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A STUDY TO ASSESS THE EFFECT OF LAVENDER OIL SITZ BATH ON EPISIOTOMY SUTURE PAIN AMONG POSTNATAL WOMEN IN A SELECTED HOSPITAL, ASSAM

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Abstract: **BACKGROUND:** Episiotomy is a common procedure in Obstetrics. It is a surgical incision done over the perineum and vulva during delivery to enhance the available space at the perineum and help the fetal delivery. The lavender oil has traditionally been thought to be antibacterial, antifungal, carminative (smooth muscle relaxant), sedative, anti-depressive, and useful for burns and bug bites. Hence, the researcher was felt to conduct a study to assess the effect of Lavender oil sitz bath on episiotomy suture pain among postnatal women. Objectives of the study to find the effect of Lavender oil sitz bath, to find the association between the pre-test level of pain with the selected demographic variables. **METHODOLOGY:** With quantitative approach, a pre- experimental, one group pre-test post-test design was adopted for the study where 60 postnatal women were selected using purposive sampling technique. The study was conducted in STHG Civil hospital, Morigaon. By using Interview and Observation method, pain level was assessed by NPRS tool. The analysis of the study finding was done using descriptive and inferential statistics. **RESULT:** The study revealed that mean post-test level of pain (2.25) was lower than the mean pre-test level of pain (7.95). The calculated t_{59}= 39.8023 and *p* value= 0.0001 was significant at $p< 0.05$, thus, research hypothesis (H_1) was accepted. The result of Chi square revealed that no selected demographic variables is associated with pre-test level of pain. **CONCLUSION:** The researcher concluded that administration of Lavender oil sitz bath was effective in reducing episiotomy suture pain among postnatal women. A similar study can be done for better generalization.

Keywords: Postnatal women, Lavender oil, Sitz bath, Episiotomy, Episiotomy suture pain

INTRODUCTION

Episiotomy was first used as an obstetric surgery more than 200 years ago. However, it became regular practice only at the beginning of the twentieth century. It was then suggested that all primigravida undergo an episiotomy to protect the fetal head and pelvic floor. The use of lavender as a bath additive dates back to Persia, Greece, and Rome. The herb's name derives from the Latin word lavare, which means "to wash," and it was employed as an antibacterial. Spanish lavender (Lavandula stoechas) has a long history of medical applications. Episiotomy was performed in 60.6% of normal deliveries and 83.6% in instrumental deliveries. In primipara, the episiotomy rate was the highest at 83.4%. The second and subsequent episiotomies had rates of 66.7% and 37.5%, respectively. Sitz bath is a type of water bath, sometimes known as a 'hip bath', that is regaining popularity due to its low danger. The phrase "sitz bath" is derived from the German verb "sitzen," which means "to sit."

OBJECTIVES OF THE STUDY

1. To assess the episiotomy suture pain before and after administration of Lavender oil sitz bath on episiotomy suture among postnatal women in a selected hospital, Assam.
2. To assess the effect of Lavender oil sitz bath on reduction of episiotomy suture pain among postnatal women in a selected hospital, Assam.

3. To find out the association between pretest findings with the selected demographic variables among postnatal women in a selected hospital, Assam.

METHODOLOGY

A quantitative approach research study conducted using pre-experimental one group pre-test and post-test research design to assess the effect of Lavender oil sitz bath for reduction of episiotomy suture pain. The study was conducted in Swahid-Tilak-Hemram-Gunabhiram civil hospital, Morigaon, the samples were selected according to researcher's study purpose. The study was conducted after administrative permission was taken from Dean, Faculty of Nursing, Assam down town University, Guwahati. The ethical approval was obtained from the Ethical Committee of Assam down town University, Guwahati. The study was conducted from 14 February 2024 to 16 March 2024 among 60 postnatal women using Non probability purposive sampling technique. Data collected using demographic variables, effect of Lavender oil sitz bath among postnatal women was collected by Mc Caffery Numerical pain Rating Scale before and after the administration of Lavender oil sitz bath. Alcohol thermometer was also use to maintain the ideal temperature of water for sitz bath. Data were collected from postnatal women admitted M & G ward, after taking informed consent. For demographic variables and level of pain, data was collected by interview and observation method. Researcher administered the Lavender oil sitz bath within 2 hours of normal vaginal delivery with episiotomy suture pain postnatal women. It was given for 15- 20 minutes for 2 consecutive days maintaining the temperature of about 105°-110° F. The data obtained was analyzed in terms of objectives of the study by using descriptive and inferential statistics.

SAMPLE SIZE

Sample size was decided according to the objectives, resources available, nature of study, method of sampling followed, nature of respondent and nature of population. In this study samples size consists of 60 postnatal women that are fulfilling the inclusion criteria.

In this study Cochran sample size calculation formula was used for calculating the sample size is as follows:

$$\boldsymbol{n = \frac{p(1-p)z^2}{e^2}}$$

p = 0.04
z = 1.96
e = 0.05

where, **n** is the sample size, **p** is population proportion, **z** is the z value at significance level or reliability level (for significance level at 95% z = 1.96) and **e** is accepting error (e= 0.05)

INCLUSION CRITERIA

The study includes those Postnatal women who are:

- On the first postnatal day after normal vaginal delivery with episiotomy suture pain admitted in a selected hospital, Assam.
- Available during the period of data collection.
- Giving consent for participation.

EXCLUSION CRITERIA

- Women with Medical complications.
- Postnatal women with sexually transmitted diseases.
- Women who are mentally unstable
- Women who are receiving analgesic drugs.

RESULTS

The data obtained was analyzed in terms of objectives of the study by using descriptive and inferential statistics. Descriptive statistics was used for describing the demographic variables and level of pain were analyzed in terms of frequency and percentage. Mc Caffery Numerical pain Rating Scale was classified as standardized tool. Inferential statistics Chi square test was used to find out the association between the pre-test level of episiotomy suture pain among postnatal women with demographic variables and the level of significance was taken at $p < 0.05$ level of significance.

In reference to table-1, table-2, table-3 respectively, the major findings of the studies showed; were characteristics of demographic variables shows that most of the postnatal women, 55% (33) aged between 21- 25 years, 98.34% (59) were non vegetarian, 51.66% (31) were primigravida, 65% (39) were homemaker, 60% (100) were received Right/ left mediolateral episiotomy, 88.33% (53) were received absorbable suture and 55% (33) were received continuous suturing method. The pain score of postnatal women before the administration of Lavender oil sitz bath, majority had pain score between 7- 10 (severe pain) i.e. 90 % (54). The episiotomy suture pain of postnatal women after the administration of Lavender oil sitz bath, majority had pain score between 4– 6 (mild pain) i.e. 85 % (51).

Table 1: Frequency and percentage distribution of demographic variables of postnatal women

n= 60

Sl. No	Demographic Variables	Frequency (f)	Percentage (%)
1	**Age in years**		
	a) < 20 years	15	25
	b) 21- 25 years	**33**	**55**
	c) > 26 years	12	20
2	**Dietary pattern**		
	a) Vegetarian	1	1.66
	b) Non vegetarian	**59**	**98.34**
	c) Ovo vegetarian	0	0
3	**Parity of the women**		
	a) Primigravida	**31**	**51.66**
	b) Multigravida	29	48.34
4	**Employment status of the postnatal women**		
	a) Homemaker	**39**	**65**
	b) Casual wage labor	12	20
	c) Self employed	9	15
	d) Regular salary employee	0	0
5	**Type of Episiotomy**		
	a) Right/ left mediolateral	**60**	**100**
	b) Mediolateral	0	0
	c) 'J' shaped	0	0
6	**(i) Suture material used**		
	a) Absorbable	**53**	**88.33**
	b) Non absorbable	7	11.67
	(ii) Method of suturing		
	a) Continuous	**33**	**55**

	b) Interrupted	27	45

Table 2: Frequency and percentage distribution of pre-test and post score on episiotomy suture pain among postnatal women.

n= 60

Level of episiotomy suture pain	Pre test		Post test	
	F	Percentage (%)	f	Percentage (%)
None	0	0	3	5
Mild pain	0	0	51	85
Moderate pain	6	10	6	10
Severe pain	54	90	0	0
Total	60	100	60	100

Table 3: Effect of Lavender oil sitz bath for reduction of episiotomy suture pain among postnatal women.

n= 60

Comparison of level of pain	Mean	SD	Mean difference	t value	df	*p* value	Inference
Pre-test	7.95	±1.10	5.70	39.8023	59	0.0001	S
Post-test	2.25	±1.05					

***Significant at $p < 0.05$ ($t_{59} = 39.8023$)** **S= Significant**

Table 4: Association between pre-test level of episiotomy suture pain score with selected demographic variables.

n= 60

Sl. no	Demographic variables	Pre-test level of episiotomy suture pain		χ^2value & Fisher's exact test	df	*p* value	Inference
		Moderate	Severe				
1	**Age in years**			2.477	2	0.2898	**NS**
	a) < 20 years	0	15				
	b) 21- 25 years	3	30				
	c) > 26 years	2	10				
2	**Dietary pattern**			0.1121	2	0.9455	**NS**
	a) Vegetarian	0	1				
	b) Non vegetarian	6	53				
	c) Ovo vegetarian	0	0				
3	**Parity of the women**			3.26	1	0.071	**NS**
	a) Primigravida	1	30				
	b) Multigravida	5	24				
4	**Employment status of the postnatal women**			3.08	3	0.3795	**NS**
	a) Homemaker	6	35				
	b) Casual wage labor	0	11				
	c) Self employed	0	8				
	d) Regular salary employee	0	0				
5	**Type of Episiotomy**			0	2	1	**NS**
	a) Right/left mediolateral	6	54				

	b) Mediolateral	0	0				
	c) 'J' shaped	0	0				
6	**(i) Suture material used**			0.877	1	0.3490	**NS**
	a) Absorbable	6	54				
	b) Non absorbable	0	0				
	(ii) Method of suturing			0.0285	1	0.8659	**NS**
	a) Continuous	3	29				
	b) Interrupted	3	25				

***Significant at *p*< 0.05** **S= Significant & NS= Non Significant**

The data of table 3 represents the mean post-test pain score (2.25) was lower than the mean pre-test pain score (7.95). the calculated t_{59}= 39.8023 and *p* value = 0.0001 was significantly at *p*< 0.05, thus, there is a significant reduction of episiotomy suture pain in postnatal women after administering Lavender oil sitz bath among postnatal women in a selected hospital, Assam. Therefore, administration of Lavender oil sitz bath was proved to significantly reduce the episiotomy suture pain among the postnatal women. The data of table 5 shows that the result of Chi-square analysis of the data indicates that there is no significant association between the pre-test level of pain with any of the selected demographic variables.

DISCUSSION

The present study aimed to assess the effect of Lavender oil sitz bath on episiotomy suture pain among postnatal women in a selected hospital, Assam. The conceptual framework used for the present study was based on Modified Lydia Hall Core, Cure and Care Model (1975). Prior to the study, a structured interview schedule for demographic variables was developed after extensive literature and was send to various experts for relevancy, accuracy and appropriateness. Suggestions of various experts in the fields and practical experience of the investigator had been incorporated and was utilized in administration of Lavender oil sitz bath for reduction of episiotomy suture pain among postnatal women.

The present research study adopted quantitative approach with pre-experimental research design one-group pre-test-post-test design. Data was collected from the postnatal women after taking informed consent and ensuring confidentiality of the data collected. Tools used in the study were demographic variable and Mc Caffery Numeric Pain Rating Scale (NPRS). Non probability purposive sampling technique was used to select the samples consisting of 60 postnatal women. Pre-test level of pain was obtained for each selected samples and was administered Lavender oil sitz bath for 15- 20 minutes twice a day i.e. immediately within 2 hours of normal vaginal delivery and subsequently after 6 hours for two consecutive days.

Observation was done before and after administration of Lavender oil sitz bath and post-test level of pain was obtained once again for each selected sample. As per the tool, the lesser the post-test level of pain, it determined the more of the effect of the intervention.

The present analysis revealed that out of 60 postnatal women: majority 90% (54) had pain score between 7-10 (severe pain) and 10% (6) had pain score between 4-6 (moderate pain)

The present study supported by the study conducted by *Yuanita Syaiful, Lilis Fatmawati, Siti Nur Qomariah and Aidatur Runis (2020)* on effectiveness of cold compress and Lavender oil aromatherapy on reduction in postpartum perineal pain intensity. The study revealed that: From 16 patients who were given Lavender aromatherapy had experienced mild pain (12.5%), moderate pain (75%) and severe pain (12.5%) whereas after the intervention of Lavender aromatherapy the pain percentages were mild pain (44%) and moderate pain (56%).

The present analysis revealed that out of 60 postnatal women: majority 85% (51) had pain score between 1-3 (mild pain), 10% (06) had pain score between 4-6 (moderate pain) and 5% (03) had 0 (no pain).

The present study supported by the study conducted by a study of *Pratibha Khosla (2017)* on effect of Sitz Bath on episiotomy wound healing and level of pain among postnatal mothers. The study revealed that: The mean percentage of pain score in experimental group in sitz bath is 2.5 and in control group it is 2.95. Therefore, it strongly supports that the effect of sitz bath on pain and REEDA scale assessment is more in experimental group than control group.

Finding of the present study reveals that the mean post-test pain score (2.25) was lower than the mean pre-test pain score (7.95). The calculated t_{59} test value was 39.8023 and the tabulated valued of df for 0.05 significance was 0.0001 was significant at $p<0.05$ thus, the research hypothesis H_1 is accepted and null hypothesis H_{01} is rejected. Therefore, Lavender oil sitz bath was proved to significantly effective in reduction of the episiotomy suture pain among postnatal women.

The present study is supported by a study of *D P Sari, S S T Hamranani and E Sawitri (2020)* on Effectiveness of lavender sitzbath therapy on episiorraphy of postpartum mother. The study revealed that: The total pretest mean of the control group was 7.99 (Slightly healed) while in post-test the total mean was 5.27 (Moderately healed). The total Post test mean of the experimental group was 3.86 (Moderately healed) whereas the total mean of controlled group was 5.27 (Moderately healed). It implies that significant remarks are there in terms of healing process with the lavender sitzbath therapy.

The data analysis presented in this study shows that the result of Chi square analysis of the data indicates that there is no significant association between the pre-test level of pain with any of the selected demographic variables. Hence, the research hypothesis H_2 is rejected and null hypothesis H_{02} is accepted.

The present study is supported by a study of *Lisa Chadha and Dr. Lily Poddar (2018)* on An Experimental study to assess the effectiveness of Lavender oil sitz bath on episiotomy wound healing among postnatal mothers admitted in selected hospitals of Pune city. The study revealed that: For the demographic variable Age, the Chi- square (2.376) and *p value* (0.123). For the demographic variable Education, the Chi- square (1.358) and *p value* (0.244). For the demographic variable Dietary pattern, the Chi- square (0.020) and *p value* (0.889). For the demographic variable Monthly income, the Chi- square (0.429) and *p value* (0.512). As all *p values* of chi-square test are greater than 0.05, we accept H_0 and conclude that there is no significant association between episiotomy wound healing and selected demographic variables at 0.05 level of significance

CONCLUSION

The present study was conducted to evaluate the effect of the Lavender oil sitz bath for reduction of episiotomy suture pain among postnatal women in a selected hospital, Assam. The findings of the study revealed that Lavender oil sitz bath is effective for reduction of episiotomy suture pain among postnatal women. The present study revealed that there was no significant association between level of pre-test episiotomy suture pain with the selected demographic variables..

RECOMMENDATIONS

The similar study can be replicated on larger sample size. A similar study can be done by utilizing other non-pharmacological therapy for reduction of episiotomy suture pain. A comparative study can be done for the use of Lavender oil sitz bath with other non-pharmacological episiotomy suture pain relief therapy.

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