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RESEARCH ARTICLE **OPEN ACCESS**

AN EXPERIMENTAL STUDY TO EVALUATE THE EFFECTIVENESS OF LAVENDER OIL SITZBATH ON EPISIOTOMY PAIN AND WOUND HEALING AMONG POSTNATAL MOTHERS WHO HAVE UNDERGONE NORMAL VAGINAL DELIVERY IN SELECTED HOSPITALS OF HUBBALLI

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ABSTRACT

Background: Motherhood is a beautiful process, where by mothers safely delivers a child. It is the magic of creation. During child birth, the women may sustain some degree of perineal trauma due to perineal tear or surgical incision called episiotomy. The care of episiotomy is an important aspect of postnatal care. One of the suggested methods is a regular antiseptic sitzbath. Nowadays, using alternative and complimentary therapies such as Lavender oil in aromatherapy have been recognized in obstetrics. It has antibacterial, antifungal, sedative, antidepressant and healing properties. One of the main actions of these oils is easy absorption through the skin. However, definitive effects of these methods have not been verified through clinical trials, and more extensive studies are still required in this area. ***Objectives:*** The objective of the study was to evaluate the effectiveness of lavender oil sitzbath on episiotomy pain and wound healing. ***Methodology:*** A quasi – experimental study was conducted among 30 (experimental 15 and control group 15) post-natal mothers who had undergone normal vaginal delivery with episiotomy at selected hospitals of Hubballi. Quasi-experimental; Pre-test post-test control group design was used for the present study. The episiotomy pain was assessed during walking, sitting, changing position, urination and defecation through Numerical pain rating scale and wound healing was assessed through REEDA scale. Pre-test was assessed after 2hrs of vaginal delivery with episiotomy in both the groups and intervention such as sitzbathwas given to experimental group in morning, afternoon and evening for 20 minutes duration with 8 hours of interval till discharge by using Lavender oil solution. Then the post-test was assessed after 24hrs, 48hrs and 72hrs respectively. ***Results:*** The study results showed that the overall mean with SD 4.56 ± 0.58, 5.30 ± 0.80 in experimental group which was lesser than the mean with SD 5.55 ± 0.63, 6.59 ± 0.97 of control group. Calculated independent't' value for episiotomy pain and wound healing was greater than tabulated value t tab= 2.05 in both experimental group and control group $p<0.05$. This indicated that there was a delayed reduction in episiotomy pain and wound healing in control group. Thus, the results showed that there was statistical difference in post-test scores regarding episiotomy pain and wound healing among postnatal mother who had undergone normal vaginal delivery with episiotomy. Lavender oil sitzbath was effective to reduce the episiotomy pain and promote wound healing. And there was no statistical association between pre-test scores regarding the level of episiotomy pain and wound healing among post-natal mothers of both experimental and control group with their selected socio-demographical variables. ***Conclusion:*** The study concluded that, the Lavender oil sitzbath was effective in episiotomy wound healing and reduction in pain perception.

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INTRODUCTION

Childbirth is a transformative event in a woman's life. The onset of motherhood presents a unique set of physical, emotional and psychological challenges. The postpartum phase can become even more challenging when the new mother experiences perineal or genital tract trauma as a result of childbirth.

Gynecological pain imposes physical limitations on the new mother making child-care, sitting, walking and other activities of daily living (ADLs) extremely difficult and painful.[1] Therefore, to facilitate the birthing process and prevent perineal tear, episiotomy is routinely done, but there are many complications associated with episiotomy wound. With proper episiotomy care, infection can be prevented, and healing takes place faster.[2] Episiotomy is a commonly performed surgical procedure during childbirth and

considered as an integral part of labor management for most women that have proven to be at risk. It is a surgical perineal incision to widen the vaginal opening just before the baby is born in order to shorten baby's expulsion period and prevent perineal tears.[3] The episiotomy rate in Karnataka is approximately 88% in women who are undergoing difficult labor. In Bangalore, rates of episiotomy for vaginal birth range from 31% to 95% of the grand total of 3,590 vaginal deliveries.[4] Herbal preparations are the earliest methods adopted in episiotomy wound healing and pain relief.28 Now a days, increasing use of complementary medicines to treat a variety of conditions has led to growing interest in the potential of traditional and complementary methods for use in wound healing.[5] World Health Organization defines "complementary and alternative medicine" (CAM) as a "broad set of health care practices that are not part of that country's own tradition and are not integrated into the dominant health care system." Many women prefer to use complementary and alternative medicine during pregnancy because of fewer side effects compared to chemical drugs. Studies have shown that 73% of pregnant mothers in Australia and 83.7% in Mashhad city used complementary and alternative medicine during pregnancy. Today, around the world, midwives use complementary therapies in their profession more than any other medical practitioners.[6]

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. Spanish lavender (Lavandula stoechas) has a long history of traditional medicine use. Constituents of lavender (Lavandula stoechas) essential oil have an anti-inflammatory, antifungal, and antibacterial effects, including activity against gram-negative and gram-positive bacteria, as it will be absorbed easily into the skin within 20-40 min depending on the chemical nature of the oil. Lavender oil sitzbath is simple and has no any side effect, also cost effective and easy method of treating episiotomy wound in the hospitals, as well as in home settings. Even though it takes less time, sitzbath is not a routine practice in hospital ward settings in spite of it being cost effective and less time consuming.[7] A study was conducted to evaluate the effectiveness of lavender oil sitzbath on episiotomy wound healing among 60 primi-parous women who were randomly categorized into two groups: case group (using Lavender Oil)and control group (usual hospital protocol). The sitzbath with 5-7 drops of lavender oil in 4L of water received by case group daily twice for 5days. The control group received usual hospital protocols. Pain was evaluated at 4h, 12h, and 5days following episiotomy. The study result revealed that there was a statistical difference in pain intensity scores between 2groups, after 4h (p= 0.02) and 5th day after episiotomy (p=0.00). The REEDA score was significantly lower in the case group (Lavender oil group) 5 days after episiotomy (p= 0.00). Hence the study concluded that use of lavender Oil Sitzbath can be effective in reducing perineal discomfort following episiotomy.[8] Based on review of literatures and clinical experience of the investigator, it is found that Lavender Oil Sitzbath is simple, cost effective and easy method to enhance the wound healing and reducing the pain. Hence, the researcher rightly felt to conduct an experimental study on the effectiveness of Lavender oil sitzbath for the management of episiotomy pain and wound healing among postnatal mothers who have undergone normal vaginal delivery.

Problem Statement: "An Experimental study to evaluate the effectiveness of Lavender oil sitzbath on episiotomy pain and wound healing among postnatal mothers who have undergone normal vaginal delivery in selected hospitals of Hubballi".

Objectives of the study:

1. To assess the episiotomy pain level and episiotomy wound status among experimental group before administration of lavender oil sitzbath.
2. To assess the episiotomy pain level and episiotomy wound status among control group.
3. To evaluate the effectiveness of lavender oil sitzbath on level of episiotomy pain and episiotomy wound healing among experimental group in terms of wound healing and pain reduction.
4. To compare the effectiveness of post-test scores regarding level of episiotomy pain and episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in experimental group and control group.
5. To find out an association between pre-test level of episiotomy pain scores and episiotomy wound status of experimental group with their selected socio-demographic variables.
6. To find out an association between pre-test level of episiotomy pain scores and episiotomy wound status of control group with their selected socio-demographic variables.

MATERIAL AND METHODS

Research approach: Evaluative Research Approach.
Research design: Pre-experimental; one group pre-test, post-test.
Research setting: Selected hospitals of Hubbali
Target Population: Postnatal natal mothers who had undergone normal vaginal delivery with episiotomy
Accessible Population: Postnatal natal mothers who had undergone normal vaginal delivery with episiotomy of selected hospitals of Hubballi

Sample and sampling technique

Sample: Postnatal natal mothers who had undergone normal vaginal delivery with episiotomy of selected hospitals of Hubballi.
Sampling technique: Non-Probability; Purposive sampling technique.
Sample size: 30 postnatal mothers undergone normal vaginal delivery with episiotomy in selected hospitals of Hubbali who were further divided equally among Experimental group (n_1=15) and Control group (n_2=15).

Criteria for selection of the sample

Postnatal mothers those who

- Had undergone normal vaginal delivery along with episiotomy.
- Were willing to participate in this study.
- Could communicate in Kannada language.

Exclusion criteria

Postnatal mothers:

- with history of any medical/ surgical/ gynecological problem.
- who had postnatal obstetrical complications.

Selection and development of tool: An interview schedule was conducted on socio-demographic variables and numerical pain rating scale and REEDA scale was used to assess the episiotomy pain and wound healing among postnatal mothers.

The following steps were carried out in preparing the tool

1. Literature review on effectiveness of lavender oil sitzbath on episiotomy pain and wound healing among postnatal mothers who have undergone normal vaginal delivery.
2. Preparation of the first draft
3. Discussion with the experts in the field of nursing and medical.
4. Validity of the tool by the experts.
5. Reliability check of the tool.
6. Final draft of the tool.

Description of the tool: The tool consists of an interview schedule which comprised of 4 sections;

Section I : Socio-Demographic Variables.
Section II : Obstetrical Variables.
Section III : Numerical Pain Rating Scale.
Section IV : REEDA Scale.

RESULTS

The data was presented under the following sections:

Section I: Distribution of sample characteristics according to socio-demographic and obstetrical variables among the postnatal mothers in experimental and control group.
Section II: Analysis and interpretation of pain scores and episiotomy wound healing of subjects who have participated in the study.
Section III: Testing Hypotheses

Section I: Distribution of sample characteristics according to socio-demographic and obstetrical variables among the postnatal mothers in experimental and control group.

I**n experimental group,**

- In relation with age of mother, most of the mothers 07(46.7%) were in the age group of 22-24 years and 04(26.7%) were in the age group of 24-26 years whereas 04(26.6%) were in the age group of 26-28 years.
- In terms of religion, most of the subjects 10(66.7%) belonged to Muslim, 3(20%) belonged to Hindu, 2(13.3%) were Christian and no one belonged to other religion.
- With regards to educational status of the mother, most of the subjects 7(46.7%) completed secondary education, 5(33.3%) had Pre-University education, 2(13.3%) had Primary education, and only 1(6.67%) were graduate and above.
- With regards to monthly family income (in Rs), majority of the subjects 8(53.3%) belonged to family income of 10,000-20,000 rupees, 4(26.7%) belonged to family income of less than 10,000 rupees, 2(13.3%) belonged to family income of 20,000-30,000 rupees and only 1(6.7%) belonged to family income of 30,000 and above.
- In respect with type of family, most of the subjects 8(53.3%) belonged to nuclear family, and 7(46.7%) were from joint family.
- Regarding the dietary pattern, most of the subjects 11(73.3%) were mixed type of dietary pattern and 4(26.7%) were vegetarian.
- With regards to area of residency, majority of the subjects 13(86.7%) belonged to urban area and 2(13.3%) were from rural area.
- With regards to history of medical illness,most of the subjects 13(86.7%) had no medical illness and 2(13.3%) had history of medical illness
- With regards to number of parity, majority of the subjects 9(60%) had one child, 4(26.6%) had 2 children, 1(6.7%) had 3 children and 1(6.7%) had more than 3 children.
- With regards to history of episiotomy in previous delivery, majority of the subjects 10(66.7%) had no history of previous episiotomy and 5(33.3%) had history of episiotomy in previous delivery.
- With regards to source of information about episiotomy pain reduction and wound healing, maximum subjects 6(40%) received information from peer group and social circle, 4(26.7%) received information from electronic media, 3(20%) received information from new age media (mobile phones and internet), and 2(13.33%) were received information from print media.

In Control group

- In relation with age of mother, most of the mothers 6(40%) were in the age group of 22-24 years and 5(33.3%) were in the age group of 24-26 years and 4(26.7%) were in the age group of 26-28 years.
- In terms of religion, most of the subjects 7(46.7%) belonged to Hindu, 5(33.3%) belonged to Muslim, 3(20%) were Christian and no one belonged to other religion.
- With regards to educational status of the mother, most of the subjects 6(40%) completed Pre-University education, 4(26.7%) had secondary education, 3(20%) had Primary education and 2(13.3%) were graduate and above.
- With regards to monthly family income (in Rs), majority of the subjects 6(40%) belonged to family income of 20,000-30,000 rupees, 5(33.4%) family income of 10,000-20,000 rupees, 2(13.3%) belonged to family income of below 10,000 rupees and 2(13.3%) belonged to family income of 30,000 rupees and above.
- In respect to type of family, most of the subjects 9(60%) belonged to nuclear familyand 6(40%) were from joint family.
- Regarding the dietary pattern, most of the subjects 8(53.3%) were mixed type of dietary pattern and 7(46.7%) were vegetarian.
- With regards to area of residency, majority of the subjects 12(80%) belonged to urban area and 3(20%) were from rural area.
- With regards to history of medical illness, most of the subjects 12(80%) had history of no medical illness and 3(20%) had history of medical illness.
- With regards to information of parity, majority of the subjects 8(53.3%) had one child, 5(33.3%) had 2 children, 1(6.7%) had 3 children and 1(6.7%) had more than 3 children.
- With regards to history of episiotomy in previous delivery, majority of the subjects 9(60%) had no history of previous episiotomy and 6(40%) had history of episiotomy in previous delivery.
- With regards to source of information about episiotomy pain reduction and wound healing, maximum subjects 8(53.4%) received information from peer group and social circle, 3(20%) received information from new age media (mobile phones and internet), 2(13.3%) received information from electronic media, and 2(13.3%) were received information from print media.

Section II*:* Analysis and interpretation of pain scores and episiotomy wound healing of subjects who have participated in the study.

Section III- Testing Hypotheses

H_1: There will be a statistical difference in post-test and pre-test scores regarding level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery. The calculated 't' value is greater than the tabulated value (t_{ab}= 2.145) at the level of $p<0.05$. This showed there was a significance differences between pre-test and post-test mean scores of episiotomy pain among post-natal mothers who received Lavender oil sitzbath. Hence it is concluded that the Lavender oil sitzbath has significantly reduce pain. Therefore, H_1 was accepted.

The calculated 't' value is greater than the tabulated value (tab= 2.145) at the level of $p<0.05$. This showed there was a significant difference between pre-test and post-test mean scores of episiotomy wound healing among post-natal mothers in control group. Therefore,H2 was accepted.

H_3: There will be a statistical difference in post-test scores regarding level of episiotomy pain and episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in experimental group and control group at 0.05 level of significance.

Table 1. Frequency and percentage distribution of level of episiotomy pain among postnatal mothers in experimental group. n_1=15

Level of pain		Pre test							
		f		Post test					
				I		II		III	
		No pain	%	f	%	f	%	f	%
Walking	Mild	-	-	-	-	-	-	-	-
	Moderate	-	-	-	-	3	20	10	66.7
	Severe	1	6.7	1	6.7	12	80	5	33.3
	No pain	14	93.3	14	93.3	-	-	-	-
Sitting	Mild	-	-	-	-	-	-	-	-
	Moderate	-	-	-	-	3	20	11	73.3
	Severe	1	6.7	2	13.3	12	80	4	26.7
	No pain	14	93.3	13	86.7	-	-	-	-
Changing position	Mild	-	-	-	-	-	-	-	-
	Moderate	-	-	-	-	6	40	13	86.7
	Severe	3	20	4	26.7	9	60	2	13.3
	No pain	12	80	11	73.3	-	-	-	-
Urination	Mild	-	-	-	-	-	-	-	-
	Moderate	-	-	-	-	-	-	10	66.7
	Sever	1	6.7	2	13.3	12	80	5	33.3
	No pain	14	93.3	13	86.7	3	20	-	-
Defecation	Mild	-	-	-	-	-	-	-	-
	Moderate	-	-	-	-	7	46.7	12	80
	Severe	-	-	3	20	8	53.3	3	20
	Severe								

*Significant at 0.05 level

Table 2. Frequency and percentage distribution of level of episiotomy pain among postnatal mothers in control group n_2=15

Level of pain		Pre test		Post test					
				I		II		III	
		f	%	f	%	f	%	f	%
Walking	No pain	-	-	-	-	-	-	-	-
	Mild	-	-	-	-	-	-	3	20
	Moderate	-	-	1	6.7	2	13.3	12	80
	Severe	15	100	14	93.3	13	86.7	-	-
Sitting	No pain	-	-	-	-	-	-	-	-
	Mild	-	-	-	-	-	-	-	-
	Moderate	1	6.7	1	6.7	5	33.3	12	80
	Severe	14	93.3	14	93.3	10	66.7	3	20
Changing position	No pain	-	-	-	-	-	-	-	-
	Mild	-	-	-	-	-	-	3	20
	Moderate	2	13.3	3	20	6	40	12	80
	Severe	13	86.7	12	80	9	60	-	-
Urination	No pain	-	-	-	-	-	-	-	-
	Mild	-	-	-	-	-	-	-	-
	Moderate	-	-	1	6.7	3	20	6	40
	Sever	15	100	14	93.3	12	80	9	60
Defecation	No pain	-	-	-	-	-	-	-	-
	Mild	-	-	-	-	-	-	-	-
	Moderate	1	6.7	3	20	6	40	11	73.3
	Severe	14	93.3	12	80	9	60	4	26.7

Table 3. Frequency and percentage distribution of level of episiotomy wound healing among postnatal mothers in experimental group n_1=15

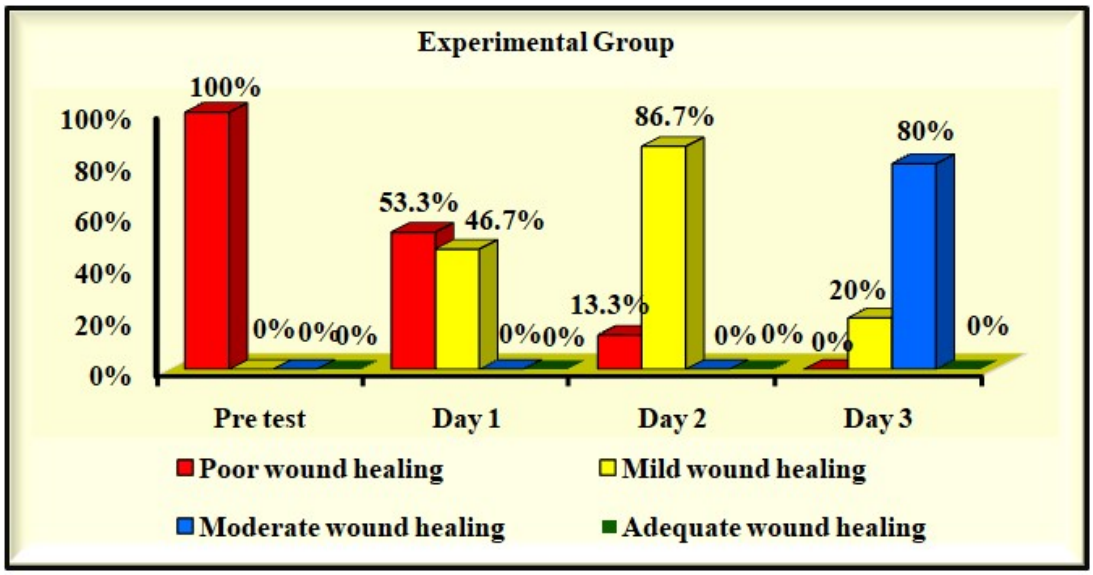
Level of episiotomy wound healing	Experimental group Post test							
	Pre test		I	II			III	
	f	%	F	%	f	%	f	%
Adequate	-	-	-	-	-	-	-	-
Moderate	-	-	-	-	-	-	12	80
Mild	-	-	7	46.7	13	86.7	3	20
Poor	15	100	8	53.3	2	13.3	-	-

*Significant at 0.05 level

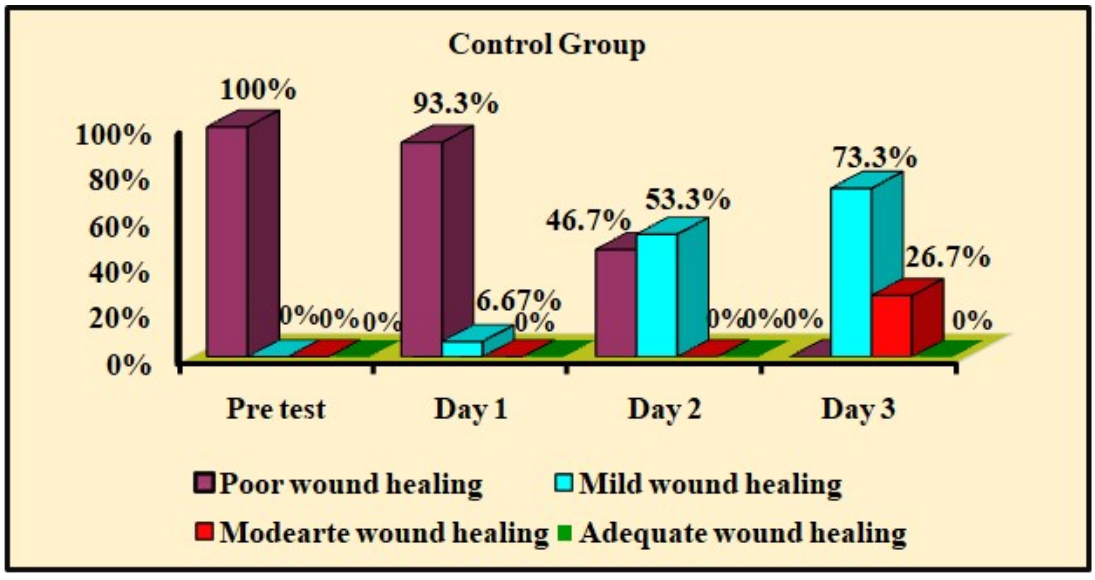
Table 4. Frequency and percentage distribution of level of episiotomy wound healing among postnatal mothers in control group n_2=15

Level of episiotomy wound healing	Control group Post test							
	Pre test		I		II		III	
	f	%	F	%	f	%	f	%
Adequate	-	-	-	-	-	-	-	-
Moderate	-	-	-	-	-	-	4	26.7
Mild	-	-	1	6.7	8	53.3	11	73.3
Poor	15	100	14	93.3	7	46.7	-	-

*Significant at 0.05 level



Graph 1. Clustered bar diagram shows the level of wound healing in experimental group



Graph 2: Column bar diagram shows the level of wound healing in control group

Table 5. Comparison of mean and standard deviation of Episiotomy pain between pre-test and post test scores among Experimental group using paired 't' test. n_1=15

Experimental group		Mean ±SD	Calculated 't' Value	Table Value
Walking	Pre-test	8.66±0.58	-	-
	Post-test I	7.13±0.75	11.25	2.145
	Post-test II	4.46±0.55	9.85	2.145
	Post-test III	2.3±0.60	12.67	2.145
Sitting	Pre test	9.33±0.53	-	-
	Post-test I	7.6±0.48	11.01	2.145
	Post-test II	4.3±0.7	11	2.145
	Post-test III	2.4±0.60	10.27	2.145
Changing position	Pre-test I	7.33±0.80	-	-
	Post-test I	5.53±0.52	8.8	2.145
	Post-test II	3.53±0.5	11.76	2.145
	Post-test III	1.73±0.45	12.85	2.145
Urination	Pre test	9±0.72	-	-
	Post-test I	7.53±0.54	9.125	2.145
	Post-test II	4.93±0.79	10.64	2.145
	Post-test III	2.33±0.48	14.44	2.145
Defecation	Pre test	9±0.72	-	-
	Post-test I	7.53±0.54	9.25	2.145
	Post-test II	4.93±0.79	10.64	2.145
	Post-test III	2.33±0.48	14.44	2.145

*Significant at 0.05 level

Table 6. Comparison of mean and standard deviation of Episiotomy wound healing between pre-test and post test scores among experimental group using paired 't' test n_1=15

Experimental group	Mean ± SD	Calculated 't' value	Table value
Pre test	13.26±0.71	-	-
Post-test I	9.13±0.76	12.46	2.145
Post-test II	5.13±1.05	22.98	2.145
Post-test III	1.66±0.61	12.28	2.145

*Significant at 0.05 level

Table 7. Comparison of mean and standard deviation of Episiotomy pain between pre-test and post test scores among Control group using paired't' test

Control Group		Mean ± SD	Calculated 't' Value	Table Value
Walking	Pre-test	8.8±0.53	-	-
	Post-test I	7.26±0.60	15.14	2.145
	Post-test II	5.53±0.64	16.51	2.145
	Post-test III	3.93±0.70	12.5	2.145
Sitting	Pre-test	8.86±0.60	-	-
	Post-test I	7.68±0.76	11.32	2.145
	Post-test II	5.8±0.64	14.30	2.145
	Post-test III	4.2±0.67	9.81	2.145
Changing position	Pre-test I	8.8±0.4	-	-
	Post-test I	6.66±0.84	11.15	2.145
	Post-test II	4.8±0.64	16.53	2.145
	Post-test III	2.8±0.53	17.54	2.145
Urination	Pre test	8.73±0.5	-	-
	Post-test I	7.53±0.54	11.32	2.145
	Post-test III	4.2±0.67	10.97	2.145
Defecation	Pre-test	8.73±0.5	-	-
	Post-test I	7.53±0.54	11.32	2.145
	Post-test II	5.66±0.54	13.98	2.145
	Post-test III	4.2±0.67	10.97	2.145

*Significant at 0.05 level

Table 8. Comparison of mean and standard deviation of Episiotomy wound healing between pre-test and post test scores among control group using paired 't' test. n_2=15

Control group	Mean ± SD	Calculated 't' value	Table value
Pre-test	13.46±0.65	-	-
Post-test I	9.93±0.96	20.85	2.145
Post-test II	5.93±1.25	22.98	2.145
Post-test III	3.93±0.7	10.98	2.145

*Significant at 0.05 level

Table 9. Comparison of mean and SD of post-test level of episiotomy pain between experimental group andcontrol group scores among postnatal mothers using independent 't' test n_1+n_2=30

Post test	Experimental group Mean ± SD	Control group Mean± SD	Calculated 't' value	Table value
Walking	4.63±0.63	5.57±0.64	16.5	2.05
Sitting	4.76±0.60	5.88±0.69		
Changing position	3.59±0.49	4.75±0.66		
Urination	4.93±0.61	5.79±0.58		
Defecation	4.93±0.61	5.79±0.58		
Overall mean and SD	4.56±0.58	5.55±0.63		

*Significant at 0.05 level

The overall mean value of experimental group was 4.56 which was lesser than the mean of control group 5.55. The standard deviation of experimental group was 0.58 which was lesser than the standard deviation of control group 0.63. The calculated t value was (t_{cal}=16.5) which was greater than the tabulated value (t_{ab}=2.05). Thus, the results show that, there was a statistical difference in post-test scores regarding level of episiotomy pain among post-natal mothers who had undergone normal vaginal delivery with episiotomy in experimental group and control group at level of $p<0.05$. Therefore, H_3 was accepted. The overall mean value of experimental group is 5.30 which is lesser than the mean of control group 6.59. The standard deviation of experimental group is 0.80 which is less than the standard deviation of control group 0.97. The calculated t value is (tcal= 4.28) which is greater than the table value (tab= 2.45).

Thus, the results show that, there was a statistical difference in post-test scores regarding level of episiotomy wound healing among post-natal mothers who had undergone normal vaginal delivery with episiotomy in experimental group and control group at level of $p<0.05$. Therefore, H3 isaccepted.

H_4: There will be a statistical association between pre-test scores regarding the level of episiotomy pain and episiotomy wound healing among postnatal mothers of experimental group undergone normal vaginal delivery with their selected socio-demographical variables at 0.05 level of significance. There was no statistical association between pre-test scores regarding the level of episiotomy pain and episiotomy wound healing among postnatal mothers of experimental group undergone normal vaginal delivery with their selected socio-demographical variables. Hence H_4 was rejected.

Table 10. Comparison of mean and SD of post-test level of episiotomy wound healing between experimental group and control group scores among postnatal mothers using independent 't' test $n_1+n_2=30$

Post test	Experimental group	Control group	Calculated 't' value	Table value
	Mean ± SD	Mean ± SD		
Post test I	9.13±0.76	9.93±0.96	4.28	2.05
Post test II	5.13±1.05	5.93±1.25		
Post test III	1.66±0.61	3.93±0.7		
Overall mean and SD = 5.30±0.80		6.59±0.97		

*Significant at 0.05 level

H_5: There will be a statistical association between pre-test scores regarding the level of episiotomy pain and episiotomy wound healing among postnatal mothers of control group undergone normal vaginal delivery with their selected socio-demographical variables at 0.05 level of significance. There was no statistical association between pre-test scores regarding the level of episiotomy pain and episiotomy wound healing among postnatal mothers of control group undergone normal vaginal delivery with their selected socio-demographical variables at 0.05 level of significance. Hence H_5 was rejected.

DISCUSSION

The episiotomy wound healing in experimental group: With regards to the episiotomy wound healing, all of the subjects 5(100%) had poor wound healing in pre-test and in post-test I, majority of subjects 8(53.3%) had poor wound healing and 7(46.7%) had mild wound healing. Where on post-test II, majority of subjects 13(86.7%) had mild wound healing and 2(13.3%) had poor wound healing. Where on post-test III, majority of subjects 12(80%) had moderate wound healing and 3(20%) had mild wound healing. These findings were supported through a study conducted by Ms. Ragania D who observed that, majority of subjects, 18(72%) had poor wound healing and 7(28%) had mild wound healing in pre-test. Where on post-test I, all of the subjects 25(100%) had mild wound healing. Where on post-test II, majority of subjects, 19(76%) had moderate wound healing and 6(24%) had mild wound healing. In post-test III, all of the subjects, 25(100%) had moderate wound healing.[9]

The episiotomy wound healing in control group: With regards to episiotomy wound healing, all of the subjects 5(100%) had poor wound healing in pre-test. Where on post-test I, majority of subjects 14(93.3%) had poor wound healing and 1(6.7%) had mild wound healing. Where on post-test II, majority of subjects 8(53.3%) had mild wound healing and 7(46.7%) had poor wound healing. Where on post-test III, majority of subjects 11(73.3%) had mild wound healing and 4(26.7%) had moderate wound healing. These findings were supported through a study conducted by by Ms. Ragania D who observed that, majority of subjects, 19(76%) had poor wound healing and 6(24%) had mild wound healing in pre-test. Where on post-test I, majority of the subjects 22(88%) had mild wound healing and 3(12%) had poor wound healing. Where on post-test II, majority of subjects, 14(56%) had mild wound healing and 11(44%) had moderate wound healing. In post-test III, majority of the subjects, 19(76%) had moderate wound healing and 6(24%) had mild wound healing.[9]

The effectiveness of Lavender oil sitzbath on episiotomy pain and wound healing: There was a statistical difference in post-test and pre-test scores regarding level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in experimental group at 0.05 level of significance.

The calculated paired 't' value for episiotomy pain while,

- Walking Post-test I (tcal=11.25), Post-test II (tcal=9.85), Post-test III (tcal=12.67) was greater than the tabulated value (ttab=2.145).
- Sitting Post-test I (tcal=11.01), Post-test II (tcal=11), Post-test III (tcal=10.27) was greater than the tabulated value (ttab=2.145).
- Changing position Post-test I (tcal=8.8), Post-test II (tcal=11.76), Post-test III (tcal=12.85) was greater than the tabulated value (ttab=2.145)
- Urination Post-test I (tcal=9.125), Post-test II (tcal=10.64), Post-test III (tcal=14.44) was greater than the tabulated value (ttab=2.145).
- Defecation Post-test I (tcal=9.25), Post-test II (tcal=10.64), Post-test III (tcal=14.44) was greater than the tabulated value (ttab=2.145).

The calculated paired 't' value for episiotomy wound in,

- Post-test I (tcal=12.46), Post-test II (tcal=22.98), Post-test III (tcal=12.28) was greater than the tabulated value (ttab=2.145).

This proved that, the stated hypothesis H_1 i.e., there will be a statistical difference between pre-test and post-test mean scores of episiotomy pain and wound healing among post-natal mothers who received Lavender oil sitzbath. Hence it is concluded that the Lavender oil sitzbath has significantly reduced episiotomy pain and wound healing. Hence, H_1 was accepted. These findings were supported through a study conducted by Anitha P who observed that there was a statistical difference in post-test and pre-test scores regarding level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery at 0.05 level of significance.

The calculated paired 't' value for episiotomy pain while,

- Walking Post-test I (tcal=12.24), Post-test II (tcal=29.89), Post-test III (tcal=45.95) was greater than the tabulated value (ttab=2.064).
- sitting Post-test I (tcal=12.03), Post-test II (tcal=40), Post-test III (tcal=49) was greater than the tabulated value (ttab=2.064).
- Changing position Post-test I (tcal=18.98), Post-test II (tcal=32.52), Post-test III (tcal=46.08) was greater than the tabulated value (ttab=2.064).
- Urination Post-test I (tcal=11.29),Post-test II (tcal=25), Post-test III (tcal=33.94) was greater than the tabulated value (ttab=2.064).
- Defecation Post-test I (tcal=11.29), Post-test II (tcal=21.58), Post-test III (tcal=33.94) was greater than the tabulated value (ttab=2.064).

The calculated paired 't' value for episiotomy wound: Post-test I (tcal=19.41), Post-test II (tcal=40), Post-test III (tcal=69.77) was greater than the tabulated value (ttab=2.064). The calculated't' value is greater than the tabulated value (tab= 2.145) at the level of $p<0.05$. This showed there was a significant difference between pre-test and post-test mean scores of episiotomy wound healing among post-natal mothers in control group. Therefore,H_2 was accepted. Therefore, it can be concluded that Lavender oil sitzbath has significantly reduced episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery.

To compare between post-test scores of experimental group and control group: There was a statistical difference in post-test scores regarding level of episiotomy pain and episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in

experimental group and control group at 0.05 level of significance.

The calculated independent 't' value for episiotomy pain while, Walking, Sitting, Changing position, Urination and Defecation, calculated value (tcal=16.5) was greater than the tabulated value (ttab=2.05).

The calculated independent 't' value for episiotomy wound healing: Post-test I, Post-test II, Post-test III, calculated value (tcal=4.28) was greater than the tabulated value (ttab=2.05). This proved that, the stated hypothesis H_3 i.e., There was a statistical difference in post-test scores regarding level of episiotomy pain and episiotomy wound healing among postnatal mothers. Hence it is concluded that, there was statistical difference in post test scores regarding episiotomy pain and wound healing among post-natal mothers who have undergone normal vaginal delivery at 0.05 level of significance. Hence H_3 was accepted. These findings were supported through a study conducted by by Ms. Ragania D who observed that there was a statistical difference in post-test scores regarding level of episiotomy pain and episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in experimental group and control group at 0.05 level of significance.[9] The calculated independent 't' value for episiotomy pain while, Walking, Sitting, Changing position, Urination and Defecation, calculated value (tcal=3.7389) was greater than the tabulated value (ttab=1.860). The calculated independent 't' value for episiotomy wound healing, Post-test I, Post-test II, Post-test III, calculated value (tcal=4.108) was greater than the tabulated value (ttab=2.132). Therefore, it can be concluded that, there was a statistical difference in post-test scores regarding level of episiotomy pain and episiotomy wound healing among postnatal mothers.

Conclusion

Based on the findings of the study, the following conclusions were drawn

1. The experimental group showed significant differences in pre-test and post-test on level of episiotomy pain and wound healing after administration of Lavender oil sitzbath.
2. The control group showed significant differences in pre-test and post-test on level of episiotomy pain and wound healing.
3. The Lavender oil Sitzbath was effective on the reduction of episiotomy pain and wound healing among post-natal mothers who had undergone normal vaginal delivery in experimental group compared to control group.

Implications of the Study: The findings of the study have implications for Nursing Education, Practice, Research and administration. Based on the study results, the nurses can organize awareness campaign through different media to increase the awareness regarding Lavender oil Sitz bath for Episiotomy poat-natal mothers in relieving the pain and enhance for wound healing.

Declarations

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Conflict of Interest: There are no conflicts of interest.

Ethical Approval: The proposal for the study was approved by the Institutional Review Board of the KLE'S Institute of Nursing Sciences, Hubballi.

Informed Consent: The researcher approached all the post-natal mothers of selected hospitals of Hubballi and explained the nature of the study to them. They were informed that participation in the study was voluntary and they could withdraw from it at any time. Anonymity and confidentiality of the collected data were also assured. Opportunities for asking questions about the study were provided. Post-natal mothers were asked to sign the consent form. All data collected were kept strictly confidential.

Author Contributions: The author confirms sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

REFERENCES

Ananda D. Wound care with traditional complementary and alternative medicine. Indian Journal of Plastic Surgery [Internet] May-Aug 2012; [Cited on 25 Feb] 45(2): 418-424 Available from URL: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3495394/

El-Saidy Tawheda M K, Aboushady Reda M N, Soliman Hanan FA. Effect of Applying Crushed Ice Gel Pads on Episiotomy Pain and Wound Healing Among Post-Partum Primiparous Women. International Journal of Nursing Didactics [Internet] July 2018; [Cited on 2021 Feb24] 8(7): 19-22. Available from URL: https://www.researchgate.net/publication/330661801

Isa H, MSPT, CSCS, Rachel S, DPT, Perez L, et al. Therapy for Childbirth Perineal Tears and Post-Partum Pain [Internet]. [Cited on 2021 Feb 24] Available from URL: https://www.practicalpainmanagement.com/pain/other/abdominal-pelvis/therapy-management-childbirth-perineal-tears-post-partum-pain.

Lisa M. Complementary and alternative medicine in midwifery practice: managing the conflicts. The Australian Journal of Nursing Practice [Internet] 15 June 2014; [Cited on 25Feb] 3(2): 1-2. Available from URL: https://www.academia.edu/7729151

Maryam M, Azin N, Ehsan N, Sayeedeh FM, Violeta L. Effect of Lavender on Episiotomy Wound Healing and Pain Relief: A systematic Review. Evidence Based Care Journal [Internet] 2020; [Cited on 25 Feb] 10(1): 61-69 Available from URL: https://ebcj.mums.ac.ir/article_15307.html

Pratibha K. Effect of Sitz Bath on Episiotomy Wound Healing and Level of Pain among Post Natal Mothers. International Journal of Advances in Nursing Management [Internet] July-September 2017; [Cited on 2021 Feb 24]5(3): 227-230. Available from URL: https://www.researchgate.net/publication/319958554

Ragania D. Effectiveness of Povidone Iodine Sitzbath Versus Lavender Oil Sitzbath among Postnatal mothers undergone normal vaginal delivery. M.Sc. [Dissertation]. Chennai: The Tamil Nadu Dr. N.G.R Medical University; April 2016; [Cited on 25 Feb] Available from URL: http://repository-tnmgrmu.ac.in/3212/1/3003283301423151RaganiaD.pdf

Rajni S. Effect of essential oil on episiotomy pain and wound healing. International Journal of Scientific Research [Internet] October 2019; [Cited on 26 Feb 2021]8(10): 1-3. Available from URL: https://www.researchgate.net/publication/336208785

Shalini S, Tushita T, Nomita C, Balwan SD. Pattern of episiotomy use and its immediate complications among vaginal deliveries in 18 tertiary care hospitals in India. Indian Journal of Medical Research [Internet] 21 June 2016; [Cited on 25 Feb 2021] 143(4): 474-480 Available from URL: https://www.ijmr.org.in/article.asp?issn=0971-5916

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