



## EFFECT OF ESSENTIAL OIL ON EPISIOTOMY PAIN AND WOUND HEALING-A RANDOMIZED CONTROL TRIAL

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### ABSTRACT

#### INTRODUCTION:

Motherhood is a beautiful process whereby the mother safely delivers a child. It is the magic of creation. Care must be given to ensure safe childbirth. Safe motherhood initiative Perineal trauma can cause considerable distress and discomfort to many women following child birth. Its severity is frequently underestimated and many women suffer unnecessarily, often in silence. Perineal pain in early post natal period has been reported as one of the most common causes of maternal morbidity. In the given comparative study lavender oil Vs sitz bath is used over episiotomy pain and wound healing. The instrument used for the Study was numerical pain rating scale, and REEDA scale, A total of 60 Subjects were selected for the study as per the inclusion and exclusion of selection of sample 30 of them were allotted to Experimental group(A) with application of lavender oil and 30 of them were allotted to the experimental Group (B) with sitz bath application. Nature and purpose of study will be explained, Demographic data was collected from postnatal mothers. Pre intervention data was obtained from post natal mothers through numerical pain rating scale and (Davidsons 1974)REEDA scale. The Episiotomy pain and healing of episiotomy wound will be assessed everyday by numerical pain rating scale and REEDA scale, The Episiotomy pain and healing of episiotomy wound will be assessed everyday by Numerical pain rating scale and REEDA scale, Application of Sitz bath for the frequency of twice a day for 7 consecutive days to one group and lavender oil 2 drops twice for 7 days. Post test was obtained three times after 24 hrs., 48hrs, 72 hrs, 96 hrs, 120hrs, 144hrs and 168 hrs. And the study concluded that lavender oil is more effective in reducing Episiotomy pain and Improving Episiotomy wound healing and also it effective, no pharmacologic, accessible, cost-effective.

### KEYWORDS

lavender oil, Sitz bath

#### INTRODUCTION :

Episiotomy is the most common perineal surgical incision in obstetric and midwifery<sup>1</sup>.

The first performance of episiotomy was done in 1742, where perineal incisions were used to facilitate deliveries<sup>1</sup>. The mother undergoing episiotomy has a greater blood loss in conjunction with delivery and there is a risk of improper wound healing and increased pain during early puerperium. Wound healing is complex and requires safe and effective treatment modalities<sup>2</sup>.

In India the incidence of Institutional normal vaginal deliveries 61.5% with 58.4% of normal vaginal delivery with episiotomy<sup>1</sup>.

A study on natural child birth found that 85% of women experience a variety of perineal traumas. More than 2/3 of such women are in need of repair<sup>1</sup>. Childbirth perineal injuries are short-term or long-term, including bleeding, infection, suturing, urine and fecal incontinence, painful intercourse, persistent perineal pain (that this disorders can affect on interaction of child and mother, breastfeeding, sexual intercourse, post-delivery recovery sensation), and weakening of the pelvic floor muscles<sup>4</sup>.

Delivery is a one of the miracle of every woman's life. The mothers suffer much distress. After child birth due to painful perineum. Perineal pain is most commonly associated with child birth by vaginal delivery. Pain following episiotomy appears to be universal. The mother undergoing episiotomy is characterized by greater blood loss in conjunction with delivery, and there is a risk of improper wound healing and increased pain during early puerperium. Various interventions are found to aid the healing process, which include cleanliness, applying ice pack, topical application by dry heat (infrared therapy), sitz bath performance of kegel's exercise and perineal care.

Today an average Indian woman considers pregnancy and child birth as a natural process. One of the aim of good intranatal care is "Delivery with minimum injury to the infant and Mother" child bearing in itself is a natural phenomenon and majority of cases require no interference only close observations, moral support and production against human meddling.

Episiotomy suture can cause considerable discomfort, pain, because the perineum is an extremely tender area and the muscles of the perineum are involved in many activities (eg. Sitting, walking, stooping, urinating, defecating). However, they usually do not anticipate the pulling pain from perineal stitches in the postnatal

period, discomfort that interferes with their rest and sleep, mother feels discomfort even when sit hold her baby. Nowadays alternative and complementary methods such as Aromatherapy using essential oils are established as an alternative therapy for episiotomy. It is used increasingly and Lavender oil is frequently prescribed due to its antiseptic and healing properties. Lavender is native to the Mediterranean region. It was used in ancient Egypt as part of the process for mummifying bodies. Lavender's use as a bath additive originated in Persia, Greece, and Rome. The herb's name comes from the Latin lavare, which means "to wash" and it was used as an antiseptic.

Spanish lavender (*Lavandula stoechas*) has a long history of traditional medicinal use. Constituents of lavender (*Lavandula* spp.) essential oil have anti-inflammatory, antifungal, and antibacterial effects, including activity against gram-negative and gram-positive bacteria, as well as pathogenic fungi<sup>1</sup>.

The mechanism of action of lavender oil is absorption through the skin. The molecules of essential oils and carrier oils are small enough to permeate through the skin barrier. Skin absorption can be via massage, bath, foot bath and hot or cold compresses. The molecules will be absorbed easily into the skin within 20- 40 min depending on the chemical nature of the oil<sup>1</sup>.

Sitz bath cleansing therapy concentrates heat and stimulates blood flow to the perineal wound or episiotomy. This local hyperthermia increases subcutaneous perineal tissue temperature and oxygen tension, thus significantly promoting the wound healing process.

Lavender oil and Sitz bath is a simple and it has not any side effects, cost effective and easy method of treating episiotomy wound healing in the hospital as well as in home settings. As it takes less time, sitz bath is not a routine practice in our ward settings in spite of it being cost effective and less time consuming.

#### OBJECTIVES OF THE STUDY:

1. To assess the episiotomy pain level and episiotomy wound status before giving lavender oil and sitz bath over Episiotomy among post natal Mothers in pre test.
2. To evaluate the effectiveness of Lavender oil on episiotomy pain and episiotomy wound healing among post natal Mothers in post test.
3. To evaluate the effectiveness of Sitz bath on pain and episiotomy wound healing among post natal Mothers in post post test

- To compare the effectiveness of Lavender oil versus Sitz bath on episiotomy pain and episiotomy wound healing among post natal Mothers.
- To find an association between episiotomy pain episiotomy wound status with selected socio demographic variables of post natal mothers ie. Age , Parity, Type of delivery, community, Lochial flow, Type of episiotomy and type of postnatal exercises.

**MATERIAL AND METHODS**  
**RESEARCH DESIGN:**

Research design selected for this study is Time series Research design with multiple institution of Treatment.

LAVENDER OIL (EXPERIMENTAL GROUP)														
OL	X <sub>L</sub> <sup>0</sup>	O1	X <sub>L</sub> <sup>0</sup>	O2	X <sub>L</sub> <sup>0</sup>	O3	X <sub>L</sub> <sup>0</sup>	O4	X <sub>L</sub> <sup>0</sup>	O5	X <sub>L</sub> <sup>0</sup>	O6	X <sub>L</sub> <sup>0</sup>	O7
	X <sub>L</sub> <sup>3</sup>		X <sub>L</sub> <sup>3</sup>		X <sub>L</sub> <sup>3</sup>		X <sub>L</sub> <sup>3</sup>		X <sub>L</sub> <sup>3</sup>		X <sub>L</sub> <sup>3</sup>		X <sub>L</sub> <sup>3</sup>	
SITZ BATH (CONTROL GROUP)														
OS	X <sub>S</sub> <sup>0</sup>	O1	X <sub>S</sub> <sup>0</sup>	O2	X <sub>S</sub> <sup>0</sup>	O3	X <sub>S</sub> <sup>0</sup>	O4	X <sub>S</sub> <sup>0</sup>	O5	X <sub>S</sub> <sup>0</sup>	O6	X <sub>S</sub> <sup>0</sup>	O7
	X <sub>S</sub>		X <sub>S</sub>		X <sub>S</sub>		X <sub>S</sub>		X <sub>S</sub>		X <sub>S</sub>		X <sub>S</sub>	

**SAMPLING CRITERIA:**  
**INCLUSION CRITERIA**

Post natal mothers who:

- are willing to participate in the study.
- who are available at the time of data collection.
- who has undergone normal or instrumental vaginal delivery with episiotomy without any complications.
- postnatal mothers who are able to speak Hindi.

**EXCLUSION CRITERIA:**

- Mothers with Gestational Diabetes Mellitus.
- Mothers who are not willing to participate in the Study.
- Postnatal mothers with, Sexually Transmitted Diseases, Puerperal sepsis.
- Postnatal Mothers who are unable to Speak Hindi.
- Post natal Mother who are mentally unstable.

**SAMPLING TECHNIQUE:**

Nonprobability –purposive sampling .

**SAMPLE SIZE:**

60 Postnatal Mothers

**DESCRIPTION AND INTERPRETATION OF TOOLS:**

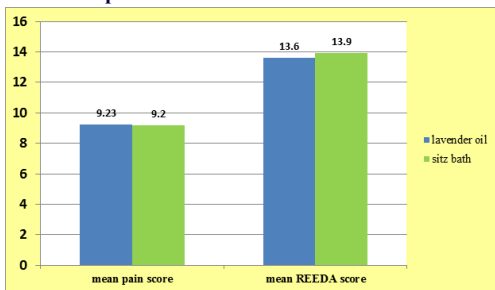
**Section A:** Demographic Performa.

**Section B:** REEDA scale to assess episiotomy wound.

-Numerical pain scale to assess pain.

**FINDINGS**

**OBJECTIVE-1: To assess the episiotomy pain level and episiotomy wound status before giving intervention among post natal Mothers in pre test.**



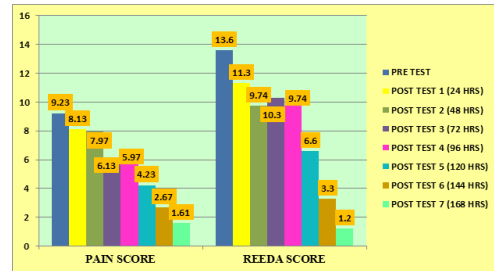
**Bar diagram 1.1** represents the mean pretest pain and REEDA score which indicates in lavender oil group the mean pre test pain score is 9.23 and REEDA score is 13.6, on the other hand the in group B (sitz

**OBJECTIVE 4: To compare the effectiveness of Lavender oil versus Sitz bath on episiotomy pain and episiotomy wound healing among post natal Mothers.**

Parameter	LAVENDER OIL	Probable P value	P-Value significance	SITZ BATH	Probable P value	P value significance		
Pre-test Mean± S.D		Post test(7) Mean± S.D.			Pre-test Mean± S.D	Post test(7) Mean± S.D.		

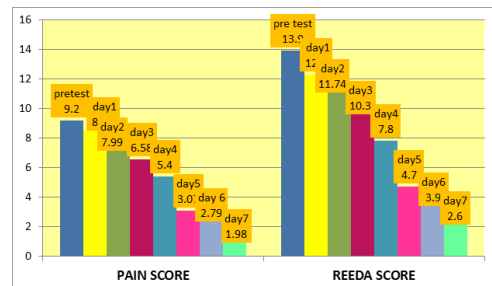
bath) the mean pre test score for pain is 9.2 and REEDA score is 13.9 .This table also represent that a significant degree of pain is experienced by the post natal women which associated with episiotomy wound. The following data reveals that there is no significant difference in the pain score and REEDA score in both the group (p>.01)N.S.

**OBJECTIVE 2: To evaluate the effectiveness of Lavender oil on episiotomy pain and episiotomy wound healing among post natal Mothers in post test.**



**Bar diagram 1.2** Represents the effectiveness of lavender oil on episiotomy pain and episiotomy wound healing which indicates that the mean pre test score for pain is 9.23 ±.817 ,post test 1 ( 24hrs) is 8.13±1.04, **post test 2 (48 hrs)** is 7.97±1.19, **post test 3 (72 hrs)** is 6.13±1.04, post test 4 (96hrs) is 5.97±1.19 , post test 5 (120hrs) 4.23±.817, post test 6 (144hrs) is 2.67±.80 and 1.61±.80 on seven postnatal day (166 hrs), simultaneously for REEDA score the values are **pre test** 13.6±1.52, post test 1 (24hrs) is 11.3±1.51, **post test 2 (48 hrs)** is 9.74±1.55, **post test 3 (72 hrs)** is 10.3±1.51, post test 4 (96hrs) is 9.74±1.55, post test 5 (120hrs) 6.6±1.58, post test 6 (144hrs) is 3.3±0.91 and 1.2±.88 respectively on seven postnatal day (168 hrs), thus lavender oil is very effective in reducing episiotomy pain (t value 5.436E-1) and enhancing episiotomy wound healing status (t value 4.4321E-1) at (P<0.01) **highly Significant.**

**OBJECTIVE 3. To evaluate the effectiveness of Sitz bath on pain and episiotomy wound healing among post natal Mothers in post test.**



**Bar diagram 1.3** Represents the effectiveness of Sitz bath on episiotomy pain and episiotomy wound healing which indicates that the mean pre test score for pain is 9.2±.761 ,post test 1 ( 24hrs) is 8.51±1.04, **post test 2 (48 hrs)** is 7.99±1.19, **post test 3 (72 hrs)** is 6.58±1.09, post test 4 (96hrs) is 5.4±1.35, post test 5 (120hrs) 3.07±1.14, post test 6 (144hrs) is 2.79±.80 and 1.98±.96 on seven postnatal day (166 hrs), simultaneously for REEDA score the values are **pre test** 13.9±1.47, post test 1 (24hrs) is 12.3±1.59, **post test 2 (48 hrs)** is 11.74±1.55, **post test 3 (72 hrs)** is 10.3±1.59, post test 4 (96hrs) is 7.8±2.02, post test 5 (120hrs) 4.7±1.51, post test 6 (144hrs) is 3.9±0.91 and 2.6±.87 respectively on seven postnatal day (168 hrs), thus Sitz bath is effective in reducing episiotomy pain (t value 5.436E-1) and enhancing episiotomy wound healing status (t value 4.4321E-1) at (P<0.01) **highly Significant.**

PAIN SCORE	9.23±0.817	1.61±.80	3.461E-1	P<0.01 * (Significant)	9.2±0.0761	1.98±.96	4.561E-1	P<0.01 * (Significant)
REEDA SCORE	13.6±1.52	1.2±.88	4.321E-1	P<0.01 * (Significant)	13.9±1.147	2.6±.87	5.32E-1	P<0.01 * (Significant)

**Table 1:** represents the comparison of the effectiveness of Lavender oil versus Sitz bath on episiotomy pain and episiotomy wound healing among post natal Mothers.

In group A (lavender oil) the mean pre test pain score is 9.23 and post –test score (7) is 1.61p –value 3.461E-1, and for REEDA score the mean pre –test score is 13.6 and mean post test REEDA score 1.2 with p –value 4.321E-1 ,the above mentioned value shows that application of lavender oil is **highly significant** in reducing pain and improving episiotomy wound healing at **P<0.01 \*\***. **In group B (sitz bath)** the mean pre test pain score is 9.2 and post –test score is 1.98p –value 4.561E-1, and for REEDA score the mean pre –test score is 13.9 and mean post test(7) REEDA score 2.6 with p –value 5.32E-1, the above mentioned value shows that application of sitz bath is effective in reducing episiotomy pain and improving episiotomy wound healing at **P<0.01** ,**The above data reveals that application of lavender oil is highly effective then the sitz bath in improving episiotomy wound healing and reducing episiotomy pain.**

### NURSING IMPLICATION

#### Nursing practice:

The role of the midwife helps post natal Mothers accepting positive child birth by applying lavender oil over episiotomy, Which aids in accelerating wound healing process and reducing episiotomy pain.

#### Nursing Administration:

In Service Education can be conducted for nurses regarding the non pharmacological Interventions, Which is some self help comfort measures for women to achieve an effective Coping level for their Postnatal period.

#### Nursing Research:

In nursing research there is lack of literature and research done on effects of lavender oil in reducing Episiotomy pain and improving Episiotomy wound status.

Nurses should take initiative to conduct research on effect of such intervention on Postnatal Mothers In Indian settings.

### RECOMMENDATIONS:

1. The Lavender oils a cost efficient ,safe, on invasive, on pharmacologic and effective method and can be utilized effectively without any side effects.
2. Nurses and physician used this safe technique.
3. Used over the pharmacological measures that has the side effects.
4. The study can be done on the larger population.

### CONCLUSION:

The Result of the given study reveals that the application of the Lavender oil and Sitz bath over episiotomy incision are effective in reducing pain and improving wound healing status, In the given Study the Subjects who meet the inclusion and exclusion criteria were assigned to two groups by purposive sampling technique. A total of 60 Subjects were selected for the study as per the inclusion and exclusion of selection Demographic data will be collected from postnatal mothers ,Preintervention data was obtained from post natal mothers through numerical pain rating scale and (Davidsons 1974)REEDA scale. The Episiotomy pain and healing of episiotomy wound will be assessed everyday by numerical pain rating scale and REEDA scale , Application of Sitz bath for the frequency of twice a day for seven consecutive days to one group and lavender oil 2 drops twice a day post test was obtained three times after 24 hrs.,48 hrs., and 72 hrs,96 hrs,120hrs, 144hrs and 168hrs.Thus we can conclude that lavender oil is more effective in reducing Episiotomy pain and Improving Episiotomy wound healing and also it effective, non pharmacologic, accessible, cost-effective.

Conflict of interest – Nil  
Source of Funding- self

### ETHICAL CLEARANCE:

ethical clearance has been taken from the concerned Hospital Ethical committee; also the informed concern has been taken from the participants.

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