ORIGINAL ARTICLE

Outcome of aromatherapy to reduce afterpain and fatigue among postnatal mothers

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ABSTRACT

Pain is pain, but it's not all the same the international association for the study of pain. Maternal fatigue is a subjective experience of whole body, encompassing the physical, emotional and cognitive functioning in the postpartum mothers. Aromatherapy is become a frequently used non biomedical method of managing pain and it also helps in promoting, relaxation, mood stimulation, sleep promotion. The present study aims to assess the effectiveness of aromatherapy on after pain and fatigue among postnatal mothers. A quantitative quasi experimental research design was conducted among 30 postnatal mothers by using a convenience sampling technique and 15 were divided in control and experimental group. The demographic data was collected using structured interview questionnaire. The pre-test was done to assess level of after pain by visual analogue scale and level of fatigue-by-fatigue assessment scale for both the experimental and control group. The experimental group was given aromatherapy by lavender oil, the control group was given a routine care and then the post test was done. The study results show that the level of fatigue was considerably reduced in the experimental group than the control group in the post test at $p<0.005$. This indicates aromatherapy is effective non pharmacological method and cost-effective method to treat after pain and fatigue among postnatal mothers. The result of the study is it was concluded that aromatherapy as no side effects and it is easy and comfortable method which can be practiced to treat after pain and fatigue.

Key Words: Aromatherapy, After Pain, Fatigue and Postnatal Mothers.

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INTRODUCTION

Pain is pain, but it's not all the same. The international association for the study of pain (IASP) defines pain as an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage. After pain is infrequent, spasmodic pain felt in the lower abdomen after delivery for a variable period of 2-4 days. Presence of blood clots orbits of after birth lead to hypertonic contractions of the uterus in an attempt to expel them out. This is commonly met in primipara.[1-3]

Pain may also due to vigorous uterine contraction especially in multipara. After birth pains, sometimes called after pains, can be quite painful. They are continuing sequential contraction and relaxation of the Uterus. They are much more common with increasing parity and in women who breastfeed. With increased parity, there is decrease in uterine muscle tone, which causes the uterus to resale therapy subject it to reconstruction. In the instance of breastfeeding women, the sucking of the baby stimulates the production of oxytocin by the posterior pituitary. The release of oxytocin not only triggers the let-down reflex in the breast but also causes the uterus to contract. Even the well contracted uterus of a primipara will contract even more.[4,5]

Maternal fatigue is a subjective experience of the whole body, encompassing the physical, emotional and cognitive functioning in postpartum mothers. The level of fatigue perceived by women who had normal vaginal childbirth was women during the second day then during the second period following childbirth than the 3 months period following childbirth. So, it is very important to properly control fatigue during the initial period following childbirth. The mothers feel fatigue from delivery and experience growing fatigue from breastfeeding and infants care early in their place postpartum period. Fatigue and lack of energy have been accepted as common effects of childbirth in the experience negative feelings and become uncomfortable.[6]

Approximately 60% of postpartum mothers have moderate fatigue, which is significantly associated with maternal health. Fatigue is the early postpartum period is significantly associated with maternal health. It is important for early postpartum mothers to have relaxing experience and fatigue reduction so that they can take care of their child with peace of mind [7].

Aromatherapy are the non-pharmacological methods used by inhaling the fragments with the help of dipped cotton balls in the fragments placed them in 10 cm away from the nose and given once in a day. This procedure will be continued for 1week. The aromatherapy which lavender oil may help to reduce pain for people, improve quality of life. The essential oil used in aromatherapy works by stimulating the smell receptors in the nose which then send message to the nervous system limbic system the part of the brain that control emotion in some studies suggest that olfactory stimulation relate to aromatherapy can result in immediate erection in pain as well as changing physiological parameters such as pulse blood pressure skin temperature and brain activities [8].

Aromatherapy is most effective intervention for after pain and fatigue. aromatherapy is non-invasive and can be applied continuously is a patient who do not have an aggressive to the order for the effect of aroma therapy cancer the stress and short-term sleeping subjects. Pain is a complex and multidimensional phenomenon that is subjective and unique to each individual and subject to a variety of external and internal influence. The essential oils in aromatherapy used to treatment provide relaxation when their fragrant compound stimulates hypothalamus and active parasympathetic nervous system. Thus, relaxation promotion and fatigue reduction are expected from the fragrance of essential oils [9].

The purpose of the study is to assess the level of after pain and fatigue among postnatal mothers, to assess the effectiveness of aromatherapy on after pain and fatigue among postnatal mothers, to associate the outcome of aromatherapy on after pain and fatigue among postnatal mothers among the postnatal mothers with demographic variables.

METHODS AND MATERIALS

A quantitative approach with quasi experimental research design with pre-test and post-test was used to conduct the study in postnatal wards of Thiruvallur District Head Quarter Government Hospital. 30 samples were selected by using a convenience sampling technique. The criteria for sample selection are all normal delivery postnatal mothers admitted in postnatal wards with after pain and fatigue and mothers who are willing to participate in the study. The exclusion criteria for the samples are with psychiatric illness. The data collection period was done with prior permission from the HOD of Obstetrics and Gynaecology department and ethical clearance was obtained from the institution. The purpose of the study was explained to the samples and written informed consent was obtained from them. The demographic data were collected using a semi structured interview questionnaire, visual analogue scale was used to assess the pain and fatigue assessment was used to assess the fatigue assessment scale. The after pain and fatigue was assessed before aromatherapy among both control and experimental group. The experimental group was given aromatherapy by using two drops of lavender oil over a cotton ball and placed the cotton 10cm away from the nose of the mothers and educated them to take deep breathing for 15-20 minutes. Then postnatal mothers in experimental group were re-assessed for the after pain and fatigue after an hour. The data were analysed using descriptive and inferential statistics. The sample characteristics were described using frequency and percentage. Pearson's co-relation coefficient was used to assess the effectiveness of aromatherapy in the experimental group. Chi square was used to associate the post-test level of after pain and fatigue the selected demographic variables.

RESULTS AND DISCUSSION:

Section A: Sample characteristics

Among 30 samples, 15 samples belongs to experimental group, where most of the postnatal mothers 3(20.0%) were belong to below 20yrs, respectively gestational age of <37 weeks 11(73.3%), parity of 11(73.3%), postnatal days of 18(53.3%) . Whereas in the control group, most of the postnatal mothers of age 20-30yrs of 8(53.3%), 3(20.0%) with gestational age of 37-40wks, 1(6.7%) with gestational age >40 weeks, 4(26.7%) with twoparity, 4(26.7%) with 30-35 age of demographic variables. Most of the them 8(53.3%) were in the age group of 20 – 30 years, 9(60%) had primary level of education, 8(53.3%) were daily wages, 10(66.7%) were moderate workers, 11(73.3%) were Christians, 12(80%) had monthly income of 15,000 – 30,000, 12(80%) belonged to nuclear family, 11(73.3%) were residing in rural area, 11(73.3%) had a gestational age of <37 weeks, 11(73.3%) were of 1st parity and 8(53.3%) had one postnatal day.

Section B: Level of after pain and fatigue among postnatal mothers:

The level of after pain was assessed by numeric pain rating scale. The major findings shows that in the pre test of experimental group,9(60%) had moderate pain,4(26.67%)had severe pain and 2(13.33%)had mild pain. Whereas in the post test ,8(53.33%) had moderate pain and 7(46.67%) had mild pain .(Table 1)

The present study is supported by a study conducted by Manju Bala (2016) regarding effectiveness of selected nursing interventions on after pain among the postnatal mothers in selected hospital in Puducherry. The findings of the study are the pain of

the postnatal mother exhibit that during the pre test 4(8%) and 46(92%) mother had intermediate continuous type of pain none of them has a brief pain whereas in post test 7(14%), 30(60%), 13(26%) mother had brief intermediate continuous type of pain the preacher's mean level of paint shows 0.49 ±0.17 whereas level the post pain level highlight 0.24± 0.12 with the"t"value 5.09 (p‹0. 05) showing the statistical highly significant difference that has no significant association p ›0.05 found between the posters pain level with demographic variable. Hence the hypothesis is proved.[10]

Table 1: Frequency and percentage distribution of level of pain among postnatal mothers in the experimental and control group.

Group	Test	No pain		Mild		Moderate		Severe	
		No.	%	No.	%	No.	%	No.	%
Experimental Group	Pretest	0	0	2	13.33	9	60.0	4	26.67
	Post Test	0	0	7	46.67	8	53.33	0	0
Control Group	Pretest	0	0	2	13.33	7	46.67	6	40.0
	Post Test	0	0	2	13.33	8	53.33	5	33.33

Table 2: Frequency and percentage distribution of level of fatigue among postnatal mothers in the experimental and control group.N = 30(15+15)

Group	Test	No Fatigue		Mild Fatigue		Moderate Fatigue		Severe Fatigue	
		No.	%	No.	%	No.	%	No.	%
Experimental Group	Pretest	0	0	5	33.33	7	46.67	3	20.0
	Post Test	0	0	8	53.33	7	46.67	0	0
Control Group	Pretest	0	0	1	6.67	9	60.0	5	33.33
	Post Test	0	0	1	6.67	10	66.67	4	26.67

The level of fatigue was assessed by fatigue assessment scale. The findings of the study shows that in the pre test of experimental group 7(46.67%) had moderate fatigue,5(33.33%) had mild fatigue and 3(20%) had severe fatigue. Whereas in the post test ,8(53.33%) had moderate fatigue and 7(46.67%) had moderate fatigue. (Table 2)

The present study is supported by **Vaziri .,et.,al.,2017)** conducted a study to assess the Effect of lavender oil aroma in the early hours of postpartum period on maternal pains, fatigue, and mood. The results of the *study are* the mean age of all the participants was 23.88 ± 3.88 years. After the first intervention and also in the tomorrow morning assessment, significant differences were found between the two groups regarding perineal pain (P = 0.004, P< 0.001), physical pain (P < 0.001), fatigue (P = 0.02, P< 0.001), and distress scores (P < 0.001). In addition, significant differences were found concerning the mean scores of positive (P < 0.001)

and negative (P = 0.007, P< 0.001) moods between the two groups after the interventions. Repeated measures analyses showed that the two groups were significantly different over time in all the evaluated variables. Hence the hypothesis is proved [11].

Section c: Effectiveness of aromatherapy on after pain and fatigue among postnatal Mothers:

The present study depicts that the pre test mean score of pain among postnatal mothers was 5.47±1.50 and the post test mean score was 4.07±1.49. The calculated paired 't' test value of t =8.573 was found to be statistically highly significant at p ‹0.001 level.The present study also portray that the pretest mean scores of fatigue among postnatal mothers was 4.73±1.79 and the post test mean score was 3.33±1.68. The calculated paired 't' test value of t= 6.548 was found to be statistically highly significant at p‹0.001 level.(Table 3)

Table 3: Effectiveness of aromatherapy on after pain and fatigue among postnatal mothers

Variables	Test	Mean	S.D	Paired 't' Test Value
Pain	Pretest	5.47	1.50	**t = 8.573** **p = 0.0001** **S*****
	Post Test	4.07	1.49	
Fatigue	Pretest	4.73	1.79	**t = 6.548** **p = 0.0001** **S*****
	Post Test	3.33	1.68	

*****p<0.001, S – Significant**

The present study findings is supported by **Kianpour, et.,al.,(2016).** conducted a study to assess the Effect of lavender scent inhalation on prevention of stress, anxiety and depression in the postpartum period, this study investigated th maternal postnatal pain is for 77% of women (n=58) indicated they experienced abdominal after pain rated as mild (n=12) discomfort (n=36) and severe (n=36) excruciating (n=2) . The total intensity score for pain when urinating decreases from 140→67 over the 4 days a woman intensity score for pain side drop from 6 to 3 that is severe to discomfort [12].

Section D: Comparison of pretest and post test level of pain & fatigue among postnatal mothers between the experimental and control group.

The table 4 depicts that the pretest mean score of pain among postnatal mothers in the experimental group was 5.47±1.50 and the mean score in the control group was 5.60±1.59. The calculated student independent 't' test value of t = 0.235 was not found to be statistically significant. The table 4 also portrays that the pretest mean score of pain among postnatal mothers was 4.07±1.49 and the post test mean score was 5.53±1.55. The calculated student independent 't' test value of t = 2.643 was found to be statistically significant at p<0.05 level. The above finding shows that there was significant difference in the level of pain between the experimental and control group which clearly infers that the level of pain was considerably reduced in the experimental group than the control group in the post test.

Table 4: Comparison of pretest and post test level of pain among postnatal mothers between the experimental and control group.

Test	Group	Mean	S.D	Student Independent 't' Test Value
Pretest	Experimental	5.47	1.50	t = 0.235 p = 0.815 N.S
	Control	5.60	1.59	
Post Test	Experimental	4.07	1.49	**t = 2.643** **p = 0.013** **S***
	Control	5.53	1.55	

*p<0.05, S – Significant, N.S – Not Significant

Table 5: Comparison of pretest and post-test level of fatigue among postnatal mothers between the experimental and control group.n = 15

Test	Group	Mean	S.D	Student Independent 't' Test Value
Pretest	Experimental	4.73	1.79	t = 1.709 p = 0.099 N.S
	Control	5.73	1.39	
Post Test	Experimental	3.33	1.68	**t = 4.208** **p = 0.0001** **S****
	Control	5.60	1.24	

***p<0.001, S – Significant, N.S – Not Significant

The table 5 depicts that the pretest mean score of fatigue among postnatal mothers in the experimental group was 4.73±1.79 and the mean score in the control group was 5.73±1.39. The calculated student independent 't' test value of t = 1.709 was not found to be statistically significant. The table 5 also portrays that the pretest mean score of fatigue among postnatal mothers was 3.33±1.68 and the post test mean score was 5.60±1.24. The calculated student independent 't' test value of t = 4.208 was found to be statistically significant at p<0.05 level. The above finding shows that there was significant difference in the level of fatigue between the experimental and control group which clearly infers that the level of fatigue was considerably reduced in the experimental group than the control group in the post test.

The present study is supported by **Asazawa, K et.al.,(2018),** conducted a study to determine the effectiveness of Aroma hand treatment in alleviating fatigue and promote relaxation of mother in their early Postpartum period among 242 Consulting Japanese early Postpartum mother. 84.4 percent of the participants were satisfied with the treatment method and 90.5% felt the intervention time was appropriate. The resultof the content analysis of the open - ended responses revealed five categories: increase relaxation ,improve physical condition, high satisfaction ,need improvement of techniques ,need

to maintain an effective amount of essential oil . SPSS version23.0 was used for data analysis which signifies the level set at 5% unpaired student t test and 2 test were used to compare the following basis characteristic each scale score of the participant and each variable before the program between the two groups. There was significant difference between pretest-posttest in the 2 scales. Fatigue ($p<0.001$) and relaxation ($p<0.001$) based on the wilcoxon signed-rank scale. There were significant difference between the pretest and posters for for each attribute in the fatigue scale 77.8 percent of the participant was fight with the treatment method 89.6 percent felt the implementation time was appropriate and 89.6 percent felt that increase discomfort. The majority 72.4 percent of the participant indicated a high agreement between their expectation and implementation [13].

Section D: Association of the effect of aromatherapy on after pain and fatigue with selected demographic variables in the experimental group.

The demographic variable they has shown statistical significant associated with post test level of pain among the postmaster postnatal mothers $p< 0.05$ level and other demographic variable as shown statistical significant associated with cost of pain among postnatal mothers in the experimental group. The demographic variables had not shown statistically significant association with post test level of fatigue among postnatal mothers in the experimental group.

CONCLUSION:

This indicate aromatherapy is effective non pharmacological method and cost effective method to treat after pain and fatigue among postnatal mothers the selected women became familiar and comfortable to practice with aromas from the result of the study is it was concluded that aromatherapy as no side effects and it is easy and comfortable method which can be practiced to treat after pain and fatigue.

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AUTHORS CONTRIBUTION:

All the authors actively participated in the work of the study. All authors read and approved the final manuscript.

CONFLICTS OF INTEREST:

The authors declare no conflicts of interest.

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