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WORD COUNT

2877 Words

CHARACTER COUNT

15294 Characters

PAGE COUNT

6 Pages

FILE SIZE

698.0KB

SUBMISSION DATE

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REPORT DATE

May 11, 2023 5:47 PM GMT+7

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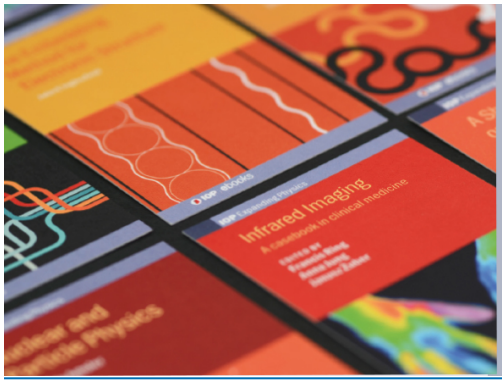
To cite this article: D P Sa[illegible] *et al* 2020 *J. Phys.: Conf. Ser.* **1517** 012046



Effectiveness of lavender sitzbath therapy on episiorraphy of postpartum mother

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Abstract. High maternal birth with vaginal delivery causes high rate for perineal trauma and episiotomy. Episiorraphy healing is prolonged in primiparous mother because lack of knowledge to care of their wound. It will interfere with the mother activity because of discomfort and pain on episiorrhaphy site. That is why non-pharmacologic management is recommended such as warm sitz bath therapy. Warm sitzbath therapy can increase blood flow to the perineal area through vasodilatation, increased capillary permeability, and reduced blood viscosity. Increased blood flows bring oxygen, nutrients and white blood cells to the wound that cause so the episiorraphy can heal faster The design of this research was pre-test and post-test nonequivalent control group. The sample was 15 participant for the intervention group using lavender sitzbath therapy and 15 participant for control group using sitzbath therapy only. The instrument using REEDA scale. Bivariate statistical test using Wilcoxon and Mann Whitney. The experiment group using lavender sitzbath therapy in pre-test "slightly healed" on the effectiveness of the lavender sitzbath therapy in terms of the healing process of episiorraphy on primiparous mother with the weighted mean 8.87 and the post-test "fully healed" with the weighted means 1.37. The result of pre-test and post-test had p-value of 0.001. it was interpreted that the lavender sitzbath therapy had a significant relationship in the healing process of primiparous mother. Lavender sitzbath therapy was effective on episiorraphy among postpartum mother.

1. Introduction

Postpartum period is a critical transitional time for a woman, because it undergoes significant changes in the body, physically and physiologically. Likewise, complications and problem related to delivery such as pain and healing of episiorraphy it might occur anytime if not address correctly. The main goals in postpartum care are to assist and support the woman's recovery to the prepregnant state and educate the mother about her own care. They experience trauma in the perineum such as pain and healing process that interferes with basic daily activities for the woman such as walking, sitting and passing urine that negatively impacts on motherhood experiences. The normal episiotomy site should not have redness, discharge or edema. And majority of healing takes place within the first 2 weeks [1].

Women suffering perineal trauma, pain and edema are the most crucial concerns in first few days following birth. These women have an initial decrease in mobility and the ability to perform daily activities. Difficulty in sitting as a result of perineal pain may impede the initiation of breastfeeding and affect mother-infant bonding. These restrictions add pressure to new mothers attempting to socialize into the role of motherhood [2].

Pain management and prevention of complication during episiorraphy healing is the priority among mother and midwives as well as the lying in owner. Hence, effective comfort measure and fast recovery is needed by mothers. According to Burn et al [1] nowadays, using alternative and complementary therapies such as essential oils in aromatherapy have been recognized in obstetrics because of healing effects on the body in different ways. After the first 24 hours, a sitz bath with warm water may be prescribed and substituted for the ice pack to reduce local swelling and promote comfort for an episiotomy, perineal trauma, or inflamed hemorrhoids. The change from cold to warm therapy enhances vascular circulation and healing [3].

According to the study of Susen [4] that sitz bath was more effective than infra-red lamp on parameters of approximation, exudates and edema. Similarly, wound healing in the warm sitz bath was better when compared to the ice pack on intensity perineal pain according to the study of El Ezim [5]. Since lavender oil has a carminative effect and anti inflammatory properties [6]. Also has antimicrobial and analgesic effect and seems to be a good substitute for washing wounds, rather than use substances like Betadine according to Heideri [7] The researcher would like to combine the hot sitz bath therapy with lavender oil to determine the effectiveness in the management of episiorraphy among primiparous mother.

Long-term complications after episiotomy repair are common. A large proportion of women suffer short-term perineal pain and up to 20% have longer-term problems . Episiorraphy is considered a common and simple procedure, performed frequently as a routine in first deliveries is known today to cause various complications such as epidermal inclusion cyst or anal sphincter injuries [8]

2. Method

The design utilized by this study was quasi experimental research to determine the effectiveness of lavender sitzbath therapy on episiorraphy management among postpartum mother. The researcher was used sitzbath therapy as control group while experiment group using sitzbath therapy with lavender essential oil.

The population of this study was a primiparous mother with normal spontaneous delivery who has an episiorraphy in selected lying in clinics at one month.Nonprobability purposive sampling used to meet the target population of the researcher. The sample in this research was 15 participant for experiment group using lavender sitzbath therapy and 15 participant for control group using sitzbath therapy only. The participant with no complicated delivery.

The study was conducted in selected lying in clinics in Klaten, Central Java, Indonesia, specifically in Bayat regency. The researcher was used 6 lying in in Klaten to get a target of populations. The tools used to determine the effectiveness of lavender sitzbath therapy on episiorraphy among postpartum mother was formulated by the researcher, while to determine the healing process the researcher was adopted the REEDA Scale.

3. Result and Discussion

The demographic profile of the respondents is presented in Table 1, in terms of ages and educational attainment of experimental and control group of respondents.

Table 1. Profile the Respondents According to Age

Age Ranges	Experimental group		Control Group	
	No	%	No	%
16 – 20	3	20	3	20
21 – 25	10	66.7	10	66.7
26 – 30	2	13.3	2	13.3
Total	15	100.0	15	100.0

Table 1 shows the personal profile of the respondents in terms of their ages of both the experimental and the control group. The data reveals that in experimental group were ten or 66.7% are at age range 21 to 25 years, three or 20% are at age range 16 to 20 years; two or 13.3% at the age range of 26 to 30.

While the age of control group were ten or 66.7% are at age range 21 to 25 years; three or 20% are at age range 16 to 20 years; two or 13.3% at the age range of 26 to 30.

The majority of the respondents were ages at the range of 21 to 25 in both experimental and control group. It implies that the couple follow the government policy that a minimum age of marriage for women in Indonesia was 20 years.

Table 2 reveals the data on the educational attainment of the respondents. It shows that in experimental group were eight or 53.3% were Senior High School, four or 26.7% were Junior High School, and two or 13.3% were elementary school and one or 6.7% College level. Whereas in control group were eight or 53.3% were Senior High School, and three or 20.0%, Junior High School, and three or 20.0% were elementary school and one or 6.7% College level.

The majority of respondent's highest educational attainments in both groups were Senior High School with sixteen. This implies that respondent can easily understood the instructions and follow guidelines in performing procedures thus effectiveness will granted.

Table 2. Profile of the Respondents according to highest educational attainment

Educational Attainment	Experimental group		control Group	
	No	%	No	%
College level	1	6.7	1	6.7
Senior High School	8	53.3	8	53.3
Junior High School	4	26.7	3	20.0
Elementary School	2	13.3	3	20.0
Total	15	100.0	15	100.0

The effectiveness of Lavender sitzbath therapy on episiorraphy among postpartum mother in Klaten, Indonesia was determined in terms of healing episiorraphy as shown in Table 3.

Table 3. Effectiveness of lavender sitzbath therapy on episiorraphy among postpartum mother in terms of healing of episiorraphy in experimental group

Healing Process	Pre-test of experimental group		Post-test of experimental group	
	Weighted mean	SD	Weighted mean	SD
1. Redness	1.73	0.50	1.00	0.00
2. Edema	2.00	0.59	1.00	0.00
3. Ecchymosis	2.40	0.41	0.80	0.41
4. Discharge	1.67	0.74	0.13	0.35
5. Approximetion	1.07	0.35	0.93	0.25
Total Weighted Mean	8.87(Slightly healed)		3.86 (moderate healed)	

The total pre-test weighted mean of the experimental group was 8.87 which was interpret as "slighlly healed" while in post-test, the total weighted mean was 3.86 which was interpret as "moderate healed" of episiorraphy.

Table 4. Effectiveness of lavender sitzbath therapy on episiorraphy among postpartum mother in terms of healing of episiorraphy in control group

Healing Process	Pre-test of control group		Post-test of control group	
	Weighted mean	SD	Weighted mean	SD
1. Redness	1.40	0.63	1.00	0.00
2. Edema	1.73	0.65	1.00	0.00
3. Ecchymosis	2.20	0.70	0.80	0.41
4. Discharge	1.53	0.51	0.13	0.35
5. Approximetion	1.13	0.53	0.93	0.25
Total Weighted mean	7.99 (slightly healing)		5.27 (moderate healing)	

The total pre-test weighted mean of the control group was 7.99 which was interpret as “slighlly healed” while in post-test, the total weighted mean was 5.27 which was interpret as “moderate healed” of episiorraphy.

Table 5. Effectiveness of lavender sitzbath therapy on episiorraphy among postpartum mother in terms of healing of episiorraphy in experimental and control group (post-test)

Healing Process	Post-test of experimental group		Post-test of Control group	
	Weighted mean	SD	Weighted mean	SD
1. Redness	1.00	0.00	1.87	0.63
2. Edema	1.00	0.00	1.00	0.65
3. Ecchymosis	0.80	0.41	0.93	0.70
4. Discharge	0.13	0.35	0.47	0.51
5. Approximetion	0.93	0.25	1.00	0.53
Total Weighted mean	3.86 (moderate healing)		5.27 (moderate healing)	

The total post-test general weighted mean of the experimental group was 3.86 interpret as “moderate healed” while in control group, total general weighted mean was 5.27, interpret as “moderate healed” also of episiorraphy. It implies that significant remarks on healing process with the of lavender sitzbath therapy. According to Mayaud et al [9]. confirmed that lavender essential oil have antimicrobial effect and prevent the episiorraphy from bacteria [10]. Moreover, warm sitzbath therapy also increase blood flow to the perineal area through vasodilatation, increased capillary permeability, and reduced blood viscosity. Increased blood flows brings oxygen, nutrients and white blood cells to the wound that cause so the episiorraphy can heal faster [3].

Wound healing is a natural physiological process that develops in response to tissue damage, to restore the function and integrity of damaged skin tissues. The wound healing process is divided into four overlapping phases; blood clotting, inflammation, new tissue formation, and tissue remodelling. These processes, especially new tissue formation and tissue remodelling, consist of sequential and coordinated events including angiogenesis, cellular proliferation, collagen synthesis followed by formation of granulation tissue, matrix degradation followed by replacement of collagen, wound contraction, and scar formation [11].

Lavender oil is extracted from Lavandula angstiforia ssp. angstiforia and is popularly used as a CAM in various fields of health promotion. There are many reports suggesting beneficial effects of inhalation of lavender oil on pain, allergic airway inflammation of asthma anxiety disorder, quality of sleep , and dementia Besides these expected effects, the influence of topical application of lavender oil on wound healing has already been evaluated. Although previous studies suggested a beneficial effect of lavender [11].

It seems that lavender has an anti-allergic effect on mast cell mediated immediate-type allergic reactions, and some concentration-dependent inhibition impact on histamine release from the peritoneal mast cells [12]. The effects of essential oils on limbic system leads to encephalin, endorphin and serotonin release. Essential oils also contain Linalyl acetate and linalool that can have sedative and local anaesthetic effects.

The finding is consistent with the prior study that indicates that lavender essential oil in the postpartum care has a positive effect on the subjective experience of wound healing and pain score (19-22). While in this study, reported that there was no statistical differences in pain score between groups. Since there are different clinical applications of aromatherapy in relation to dosage, methods of administration, these factors may influence the reducing pain and improving patient's condition. This was shown in this study that adding six drops of pure lavender oil to bath water reduces perineal pain discomfort with no statistical differences between the groups [12].

4. Conclusions

The experiment group using lavender sitzbath therapy in pretest "slightly healed" on the effectiveness of the lavender sitzbath therapy with weighted mean 8.87 and the control group pretest "slightly healed" with the weighted mean 7.99. However, the experiment group using lavender sitzbath therapy in posttest was "moderately healed" on the effectiveness of the lavender sitzbath therapy in terms of healing process with the general weighted mean of 3.86 likewise the control group posttest interpreted as "moderately healed" with the general weighted mean 5.27. There was a significant difference between experiment and control group in terms of healing process and level of pain. Thus alternative hypothesis was accepted. But in terms of comfort, there was no significant relationship between the control and experiment group. Hence, the alternative hypothesis was rejected.

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