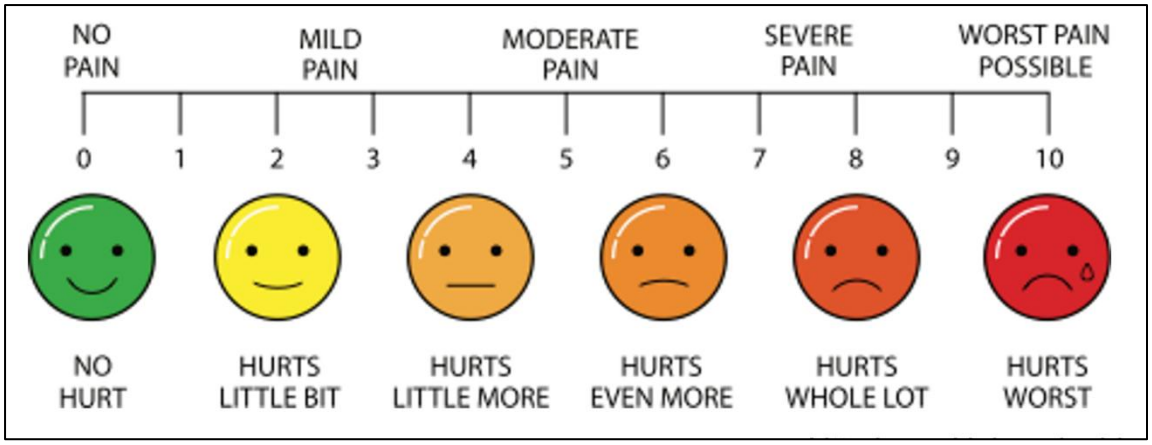

Figure (3): Pain Visual Analog Scale (VAS)

Tool IV: Postpartum Comfort Questionnaire (PPCQ): The creators of this 34-item, 5-point Likert-type scale were ***(Karakaplan and Yıldız, 2010)*** to determine postpartum comfort. Each item is scored between "strongly agree" (5 points) and "strongly disagree" (1 point).

An expression of full agreement yields five points in positive sentences, indicating the most extreme degree of comfort and one point in negative ones, indicating the lowest degree of comfort. Scores range from 34 (the lowest possible) to 170 (the highest possible) on the scale. The scale's score indicates that contentment is on the rise. The scale has three sub-dimensions related to:

- Physical (14 item).
- Psycho-spiritual (10 item).
- Sociocultural comfort (10 item).

Tools validity

The questionnaires' validity was assessed by a panel of three jury experts in the field of obstetrics and gynaecological nursing at Benha University, who insured that the tools were clear, relevant, exhaustive, and applicable. When formulating sentences, only minimal modifications were required. In the expert's opinion, the instruments were legitimate.

Tools reliability:

The reliability of tools was done by Cronbach's Alpha coefficient test, which revealed that the internal consistency of research tools as following:

Tool	Cronbach's alpha value
Tool II: The Standardized REEDA Scale (REEDA).	(α =0. 0.981).
Tool III: Pain Visual Analog Scale (VAS).	(α =0.87).
Tool IV: Postpartum Comfort Questionnaire (PPCQ).	(α = 0. 78).

Ethical considerations:

Prior to commencing the study, the subsequent ethical considerations will be assessed: The study was accomplished with the sanction of the scientific research ethical committee (REC-OBSN-P63) of the nursing faculty at Benha University. Official sanction was obtained from the designated study settings for the study. Prior to implementing the tools, the researchers clarified the study's purpose and significance to instill confidence in women. In order to ensure the confidentiality of the study, the researchers obtained notarized consent from women who wished to participate. The results of the investigation did not expose the women to any psychological, social, or physical risks. Upon completion of the statistical analysis, all data collection instruments were destroyed to safeguard the privacy of the women who participated. The study was designed to ensure that it did not contain any unethical statements and that it respected human rights. The women were permitted to discontinue their studies at any point.

Pilot study:

10% of the entire sample duration was utilized for the pilot study (3 weeks in which 14 women) It is necessary to evaluate the clarity, objectivity, feasibility, and applicability of the tools in order to identify any specific problems with the statements that might face the researcher, such as the order of questions or lack of clarity, and to prevent any problems that could hinder data collection. This helped a lot when trying to estimate how long data collection would take. Exclusion of the pilot sample from the investigation was implemented to prevent sample contamination, and modifications were implemented in accordance with the prototype test results.

Field work:

The dean of the nursing faculty issued written formal sanctions to the director of the Benha University Hospital. Subsequently, the superintendent of the Obstetrics and Gynaecology department was informed of this sanction in order to obtain their consent to conduct the research after a thorough explanation of its objectives. The research was carried out from the beginning of September 2024 and completed at the end of February 2025 lasting for six months. From 9:00 a.m. to 1:00 p.m. on Mondays and Thursdays, the researchers conducted the research at the locations until the predetermined duration was reached. The researchers interviewed the women individually at a rate of 2-3 women per day to implement the topical application of fresh breast milk on the episiotomy wound. The leaflet (pamphlet) was left in the obstetric and gynecological outpatient clinic at the conclusion of this research to be distributed to all women, thereby disseminating the associated benefits.

The preparatory, interviewing, and assessment phases, as well as the implementation and evaluation and follow-up phases, comprised the five phases of our research. To safeguard the privacy and confidentiality of women, these phases were conducted at the obstetrics and gynecological outpatient clinic and the postnatal inpatient ward.

Preparatory phase:

The initial phase of the research is known as the preparatory phase. Local and international literature pertinent to the research query were meticulously reviewed by the researchers during this phase. The researchers were able to develop a comprehensive comprehension of the issue's severity and magnitude, which in turn facilitated the development of the requisite data collection instruments. The instruments were disseminated to three experts in the field of obstetrics and gynaecological nursing at the Benha University faculty, and the jury results were determined.

Interviewing and assessment phase:

The interview was conducted by researchers who greeted the woman warmly, introduced themselves to each postnatal woman in the study, explained the research's purpose, provided all the information the woman needed about her scheduled visits (3rd, 5th, and 7th days after the episiotomy wound was treated topically with fresh breast milk) to make sure the woman followed the interventions, and obtained her signed consent to participate in the study .To assess the personal characteristics and obstetrical history of the postnatal women, the initial stage was to conduct interviews ***(Tool: I)***. Then, the researchers used ***(Tool: II)*** to assess women's episiotomy healing using REEDA scale. After that, through the researchers used ***(Tool: III);*** to assess the perineal pain intensity and **(*Tool: IV);*** to determine postpartum comfort level.

Implementation phase

For control group:

The control group was not granted any special intervention; alternatively, women were just instructed to keep up with routine regular episiotomy care recommended by the hospital.

For study group:

Immediately after completion of the assessment phase, the researchers explained to each woman how to apply fresh breast milk on episiotomy wound, followed by demonstration and discussion. The researchers demonstrated the steps ***as follow: (Nuraini et al., 2019) and (Anjali et al., 2023)***

- It is recommended that the women adopt the lithotomy position or lie on their sides with their upper buttocks lifted. The episiotomy incision can only be seen with the help of an appropriate light source.
- The episiotomy site was treated with fresh expressed breast milk from the woman, which was collected in a sterile bowl and applied twice daily to the area using sterile cotton.
- The woman was administered 0.25 cc of topical breast milk using a syringe without a needle from 1-3 days postpartum.
- The woman was administered 2 cc of breast milk from 4-7 days postpartum by smearing the milk on cotton and cleaning the episiotomy incision from the fourchette to the anus. Various clean cotton was used to duplicate this procedure three times in order to guarantee consistency. Compress it on the incision for a period of five minutes finally.
- After 12 hours of episiotomy, the women were instructed to start performing this procedure in the morning and evening for seven consecutive days.
- Both groups are not subject to any limitations regarding the mobilization of respondents.
- Finally, the researchers educated the women on how to take care of themselves so that they would compliance with the interventions and assess how well their wounds had healed. Follow-up was the primary focus of this educational program. The researchers reassured the women of the advantages of the interventions they had implemented and the significance of engaging in follow-up through daily phone calls.
- Follow-Up: the researchers made sure that the postnatal women in both groups went to their outpatient clinic follow-up appointments on the third, fifth, and seventh days after giving birth in order to measure the severity of perineal pain, the rate of episiotomy wound healing, and postpartum comfort.

Evaluation and follow up phase:

The efficacy of topical application of fresh breast milk on episiotomy was assessed three times, each time using the same framework of tools (Tool II, Tool III, and Tool IV) as during the assessment phase. The women of control group were followed and evaluated as the same in the study group. This phase could be accomplished during postnatal visits and follow up.

The REEDA scale, Pain VAS, and Postpartum Comfort Questionnaire (PPCQ) were implemented to assess the episiotomy healing, perineal pain, and postpartum comfort of the women in the study at four distinct intervals during the postpartum period: on the first day, after 6 to 10 hours (Baseline first evaluation), on the third day (second evaluation), on the fifth day (third evaluation), and on the seventh day after birth (fourth evaluation).

Statistical analysis:

Everything was double-checked before the data was entered into the computer. Statistical methods and tests will be applied to the data after it has been organized, categorized, and computerized. The researchers used SPSS 25.0, which is a statistical package for social science research. We provide descriptive statistics, which include means, variances, frequency distributions, and percentages. Inferential statistics such as chi-square tests and independent t-tests were utilized to assess the study's hypothesis. A statistically significant difference was shown by a p-value lower than 0.05. Highly statistically significant is a difference of 0.001 or less. When the results were less than 0.05, we observed a statistically significant difference.

Results:

Table (1): Clarifies that more than half and half (56.0% & 50.0%) of both intervention and control groups respectively were in the same age group (25 - < 30 years) with a mean age of 25.38 +3.92 and 26.08+4.61 years old respectively. Pertaining to education, more than half and less than two-thirds (54.0% & 60.0%) of both intervention and control groups respectively had secondary education. In addition, the intervention group comprised the majority (80.0%), while the control group comprised more than two-thirds (68.0%) lived in the rural area. In the context of occupation, the intervention and control groups were both unemployed, with (76.0%) and (82.0%), respectively. Therefore, the personnel characteristics of both the intervention and control groups were not statistically significant ($p > 0.05$), which was indicative of group homogeneity.

Figure (1): demonstrates that the majority (88% and 96.0%) of both intervention and control were primigravida respectively.

Figure (2): demonstrates that the majority (92.0% and 96.0%) of both intervention and control had Medio-lateral episiotomy respectively.

Figure (3): demonstrates that the majority (92.0% and 96.0%) of both intervention and control sutured with chromic catgut suture respectively.

Table (2): Founded that there was no statistically significant difference between the two groups in terms of all components of the REEDA scale prior to the intervention (baseline, on the first day), where ($P > 0.05$). In terms of all components of the REEDA scale, including redness, edema, ecchymosis, discharge, and approximation, there was a statistically significant

difference between the two groups on the third and fifth days following the intervention ($P \leq 0.05$). Furthermore, two groups exhibited a highly statistically significant difference in each of the five components of the REEDA scale: redness, edema, ecchymosis, discharge, and approximation on the seventh day following the intervention ($P \leq 0.001$).

Table (3): The total mean of episiotomy wound healing scores between the control and intervention groups experienced a stark decrease on the third day (10.10±3.90 and 6.70±2.58), on the fifth day (7.60±4.8 and 4.16±3.78), and on the tenth day (5.86±2.90 and 2.84±2.11) following the intervention. There was a highly statistically significant difference ($P \leq 0.001$) in favor of the intervention group. Although the two groups did not exhibit a statistically significant difference on the baseline first day prior to the intervention ($P > 0.05$).

Table (4): Demonstrates that the study group showed significant improvements in the healing of episiotomy wounds on the third, fifth, and tenth days following the interventions ($P \leq 0.05$) ($P \leq 0.001$). The control group exhibited only a fifth (20%) of the episiotomy wounds that had fully healed on the third day following the intervention, compared to over half (56.0%) of the study group. Additionally, complete healing of episiotomy wounds was observed in more than three-quarters (78.0%) of the study group on the fifth day following intervention, as opposed to less than half (46.0%) of the control group (46.0%). Additionally, the control group experienced a lower rate of complete healing of episiotomy wounds (52.0%) than the vast majority (96.0%) of the study group on the 10th day thereafter. While there was no statistically significant difference between the two groups on the baseline day prior to the intervention ($P > 0.05$).

Table (5): shows an evident decrease in the total mean of perineal pain intensity scores between the control and intervention groups on 3rd day (8.36±2.36 and 7.26±1.72) and on 5th day (76.42±1.75 and 5.18±2.29) after the intervention, with statistically significant differences ($P \leq 0.05$) in the favor of the intervention group. Furthermore, the intervention group exhibited a highly statistically significant difference from the control group on the 10th day (4.22±1.92 and 2.74±2.33) ($P \leq 0.001$) following the intervention. However, there was no statistically significant difference between the two groups on the baseline day prior to the intervention ($P > 0.05$).

Table (6): Manifests that there was no statistically significant difference between the two groups on baseline 1st day before the intervention ($P > 0.05$). While, significant differences were observed between the study and control groups in the perineal pain intensity on the 3rd day, 5th day and 10th day after the interventions ($P \leq 0.05$) ($P \leq 0.001$); in favor of the study group.

Table (7): shows a conspicuous increase in the total mean of postpartum comfort level scores between the control and intervention groups on 3rd day (102.22±18.2 and 116.74±20.36), on 5th day (115.02±19.88 and 131.68±25.71) and on 10th day (133.20±18.92 and 148.34±23.78) after the intervention, with a highly statistically significant differences ($P \leq 0.001$) in the favor of the intervention group. While, there was no statistically significant difference between the two groups on baseline 1st day before the intervention ($P > 0.05$).

Table (1): Distribution of the studied sample in intervention and control groups according to their personnel characteristics (n=100).

Personnel characteristics	Control group n=50		Intervention group n=50		X^2	P value
	No	%	No	%		
Age (years):						
18 < 25	15	30.0	10	20.0	**1.35**	**0.509**
25 - < 30	25	50.0	28	56.0		
30 - ≤ 35	10	20.0	12	24.0		
Mean ± SD =	**26.08+4.61**		**25.38 +3.92**		-	-
Education:						
Not read and write	2	4.0	0	0.0	**4.14**	**0.246**
Basic education	5	10.0	3	6.0		
Secondary education	30	60.0	27	54.0		
University education	14	28.0	20	40.0		
Residence:						
Rural	34	68.0	40	80.0	**1.87**	**0.171**
Urban	16	32.0	10	20.0		
Occupation:						
Employed	9	18.0	12	24.0	**0.542**	**0.461**
Unemployed	41	82.0	38	76.0		
Monthly income:						
Low/Middle	45	90.0	47	94.0	**0.543**	**0.461**
High	5	10.0	3	6.0		

***Statistically significant difference (P ≤ 0.05) **A highly statistically significant difference (P ≤ 0.001)**

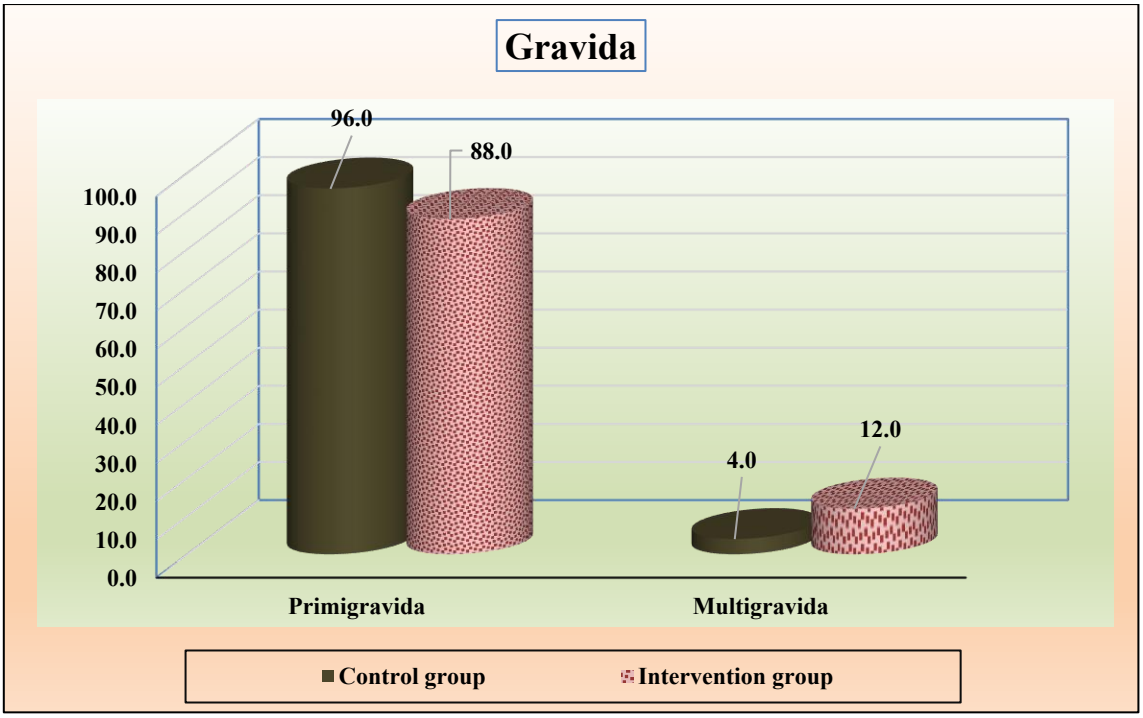

Figure (1): Distribution of studied sample in both groups according to their gravida (n=100).

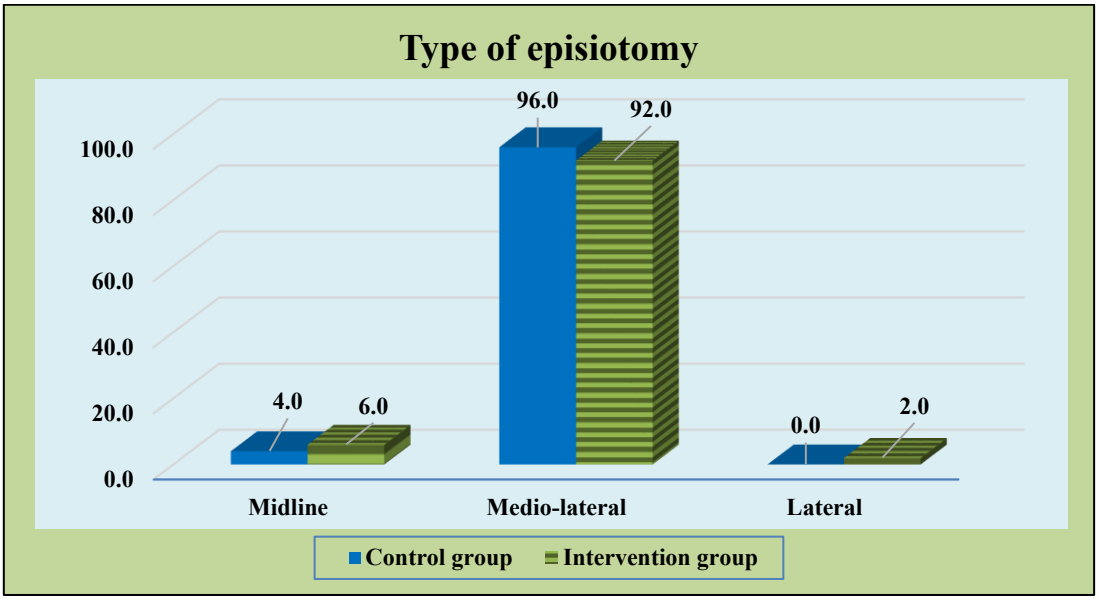

Figure (2): Distribution of studied sample in both groups according to their type of episiotomy (n=100).

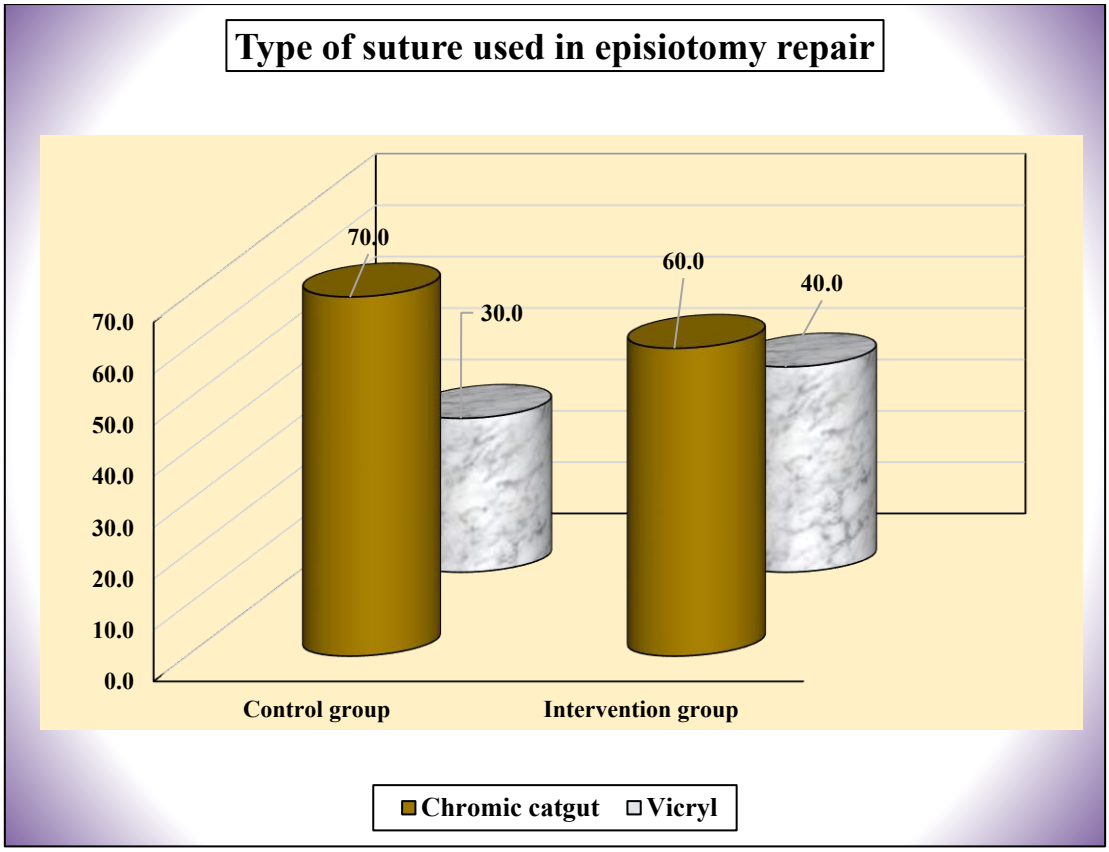

Figure (3): Distribution of studied sample in both groups according to type of suture used in episiotomy repair (n=100).

Table (2): Distribution of the studied sample in the two groups according to episiotomy healing using REEDA scale (Day wise) before and after intervention (n=100).

REEDA scale		Baseline (On 1st day)				On 3rd day				On 5th day				On 7th day			
		Control group (n=50)		Intervention group (n=50)		Control group (n=50)		Intervention group (n=50)		Control group (n=50)		Intervention group (n=50)		Control group (n=50)		Intervention group (n=50)	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Redness	None	0	0.0	0	0.0	0	0.0	2	4.0	0	0.0	2	4.0	12	24.0	34	68.0
	Mild	20	40.0	20	40.0	25	50.0	34	68.0	27	54.0	36	72.0	30	60.0	16	32.0
	Moderate	26	52.0	23	46.0	15	30.0	14	28.0	13	26.0	12	24.0	5	10.0	0	0.0
	Severe	4	8.0	7	14.0	10	20.0	0	0.0	10	20.0	0	0.0	3	6.0	0	0.0
	$X2/F^{ET}$ (P-value)	**1.00 (0.606)**				**13.40 (0.004*)**				**13.32 (0.004*)**				**22.78 (0.000**)**			
Edema	None	0	0.0	0	0.0	9	18.0	23	46.0	11	22.0	27	54.0	21	42.0	50	100.0
	Mild	18	36.0	16	32.0	26	52.0	18	36.0	25	50.0	16	32.0	23	46.0	0	0.0
	Moderate	19	38.0	19	38.0	9	18.0	9	18.0	8	16.0	7	14.0	6	12.0	0	0.0
	Severe	13	26.0	15	30.0	6	12.0	0	0.0	6	12.0	0	0.0	0	0.0	0	0.0
	$X2/F^{ET}$ (P-value)	**0.261 (0.878)**				**13.58 (0.004*)**				**14.77 (0.002*)**				**40.48 (0.000**)**			
Ecchymosis	None	8	16.0	11	16.0	16	32.0	30	60.0	20	40.0	35	70.0	30	60.0	47	94.0
	Mild	28	56.0	26	52.0	26	52.0	20	40.0	24	48.0	14	28.0	14	28.0	3	6.0
	Moderate	12	24.0	10	20.0	6	12.0	0	0.0	5	10.0	1	2.0	6	12.0	0	0.0
	Severe	2	4.0	3	6.0	2	4.0	0	0.0	1	2.0	0	0.0	0	0.0	0	0.0
	$X2/F^{ET}$ (P-value)	**0.930 (0.818)**				**13.04 (0.005*)**				**10.38 (0.016*)**				**16.87 (0.000**)**			
Discharge	None	50	100.0	50	100.0	18	36.0	30	60.0	21	42.0	37	74.0	29	58.0	46	92.0
	Serum	0	0.0	0	0.0	14	28.0	14	28.0	16	32.0	12	24.0	12	24.0	4	8.0
	Serosanguinous	0	0.0	0	0.0	14	28.0	4	8.0	11	22.0	1	2.0	9	18.0	0	0.0
	Bloody/purulent	0	0.0	0	0.0	4	8.0	2	4.0	2	4.0	0	0.0	0	0.0	0	0.0
	$X2/F^{ET}$ (P-value)	**- (-)**				**9.22 (0.026*)**				**15.31 (0.002*)**				**16.85 (0.000**)**			
Approximation	Closed	50	100.0	50	100.0	5	10.0	15	30.0	11	22.0	23	46.0	30	60.0	47	94.0
	Mild	0	0.0	0	0.0	9	18.0	17	34.0	8	16.0	15	30.0	9	18.0	3	6.0
	Moderate	0	0.0	0	0.0	27	54.0	15	30.0	23	46.0	10	20.0	7	14.0	0	0.0
	Severe	0	0.0	0	0.0	9	18.0	3	6.0	8	16.0	2	4.0	4	8.0	0	0.0
	X^2/F^{ET} (P-value)	**- (-)**				**13.89 (003*)**				**15.08 (0.002*)**				**17.75 (0.000**)**			

***Statistically significant difference (P ≤ 0.05)** ****A highly statistically significant difference (P ≤ 0.001)**

Table (3): Total mean scores of episiotomy wound healing using REEDA scale (Day wise) of the studied sample in both groups before and after the intervention (n=100).

REEDA assessment days	Control group n=50	Intervention group n=50	Independent t-test	P-value
	Mean ± SD	Mean ± SD		
Baseline (REEDA **1st day**)	13.38±2.79	13.06±2.45	**0.609**	**0.544**
REEDA **3rd day**	10.10±3.90	6.70±2.58	**5.12**	**0.000****
REEDA **5th day**	7.60±4.81	4.16±3.78	**3.97**	**0.000****
REEDA **7th day**	5.86±2.90	2.84±2.11	**5.95**	**0.000****

***Statistically significant difference (P ≤ 0.05) **A highly statistically significant difference (P ≤ 0.001)**

Table (4): Distribution of the studied sample in the two groups according to total episiotomy healing using REEDA scale (Day wise) before and after intervention (n=100).

Episiotomy wound healing	Baseline (On 1st day)				On 3rd day				On 5th day				On 7th day			
	Control group (n=50)		Intervention group (n=50)		Control group (n=50)		Intervention group (n=50)		Control group (n=50)		Intervention group (n=50)		Control group (n=50)		Intervention group (n=50)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Complete healing	0	0.0	0	0.0	10	20.0	28	56.0	23	46.0	39	78.0	26	52.0	48	96.0
Moderate healing	0	0.0	0	0.0	10	20.0	9	18.0	9	18.0	7	14.0	15	30.0	2	4.0
Mild healing	7	14.0	5	10.0	16	32.0	7	14.0	10	20.0	4	8.0	8	16.0	0	0.0
Poor healing	43	86.0	45	90.0	14	28.0	6	12.0	8	16.0	0	0.0	1	2.0	0	0.0
X^2/F^{ET}	**0.379**				**15.30**				**14.95**				**25.48**			
P-value	**0.538**				**0.002***				**0.002***				**0.000****			

***Statistically significant difference (P ≤ 0.05) **A highly statistically significant difference (P ≤ 0.001)**

Table (5): Total mean scores of perineal pain intensity (Day wise) of the studied sample in both groups before and after the intervention (n=100).

Perineal pain assessment days	Control group n=50	Study group n=50	Independent t-test	P-value
	Mean ± SD	Mean ± SD		
Baseline (Perineal pain 1st day)	8.08±2.28	8.36±1.88	**0.669**	**0.505**
Perineal pain 3rd day	8.36±2.36	7.26±1.72	**2.65**	**0.009***
Perineal pain 5th day	6.42±1.75	5.18±2.29	**3.04**	**0.000****
Perineal pain 7th day	4.22±1.92	2.74±2.33	**3.46**	**0.001****

*Statistically significant difference (P ≤ 0.05) **A highly statistically significant difference (P ≤ 0.001)

Table (6): Distribution of the studied sample in the two groups according to total perineal pain intensity (Day wise) before and after intervention (n=100).

Perineal pain intensity	Baseline (On 1st day)				On 3rd day				On 5th day				On 7th day			
	Control group (n=50)		Intervention group (n=50)		Control group (n=50)		Intervention group (n=50)		Control group (n=50)		Intervention group (n=50)		Control group (n=50)		Intervention group (n=50)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
No pain	0	0.0	0	0.0	0	0.0	3	6.0	0	0.0	4	8.0	0	0.0	15	30.0
Mild pain	7	14.0	6	12.0	1	2.0	8	16.0	3	6.0	12	24.0	30	60.0	20	40.0
Moderate pain	19	38.0	14	28.0	20	40.0	16	32.0	25	50.0	18	36.0	9	18.0	12	24.0
Severe pain	18	36.0	20	40.0	14	28.0	14	28.0	14	28.0	12	24.0	5	10.0	3	6.0
Unbearable pain	6	12.0	10	20.0	15	30.0	9	18.0	8	16.0	4	8.0	6	12.0	0	0.0
X2/F^ET	**1.94**				**10.38**				**12.02**				**23.92**			
P-value	**0.585**				**0.034**				**0.017***				**0.000****			

*Statistically significant difference (P ≤ 0.05) **A highly statistically significant difference (P ≤ 0.001)

Table (7): Total mean scores of postpartum comfort level (Day wise) of the studied sample in both groups before and after the intervention (n=100).

Postpartum Comfort Sub-dimensions (PPCQ)	Possible score	Control group n=50	Intervention group n=50	Independent t-test	P-value
		Mean ± SD	Mean ± SD		
Physical comfort					
Baseline (Perineal pain **1st day**)	14 - 70	38.04±9.87	36.86±9.15	**0.620**	**0.537**
Perineal pain **3rd day**		37.02±8.37	42.48±9.20	**3.10**	**0.003***
Perineal pain **5th day**		43.48±8.19	50.28±12.84	**3.15**	**0.002***
Perineal pain **7th day**		48.50±11.23	56.04±14.75	**2.87**	**0.005***
Psychospiritual comfort					
Baseline (Perineal pain **1st day**)	10 - 50	32.84±8.29	34.12±7.25	**0.812**	**0.414**
Perineal pain **3rd day**		31.52±8.03	36.58±8.11	**3.13**	**0.002***
Perineal pain **5th day**		34.64±8.37	39.78±8.76	**2.99**	**0.003***
Perineal pain **7th day**		41.00±8.62	45.58±6.81	**2.94**	**0.004***
Sociocultural comfort					
Baseline (Perineal pain **1st day**)	10 - 50	33.28±7.62	34.78±6.79	**1.03**	**0.302**
Perineal pain **3rd day**		33.68±7.55	37.68±8.44	**2.49**	**0.014***
Perineal pain **5th day**		36.90±9.04	41.62±9.49	**2.54**	**0.013***
Perineal pain **7th day**		43.70±7.63	46.72±6.69	**2.10**	**0.038***
Total PPCQ					
Baseline (Perineal pain **1st day**)	34 - 170	104.16±21.92	105.76±18.38	**0.395**	**0.693**
Perineal pain **3rd day**		102.22±18.2	116.74±20.36	**3.75**	**0.000****
Perineal pain **5th day**		115.02±19.88	131.68±25.71	**3.62**	**0.000****
Perineal pain **7th day**		133.20±18.92	148.34±23.78	**3.52**	**0.000****

***Statistically significant difference (P ≤ 0.05)** ****A highly statistically significant difference (P ≤ 0.001)**

Discussion

During the second stage of labour, the pelvic floor musculature is surgically addressed to facilitate the exit of the baby's head. This procedure is known as episiotomy. Women's quality of life and health are adversely affected by episiotomy, both in the short and long term. ***(López-Campos et al, 2025).*** Postnatal hospitalization for more than four days, third or fourth-degree perineal injuries, edema, bruising, infections, bleeding, and perineal pain are the primary consequences. Mobility, self-care, and neonatal care can be considerably impeded by these symptoms, which can significantly affect the quality of life during the initial postpartum days. Non-pharmacological interventions for episiotomy are essential for the care of postpartum women, as they offer a viable alternative to the potential adverse effects of excessive medication use on both the woman and the newborn ***(Nguyen et al., 2025; Gondim et al., 2025)***.

The healing of episiotomy wounds is facilitated by the implementation of a variety of alternative interventions by nurses. The application of breast milk was more efficacious than routine care in reducing the healing time of cutaneous injuries ***(Cirik et al., 2025).*** Wound healing is essential for the restoration of tissue integrity and homeostasis, and it is a complex and dynamic process. It is commonly believed that breast milk has a beneficial effect on wound healing as a result of the components it contains ***(Acar et al., 2024).***

Consequently, the main aim of the current study was to evaluate the effect of topical application of fresh breast milk on episiotomy healing, perineal pain, and postpartum comfort among primiparous women.

According to **personal characteristics of the studied women,** the results of the current study clarified that, more than half and half of both intervention and control groups respectively were in the same age group (25 - < 30 years) with a mean age of 25.38 +3.92 and 26.08+4.61 years old respectively. The intervention and control groups both included participants who had completed secondary education, with over half and less than two-thirds of the participants, respectively, having completed this level of education. Over two-thirds of the control group and the majority of the study group lived in rural areas. More than 70% of the sample, including the majority of the control and intervention groups, was unemployed in this occupation. Finally, there were no statistically significant variations in the demographics of the participants in the control and study groups (p 0.05), suggesting that they were similar.

Regarding **the obstetrical history of the studied sample,** some recent research indicates that primigravidae comprised the intervention and control groups. The intervention and control groups conducted mediolateral episiotomy at a higher frequency. Additionally, the intervention and control groups were sutured with chromic catgut suture, with fewer than two-thirds and more than three-quarters of participants, respectively. The obstetric history of the studied groups were lacking in statistically significant differences ($p > 0.05$), which exemplified group homogeneity.

In relation to **the episiotomy healing using REEDA scale (Day wise),** None of the components of the REEDA scale (baseline (on the first day)) between the two groups were significantly different prior to the intervention. The present research demonstrated this conclusively, with a level of statistical significance ($P > 0.05$). On the third and fifth days following the intervention, there was a statistically significant difference in all components of the REEDA scale between the two groups ($P \leqq 0.05$). This was proven by utilizing redness, edema, ecchymosis, discharge, and approximation. Additionally, the two groups exhibited a highly statistically significant dissimilarity in all components of the REEDA scale, including redness, edema, ecchymosis, discharge, and approximation, on the seventh day following the intervention ($P \leq 0.001$).

The total mean of episiotomy wound healing scores between the control and study groups decreased significantly on the third day (10.103.90 and 6.702.58), the fifth day (7.604.8 and 4.163.78), and the tenth day (5.862.90 and 2.842.11) following the intervention. In these regions, the study group exhibited highly statistically significant differences ($P \leq 0.001$). However, there was no statistically significant difference between the two groups on the baseline day preceding the intervention ($P > 0.05$).

There were significant differences were observed between the study and control groups in the healing of episiotomy wound on the third, fifth, and tenth days after the interventions ($P \leq 0.05$, $P \leq 0.001$). To sum up, this claim is supported by the study's findings. The study group achieved a recovery rate of over half of the episiotomy wound

on the third day after the intervention, while the control group only fifth had recovery rate. Additionally, the control group had less than half of the episiotomy wound fully restored on the fifth day following the intervention, whereas over seventy-five percent of the study participants experienced a complete recovery. Conversely, the control group's participants recovered from their episiotomy wound significantly more than half of the time, while the majority of the study participants had fully recovered by the 10th day following the interventions. There was no statistically significant difference between the two groups prior to the intervention, as evidenced by the baseline day ($P > 0.05$). Breast milk may be applied topically to episiotomy wound to expedite their incision healing.

Breast milk's advantageous effects on wound healing are emphasized by the research, which demonstrates that it contains a growth factor capable of converting alpha and beta growth factors (TGF-a and TGF-B) and insulin-like growth factors 1 and 2 (IGF-1 and IGF-2). A variety of molecular and cellular processes that aid in wound healing are influenced by this growth factor. At the same time, it is a treatment that is both effective and safe for postpartum perineal wounds.

These results were congruent with ***Hosseini et al., (2024)*** who illustrated that the healing of episiotomy lesions in postpartum women was significantly improved by the topical administration of breast milk in comparison to conventional care. This was demonstrated by the reductions in REEDA (Redness, Oedema, Ecchymosis, Discharge, and Approximation) scale scores. Additionally, these findings were consistent with ***Admasari et al., (2017)*** and demonstrated that the control and intervention groups demonstrated a significant mean difference in the perineal wound healing process, with a p-value of 0.002 (<0.05). Bioactive substances, antibodies, growth factors, anti-inflammatory, and leukocytes are all present in breast milk, and they are highly effective in the treatment of perineum lesions. These substances facilitate the suppression of the colony of pathogenic microorganisms. This has been verified by the results of current and other research. Breastmilk is also antiseptic, free, available, and innocuous in cases of perineal injury.

These results were in accordance with study by ***Patel et al. (2023)*** who employed A quasi-experimental design was implemented in Gujarat, India, to randomly allocate 40 postpartum women to two groups: an experimental group that received topical breast milk treatment and a control group that received usual care. The experimental group significantly improved the healing of episiotomy wounds, as evidenced by a decrease in REEDA scale scores from 14.750.55 to 4.551.32 after seven days. In contrast, the control group's scores decreased from 14.650.59 to 9.351.46 ($p<0.00001$).

These results were supported by ***Acar et al., (2024)*** who demonstrated that breast milk improved wound healing at various lactation phases. Despite the fact that the control group had a wound closure percentage of 48.7%, the mature milk group had the greatest rate at 81.6% (p:0.0002). Additionally, the results were virtually identical to those of a study conducted at a public health center in Tasikmalaya, Indonesia, completed by ***Nuraini et al., (2019)*** that 66.7% of participants demonstrated adequate wound healing, while 33.3% exhibited deficient wound healing, following the evaluation. Therefore, the

lesion healing procedure of the intervention group was satisfactory. The control group, on the other hand, demonstrated 36.7% of adequate wound healing and 63.3% of insufficient wound healing. With a -value of 0.039 and a minus sign of 0.05, a significant difference was found in the Chi-square test. In the 1-7 day time frame, the aforementioned findings, as perceived by the researchers, corroborated the evidence of the perineal wound healing influence of breastfeeding topical on postpartum mothers. The intervention group's administration of topical breastmilk is significant because it contains pro-resolving mediators (SPMs) that have the capacity to eradicate the infection, reduce inflammation, pain, and speed up wound healing.

In regards **perineal pain intensity (Day wise),** the current research findings illustrated a discernible decrease in the total mean of perineal pain intensity scores between the control and intervention groups on the third day (8.36±2.36 and 7.26±1.72) and the fifth day (76.42±1.75 and 5.18±2.29) following the intervention. The study group exhibited statistically significant differences ($P \leq 0.05$). The intervention technique also caused a highly significant difference between the control and intervention groups on the tenth day (4.22±1.92 and 2.74±2.33, respectively) ($P \leq 0.001$). No statistically significant difference was found between the two groups prior to the intervention, based on the baseline day ($P > 0.05$). This could be attributed to the significant relieve of perineal pain that breast milk administration provided.

These results were in agreement with a study carried out by ***Girsang and Elfira, (2023)*** who looked at a variety of interventions for postpartum perineal wound management, such as the use of breast milk. The review consolidated the results of numerous studies, underscoring that breast milk not only alleviates perineal pain and distress but also promotes wound healing.

In the same vein, ***Pimple et al., (2024) and Witkowska-Zimny et al., (2019)*** announced that commensal microbes found in human milk can modulate the immune system and fight infections. Due to their capacity to hasten the development of skin biofilms, they may hold novel therapeutic and preventative insights for skin and wound healing illnesses. In the postnatal care of women, this could subsequently alleviate perineal pain.

Breast milk is a natural substance that is biologically appropriate for the body, does not have any adverse effects, and does not pose a risk of allergy, according to researchers. This may explain the correlation between the results of the present study and the aforementioned study. Given its bioactive molecules, antibodies, epidermal growth factor (EGF), and erythropoietin, it has the potential to offer a novel treatment that could facilitate the growth and repair of epidermis cells. Individuals from all socioeconomic and social backgrounds have perpetual access to it.

Concerning **postpartum comfort level (Day wise),** On the third day (102.22±18.2 and 116.74±20.36), the fifth day (115.02±19.88 and 131.68±25.71), and the tenth day (133.20±18.92 and 148.34±23.78) following the intervention, Between the control and intervention groups, the present research results demonstrated a significant increase in the

total mean of postpartum comfort level scores. Based on statistical criteria, there was a highly significant difference ($P \leq 0.001$) in the intervention group. On the baseline day, before the intervention, there was no discernible difference between the two groups ($P > 0.05$). The tremendous effect of non-pharmacological methods of applying topical breast milk in enhancing the comfort of women associated with episiotomy healing among the study group was assured by these results.

These results were congruent with a study carried out by ***Keleş and Altinkaya, (2025)*** Additionally, compared to the control group, the experimental group thought the recovery time after an episiotomy was shorter. Also, the experimental group had significantly lower perineal pain scores (during: 5, after: 2) compared to the control group (during: 7, after: 4). Consequently, the scores on the postpartum comfort scale were significantly higher in the experimental group (E: 4.20 ± 0.36/ C: 3.99 ± 0.55). These findings also appear to confirm the findings of a study conducted by ***Amiri-Farahani et al., (2020)*** , who said that almost everyone knows that breast milk helps prevent and treat common obstetric problems like ulcers and lesions, whether they have secondary infections or not. It has not been reported that any adverse side effects have been associated with the administration of human milk. Human milk may serve as a secure, accessible, and suitable alternative for the treatment of skin and mucous tissue injuries in women in the context of postpartum comfort. In conclusion, the significant improvement in episiotomy wound healing and the diminution of pain at the incision site, which led to the women feeling more at ease than the other participants, are responsible for the enhanced comfort level of the study group.

Conclusion

An alternative approach to the wound healing process following an urgent episiotomy is the topical application of fresh breast milk. Primiparous women reaped the benefits in terms of decreased perineal pain and enhanced postpartum comfort, as indicated by the findings of the present study. In all components of the REEDA scale, postpartum comfort level, and perineal pain intensity, the interventions produced a statistically significant difference between the control group and the study group. This led to the validation of the research hypotheses and the successful completion of the research aim.

Recommendations:

Based on the research findings it was recommended that:

- Advice primiparous women to apply fresh breast milk to accelerate the healing process of episiotomy, decrease perineal pain and enhance postpartum comfort.
- Scaling up health education about importance of breast milk is highly recommended.
- Fresh breast milk should be attributed to be an alternative method of nursing intervention for women during postpartum episiotomy care.
- Dissemination of the vibrant booklets and educational brochures regarding importance of breast milk in enhancing episiotomy healing for postpartum women before hospital discharge.

Further researches:

- The curricula of basic nursing education can be enriched with correct and valid evidence about the non- pharmacological management of episiotomy with breast milk.
- Encourage the implementation of ongoing training programs for maternity nurses in postpartum units to enhance the healing process of episiotomies through the use of non-pharmacological methods, particularly fresh milk.
- The study's replication on a larger representative probability sample in various settings is essential for the generalization of the findings and to underscore the significance of fresh breast milk in wound healing.

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الملخص العربى

مقدمة: تُسهّل الخصائص العلاجية لحليب الأم الطازج التئام جروح شق العجان وتخفف ألم العجان، مما يُعزز راحة السيدات بعد الولادة .يُعدّ تطبيق حليب الأم الطازج موضعيًا خيارًا رائعًا، فهو بسيط وخالٍ من المخاطر والتكاليف.

الهدف: تقييم تأثير التطبيق الموضعي لحليب الأم الطازج على التئام شق العجان، وألم العجان، وراحة ما بعد الولادة لدى السيدات اللواتي ولدن لأول مرة.

التصميم: استُخدم تصميم بحث شبه تجريبي (مجموعتان ضابطتان، دراسة قبلية وبعدية) لتحقيق هدف هذا البحث.

النتائج: تباينت جميع مكونات مقياس ريدا، وشدة ألم العجان، ومستوى الراحة بعد الولادة، بشكل كبير إحصائيًا بين مجموعتي الدراسة والضابطة بعد التدخلات، مع تحقيق مجموعة الدراسة نتائج أفضل.

الخلاصة والتوصيات: يُعدّ الاستخدام الموضعي لحليب الثدي الطازج نهجًا بديلًا لعملية التئام الجروح بعد شق العجان العاجل. كما يُنصح النساء اللواتي ولدن لأول مرة باستخدام حليب الثدي الطازج لتسريع عملية التئام شق العجان، ، وتعزيز الراحة بعد الولادة.