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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

Lisa Chadha and Dr. Lily Podder

Abstract
Introduction: Episiotomy is the most common surgical procedure performed worldwide. 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. Midwives have a very important role to play in the care of perineal wounds following childbirth to prevent from infections and promote healing.
Objectives: The study was conducted to assess the effectiveness of lavender oil Sitz bath on episiotomy wound healing among postnatal mothers and associate the findings with demographic variables.
Material and methods: In order to achieve the desired outcome of the study quantitative research approach with Quasi Experimental-Non- Equivalent Pre Test - Post Test Control Group Design was adopted for the present study. Using Non probability purposive sampling 60 postnatal mothers who had undergone vaginal delivery with episiotomy were enrolled in the study and distributed in two groups (30 each in control and experimental group). Data collection was accomplished by using tool comprised of Self structured interview schedule consisting demographic schedule and REEDA scale. Data was analyzed through descriptive and inferential statistics.
Results: Initially in pretest the experimental and control group didn't differ in REEDA scoring ('W'=0.2009, $p>0.05$). Lavender oil sitz bath have significantly improved the episiotomy wound healing in experimental group ('W'=0.0001, $p<0.05$) while there is no association of demographic variable with episiotomy wound healing. ($p>0.05$)
Conclusion: Lavender oil Sitz bath is found to be a simple, cost effective and easy method to enhance the wound healing. The postnatal mother can do this independently in the home setting also when they get discharged from the hospitals following the delivery.

Keywords: Lavender oil, episiotomy, wound healing

Introduction
Childbirth was found to be an overpowering experience in a woman's life since ancient time. It is a strongly physical and enthusiastic occasion in a women's life when she advances to parenthood. Pregnancy and birth of the baby is normal and healthy event in majority of female's life and has potential to be an emancipating life time experience [1]. Labour is an unsolicited law of nature, and peculiar to every childbearing woman. Especially the postpartum period becomes more challenging as chances of genital region injury in an outcome of child birth which requires special attention for her wellbeing.
Episiotomy is a routinely used surgical approach which is implemented during 2nd phase of labour. Episiotomy was first performed in 1742 by Dr. Joseph De Lee in order to deliver baby in case of complicated labor [2]. About 70% of females with vaginal delivery experience some extent of trauma in the perineum because of perineal tear or episiotomy which requires suture repair. Same as any other surgical incision, episiotomy can also leads to some kind of discomfort for most of postnatal mothers.
Various modalities are found to decrease episiotomy pain and upgrade healing process, which include administration of analgesics, Sitz bath, ice pack application, cleanliness, infra-red therapy, perineal care and performance of Kegel's exercises [3].

Nowadays utilization of alternative & complementary therapies by utilizing essential oils as an alternative therapy for care of episiotomy. Lavender oil is frequently prescribed because of its anti- inflammatory, antiseptic, antibacterial, antifungal, and antimicrobial properties [4]. Lavender oil Sitz bath is a simple and it has not any side effects, cost effective and simple method to exaggerate the wound healing process in the medical centre as well as in home settings and it promotes comfort to the mother in post natal period.

Objectives

1. To assess the episiotomy wound healing in experimental and control group.
2. To assess the episiotomy wound healing after administration of lavender oil sitz bath in experimental group; and control group.
3. To evaluate the effectiveness of lavender oil sitz bath on episiotomy wound.
4. To associate the pre interventional findings with selected demographic variables

Conceptual Framework

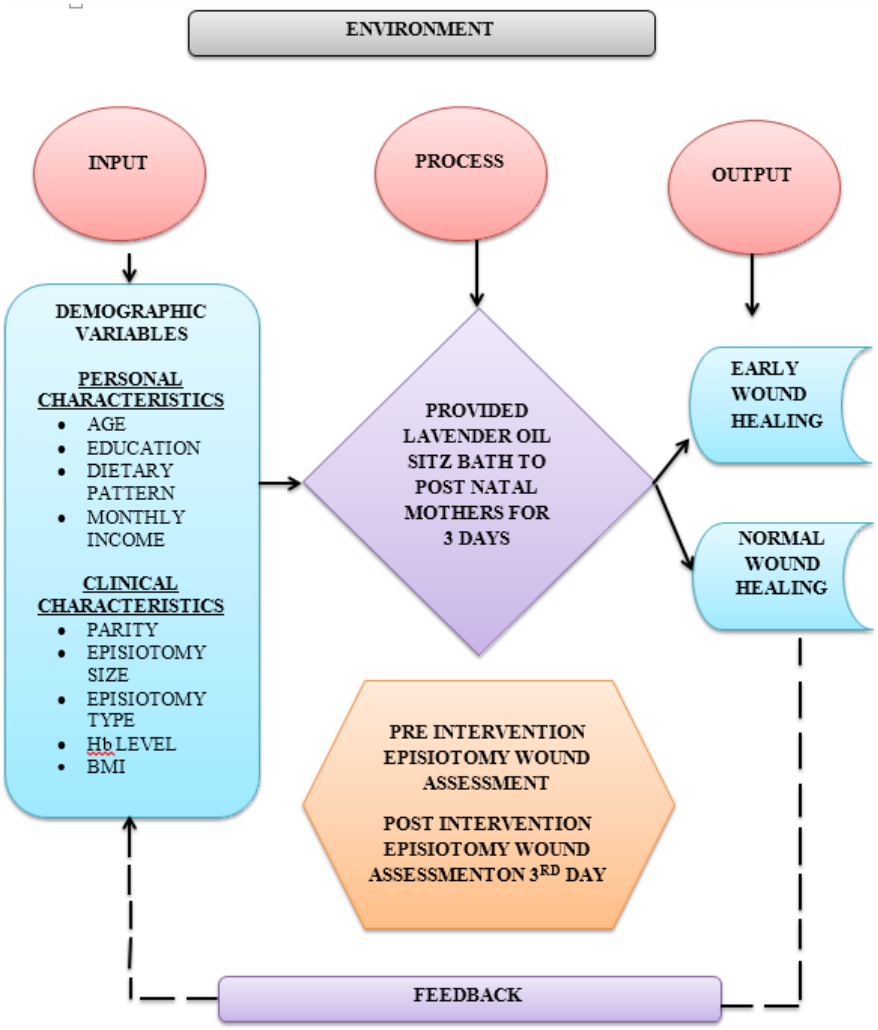

Fig 1: Conceptual framework based upon system theory

Material and methods

Hypothesis

Hypothesis for Effectiveness

$H0_1$: There is no significant difference in episiotomy wound healing between experimental and control group of post natal mothers at 0.05 Level Of Significance.

Hypothesis for Association

$H0_2$: There is no significant association between episiotomy wound healing and selected demographic variables at 0.05 Level Of Significance.

Methodology

In order to achieve desired objectives of the study quantitative research approach with Quasi Experimental- Non- Equivalent Pre Test - Post Test Control Group Design was adopted for the present study. Using non-probability purposive sampling 60 post natal mothers who have undergone vaginal delivery with episiotomy in selected hospitals of Pune city were enrolled for the study and distributed in two groups (30 each in control and experimental group). After obtaining administrative approval and written consent from the participants, tool was administered for data collection. Data collection was accomplished by using tool comprised of section I: Demographic profile consist of personal characteristics such as age, education, dietary pattern, monthly income and clinical characteristics such as parity, episiotomy size, episiotomy type, Hemoglobin level, BMI. Section II: which consist of Reeda Scale.

Post natal Mothers in experimental group were initially observed for wound healing status (1st post natal day) prior

to the treatment. After taking pre –assessment reading, mothers were given sterile lavender oil sitz bath in procedure room. Water temperature was maintained to 110 ^{O} F or 46 ^{O} C. 6 drops of lavender oil were added to the lukewarm solution. The basin was placed on the stool in procedure room. Adequate privacy was maintained and mothers were asked to soak their buttocks inside the sterile solution. The procedure was continued for duration of 15 minutes. Mothers were draped adequately to prevent chilling and maintained the water temperature. After the procedure mothers were allowed to take rest at their respective beds. At the end of therapy on third day a post assessment score of wound status was taken with wound assessment tool.

Similarly Post natal Mothers in control group were observed on 1st post natal day and on 3rd post natal day with wound assessment tool.

Results

Section I: Description of samples based on their personal and clinical characteristics.

Table 1: Description of samples based on their personal characteristics in terms of frequency and percentage, n=60

Demographic variables		Control group (N=30)		Experimental group (N=30)	
		frequency	%	Frequency	%
Age	18-20 years	8	26.67	10	33.33
	21 year-25 years	15	50.00	17	56.67
	26 years-30 years.	4	13.33	2	6.67
	31years and above	3	10.00	1	3.33
Education	Illiterate	0	0.00	0	0.00
	Primary	16	53.33	17	56.67
	Secondary	10	33.33	8	26.67
	Graduate or above	4	13.33	5	16.67
Dietary pattern	Vegetarian	6	20.00	4	13.33
	Non-vegetarian	24	80.00	26	86.67
	Eggetarian	0	0.00	0	0.00
Monthly income	< Rs.5000	0	0.00	1	3.33
	Rs.5001-10000	11	36.67	11	36.67
	Rs.10001-15000	12	40.00	11	36.67
	Rs.15001 and above	7	23.33	7	23.33

Analysis of personal characteristics reveals that in control group, Majority of samples 50% belongs to age group of 21-25yrs whereas majority of samples 56.67% belongs to age group of 21-25yrs in experimental group. Majority of samples 53.33% were primary educated in control whereas majority of samples 56.67% were primary educated in experimental group. Majority of samples 80% were non vegetarian in control group whereas, in experimental group majority of samples 86.67% were non vegetarian. Majority of samples 40% had income Rs.10001-15000 in the control group. Whereas, in experimental group 36.67% had income in the range of Rs.5001-10,000/- and Rs.10,001/- to 15,000/-

Table 2: Description of samples based on their clinical characteristics in terms of frequency and percentage, n=60

Clinical Characteristic		Control group (N=30)		Experimental group (N=30)	
		Frequency	%	frequency	%
Parity	Primipara	16	53.33	18	60.00
	Multipara	14	46.67	12	40.00
Episiotomy size	≤3cm	16	53.33	10	33.33
	3-5cm	14	46.67	19	63.33
	≥5cm	0	0.00	1	3.33
Episiotomy type	Lt. medio-lateral		30	100.00	30	100.00
	Rt. medio-lateral		0	0.00	0	0.00
	Median		0	0.00	0	0.00
	Any other		0	0.00	0	0.00
Hb level	<10g/dl		15	50.00	17	56.67
	10.1-12g/dl		14	46.67	12	40.00
	>12.1g/dl		1	3.33	1	3.33
BMI	Underweight (<18.5)		2	6.67	7	23.33
	Normal weight (18.5-24.9)		28	93.33	23	76.67
	Overweight (25.0-29.9)		0	0.00	0	0.00

Analysis of clinical characteristics reveals that Majority of samples in control group 53.33% are primipara whereas in experimental group majority of samples 60% are primipara. Majority of samples in the control group 53.33% having size less than 3cm, Whereas in experimental group majority of samples 33.33% having size less than 3cm. Majority of samples in control and experimental group were having 100% left Medio-lateral type. Majority of samples 50% had hemoglobin level less10g/dl.Whereas in experimental group majority of samples 56.67% had hemoglobin level less10g/dl. Majority of samples 6.67% are Underweight having BMI less than 18.5 in control group whereas in experimental group majority of samples having BMI shows 23.33% are Underweight having BMI less than 18.5.

Section II: Analysis of data related to pretest REEDA score of postnatal mothers in experimental and control group.n=30

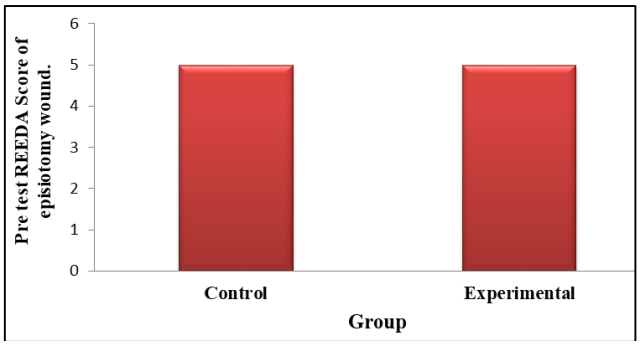

Fig 2: Bar Diagram representing Pre test Reeda score of episiotomy wound.

The figure depicts that pre interventional findings in control group the median of grading the perineal trauma measured by REEDA Scale is 5 with standard deviation 1.126 where as in experimental group median is 5 with standard deviation 1.07. As P-value of Mann-Whitney Test (0.2009) is greater than 0.05 we accept H_0 (There is no significant difference in episiotomy wound healing between experimental and control group before intervention at 0.05 Level of Significance.). And conclude that before intervention median score of both the groups are same.

Section III: Analysis of data related to the posttest REEDA score of postnatal mothers in experimental and control group

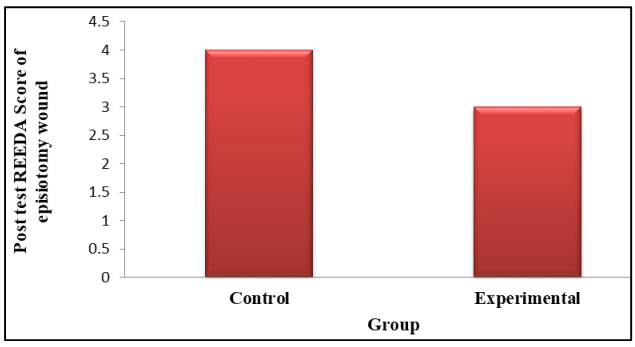

Fig 3: Bar diagram representing post test reeda score of episiotomy wound.

The figure depicts that after intervention in control groups the median of grading the perineal trauma measured by Reeda Scale is 4 with standard deviation 1.167. whereas in experimental group median is 3 with standard deviation 1.085.As P-value of Mann-Whitney Test (0.0001) is less than 0.05 we reject H_0 (There is no significant difference in episiotomy wound healing between experimental and control group after intervention at 0.05 Level of Significance. And conclude that after intervention median score of both the groups are not same.

Section IV: Analysis of data to study the effectiveness of lavender oil sitz bath on episiotomy wound healing.

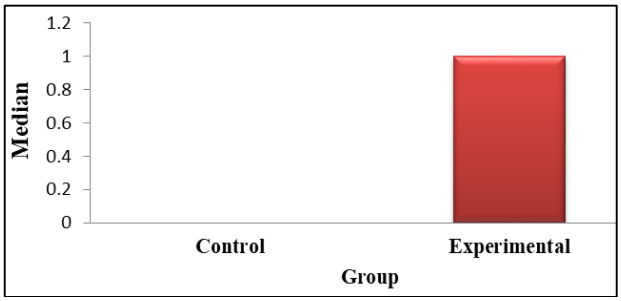

Fig 4: Bar diagram representing effectiveness of lavender oil sitz bath on episiotomy wound healing

The figure depicts the median and standard deviation of difference in grading score of the severity of perineal trauma before and after intervention. It shows that in control group the median is 0 with standard deviation 0.4498. Where as in experimental group median is 1 with standard deviation 0.679. As P-value of Wilcoxon Matched Pairs Test (0.000) is less than 0.05 we reject H_0 (H_0:There is no significant difference in episiotomy wound healing between experimental and control group before intervention at 0.05 Level of Significance.). And conclude that before and after intervention change in median score of both the groups are not same. In other words the lavender oil sitz bath on episiotomy wound is effective at 5% Level of significance.

Section V: Analysis of data related to assess the association between the pre interventional findings with selected demographic variables.

Table 3: Association table between the pre interventional findings with selected demographic variables, n=60

Demographic variables		Good or moderate healing		Mild healing		Chi-square test
		F	*f* in %	*f*	*f* in %	
Age	< 25 years	41	82.00	9	18.00	Chi-Square = 2.376, DF = 1, P-Value = 0.123
	≥25 yrs.	6	60.00	4	40.00	
Education	Primary	24	72.73	9	27.27	Chi-Square = 1.358, DF = 1, P-Value = 0.244
	Secondary or above	23	85.19	4	14.81	
Dietary pattern	Vegetarian	8	80.00	2	20.00	Chi-Square = 0.020, DF = 1, P-Value = 0.889
	Non-vegetarian	39	78.00	11	22.00	
Monthly income	< Rs.10000	17	73.91	6	26.09	Chi-Square = 0.429, DF = 1, P-Value = 0.512
	≥Rs. 10000	30	81.08	7	18.92	

Analysis of data reveals that there is no significant association between episiotomy wound healing and selected demographic variables at 0.05 Level Of Significance. 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.

Table 4: Association table between the pre interventional findings with selected clinical characteristics, n=60

Clinical Characteristic		Good or moderate healing		Mild healing		Chi-square test
		f	*f* in %	*f*	*f* in %	
Parity	Primipara	27	79.41	7	20.59	Chi-Square = 0.054, DF = 1, P-Value = 0.817
	Multipara	20	76.92	6	23.08	
Episiotomy size	≤3cm	19	73.08	7	26.92	Chi-Square = 0.747, DF = 1, P-Value = 0.387
	≥4cm	28	82.35	6	17.65	
Hb level	<10g/dl	23	71.88	9	28.13	Chi-Square = 1.685, DF = 1, P-Value = 0.194
	≥10.1g/dl	24	85.71	4	14.29	
BMI	Underweight (<18.5)	7	77.78	2	22.22	Chi-Square = 0.002, DF = 1, P-Value = 0.965
	Normal weight (18.5-24.9)	40	78.43	11	21.57	

Analysis of data reveals that there is no significant association between episiotomy wound healing and selected demographic variables at 0.05 Level Of Significance. 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.

Discussion

The findings of the study have been discussed with reference to the objective and hypothesis stated. In this section the major findings of the present study have been discussed with the reference to the results obtained by other researcher.

Analysis of personal characteristics reveals that in control group, Majority of samples 50% belongs to age group of 21-25yrs whereas majority of samples 56.67% belongs to age group of 21-25yrs in experimental group. Majority of samples 53.33% were primary educated in control whereas majority of samples 56.67% were primary educated in experimental group. Majority of samples 80% were non vegetarian in control group whereas, in experimental group majority of samples 86.67% were non vegetarian. Majority of samples 40% had income Rs.10001-15000 in the control group. Whereas, in experimental group 36.67% had income in the range of Rs.5001-10,000/- and Rs.10,001/- to 15,000/.

Analysis of clinical characteristics reveals that Majority of samples in control group 53.33% are primipara whereas in experimental group majority of samples 60% are primipara. Majority of samples in the control group 53.33% having size less than 3cm, Whereas in experimental group majority of samples 33.33% having size less than 3cm. Majority of samples in control and experimental group were having 100% left Medio-lateral type. Majority of samples 50% had hemoglobin level less10g/dl. Whereas in experimental group majority of samples 56.67% had hemoglobin level less10g/dl. Majority of samples 6.67% are Underweight having BMI less than 18.5 in control group whereas in experimental group majority of samples having BMI shows 23.33% are Underweight having BMI less than 18.5.

It was found that before and after intervention change in median score of both the groups are not same and found that the lavender oil sitz bath on episiotomy wound is effective at 5% Level of significance.

The association of pre-interventional findings with selected demographic variable reveals that there is no significant association of demographic variables with pre-interventional findings.

A study conducted by Harpreet Kaur, et.al to evaluate the effectiveness of lavender oil on episiotomy wound healing in comparison with povidine – iodine. The research was conducted from the period of Dec. 2012 to Jan 2013 in G.G.S.M College & Hospital, Faridkot, Total 60 post natal mothers were selected. Experimental group was treated with lavender oil while cntrl group was given povidine – iodine. REEDA Scale was used to assess the healing of episiotomy wound. It was found that healing is improved with use of lavender oil as compared with povidine-iodine [5].

A study conducted by Maria Menezes Preeti to study the Effectiveness of Aloe Vera Gel Vs Lavender Oil on Episiotomy Wound among Postnatal Mothers and selected Forty mothers through non-probability purposive sampling technique and divided twenty mothers in the aloe vera gel group and twenty mothers in lavender oil group. Each group received treatment for two days. REEDA scale, and universal pain assessment tool were used. It was found that the computed't' value of wound healing (0.623) was lesser than table value (1.96) (t38=1.96, p<0.05) and't' value of pain (2.307) was greater than the table value (1.96) (t38=1.96, p<0.05). Hence it shows aloe vera gel and lavender oil were equally effective in wound healing, as the mean post test pain score in aloe vera gel (3.8±1.02) was lower than mean post test pain score in lavender oil group (4.55±0.97). The findings of the study indicated that aloe vera gel is effective in reducing episiotomy wound pain than lavender oil among postnatal mothers [6].

Conclusion

The purpose of the study to determine the effectiveness of Lavender oil sitz bath on Episiotomy wound healing have proved statistically and found effective in treating episiotomy wound healing amongst post natal mothers. A Review of Literature has helped the researcher to gain in-depth knowledge of the content, to develop conceptual framework for the study, tool for data collection and analysis of data. The study was Quasi Experimental and was conducted on a sample of 60 Post natal mothers at Kamla Nehru Hospital and Sonawane Maternity Home. Data collection was accomplished by using REEDA Scale. Pilot study was conducted on 6 Post natal mothers of Navale Hospital. Final data was collected from two hospitals from (8/8/17-31/8/17). Data was analysed with the help of Descriptive and Inferential statistics using median, SD and Mann-whiney Test. For further analysis Chi Square test was used to find the association of pre-interventional findings with selected demographic variable at 0.05 level of significance.

The following conclusion can be drawn from the study findings i.e, lavender oil sitz bath is effective method for episiotomy wound healing. REEDA score in experimental group was significantly lower than REEDA Score in control group.so, null hypothesis is rejected.

Recommendations

- A comparative study can be done with other complementary therapy to assess the effectiveness of episiotomy wound healing.
- A study can be conducted for assessing the effectiveness of aromatherapy using lavender oil on pain after caesarean section.
- A comparative study can be done between lavender oil Sitz bath and potassium permanganate ($KMNO_4$) sitz bath.

Limitations

- Researcher was not able to maintain optimum water temperature as required
- Sample attrition.

Acknowledgement

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References

1. Ross Sylvia P. Intrapartum Nurses Beliefs about Childbirth: a Descriptive Qualitative study in nurses that provide care to women in labor and birth, 2014. Open access dissertations. Paper 244. Available in URL Http://digitalcommons.uri.edu/oa_diss/244
2. Herrea Isa and *et al*. Therapy for management of childbirth Perineal tears and postpartum pain. Practical pain management, 2011. Available in URL Http:Www.practical painmanagement.com/pain/others/abdominal-pelvis/therapy-managementchildbirth-Perineal tears-post-partum-pain.
3. Rani Jancy. A comparative study to assess the effectiveness of medicated and non-medicated sitz bath in episiotomy healing on postnatal mothers admitted in selected Government hospital- Bangalore, 2011-2013.
4. Kaur Harpreet *et al*. A study to assess the effectiveness of lavender oil versus Povidine iodine on healing of episiotomy wound among postnatal mothers Indian Journal of Public Health Research & Development. 2016; 7:2.
5. Maria Preeti *et al*. Effectiveness of aloe vera gel vs Lavender oil on Episiotomy wound among postnatal mothers in a selected Hospital, Mangalore. Journal of. Nursing and. Midwife. 2017; 4(3). Issn: 2455-9318.