Original Research Article

Effectiveness of Routine Back Massage versus Jasmine Oil Back Massage Versus Coconut Oil Back Massage on Labour Pain among Parturient Mothers in Selected Tertiary Care Hospital Bangalore

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ABSTRACT

Pain in labour is considered as universal experience for childbearing women. Every woman doesn't need traditional pain relief medication to manage pain. Complimentary therapies such as essential oils like jasmine oil back massage helps mother relax emotionally and physiologically. The quasi experimental study was conducted to assess effectiveness of Routine back massage versus Jasmine oil back massage versus Coconut oil back massage on labour pain among 60 parturient mothers who were allotted randomly in three groups each having 20 mothers. Both Numerical Pain Scale and Visual Analogue Scale were used to measure the level of labour pain in all the three groups in order to get subjective and objective data. The results evidenced that Routine back massage (t value=7.75), (t value=4.05), Jasmine oil back massage (t value=14.24), (t value=7.55), Coconut oil back massage (t value=11.82), (t value=8.82) was effective within groups at 0.05 level of significant by Numerical Pain Scale and Visual Analogue Scale respectively. The comparison between routine back massage, jasmine oil back massage and coconut oil back massage was found significant with Calculated F value 5.366 at 0.05 level of significant by Visual Analogue scale and there was no significance by using Numerical Pain Scale. There was no significant association between labour pain and the selected baseline and maternal variables. So, the current findings evidenced that there is not much difference in routine back massage, jasmine oil back massage and coconut oil back massage but the study shows that back massage and oil massage during first stage of labour helps in reducing the intensity of pain.

Keywords: Effectiveness, Routine back massage, Jasmine oil back massage, Coconut oil back massage, Labour pain, Parturient mothers.

INTRODUCTION

A human body can bear only up to 45 del (units) of pain yet at the time of giving birth the mothers fed up to 52 del (units) of pain. This is similar to 20 bones fractured at a time. Hence the labour pain is real, not imagined and require the proper management. [1] Back massage has been practice as a healing therapy for many centuries and also massages works as an atmosphere of acceptance, respect for the body and being cared for. Jasmine oil evokes feeling of joy, peace and self-confidence and it can soothe discomfort and contribute to normal labour. It is also a popular natural remedy for improving mood, overcoming stress, balancing hormones; reduce anxiety, depression, emotional stress, low libido and insomnia. [2]

The oils used may be able to penetrate cell walls and transport nutrients

or oxygen to the inside of cells. Jasmine oils are thought to be responsible for an easier labour. Touch and massage probably work to relieve pain by increasing the release of endorphins. [3] Jasmine's ability to reduce pain and spasms and increase contraction strength makes it one of the best essential oils for labour. Rubbing jasmine oil into the lower part of the stomach and back just before childbirth will strengthen a contraction which lead to quicker childbirth and significantly reduces pain experienced during childbirth. [4]

Coconut oil help increase metabolism, balance hormones and improves immune system functioning. It also helps skin to prevent dryness, discomfort and also helps in smooth massaging. [5]

Massage during labour helps ease pain and reduce anxiety in the first stage of labour and also linked with the shorter labours. Thus the investigator felt the need of oil back massage as it freshens the mind and reduces anxiety as it also helps in quick labour progress.

Objectives

1. To assess the effectiveness of routine back massage, jasmine oil back massage, coconut oil back massage on labour pain by using Numerical pain scale and Visual Analogue Scale among parturient mothers.
2. To compare the effectiveness of routine back massage versus jasmine oil back massage versus coconut oil back massage on labour pain by using Numerical Pain Scale and Visual Analogue Scale among parturient mothers.
3. To identify the association between pre interventional pain score with selected Baseline variable and Maternal variables by using Numerical Pain Scale and Visual Analogue Scale among parturient mothers.

HYPOTHESES:

H₁: There will be significant difference between pre and post interventional pain score among parturient mothers receiving routine back massage by Numerical Pain Scale and Visual Analogue Scale at the significant level of 0.05.

H₂: There will be significant difference between pre and post interventional pain score among parturient mothers receiving jasmine oil back massage by Numerical Pain Scale and Visual Analogue Scale at the significant level of 0.05

H₃: There will be significant difference between pre and post interventional pain score among parturient mothers receiving coconut oil back massage by Numerical Pain Scale and Visual Analogue Scale at the significant level of 0.05

H₄: There will be significant difference between routine back massage versus jasmine oil back massage versus coconut oil back massage on labour pain among parturient mothers at the significant level of 0.05 by Visual Analogue Scale and Numerical Pain Scale among parturient mothers.

H₅: There will be significant association between pre interventional labour pain with selected baseline and maternal variable by Numerical Pain Scale and Visual Analogue Scale.

MATERIALS AND METHODS

Research approach: A quantitative approach was adopted for this study.

Research design: Research design selected for the present study was Quasi experimental design with pre-test post-test only design with no control group.

Variables:

Independent variable: Routine back massage, Jasmine oil back massage, Coconut oil back massage.

Dependent variable: labour Pain levels

Settings

The tertiary care hospital at Bangalore selected for the study. The hospital has well developed birthing unit and the labour room the average number of normal deliveries conducted 150 deliveries and 50-60 abnormal deliveries in a month.

Sample/Sample Size

Sample is subset of population elements. The sample selected in this study was parturient mothers during first stage of labour who were fulfilling the inclusion criteria. Total sample size in this study was 60. About 20 samples were allocated into interventional group1 (routine back massage), 20 samples were allocated into interventional group2 (jasmine oil back massage), and 20 samples were allocated into interventional group3 (coconut oil back massage).

Sampling Technique

Simple Random Sampling using lottery method was used for the study and the parturient mothers were randomly allocated to the group1 receiving routine back massage, group 2 receiving jasmine oil back massage and group 3 receiving coconut oil back massage.

Description of the Tool

Section A: Consisted of data on Baseline and Maternal variables

Section B: Consisted of the Numerical Pain Scale which was used to assess the pain levels during 1st stage of labour in which the parturient mothers will be verbally rating their pain from 0 to 10

Section C: Visual Analogue Scale which was used to assess the pain levels during 1st stage of labour in which the pain rate was marked by the researcher according to the facial expression.

Data Collection Procedure

Mothers who felt into the inclusion criteria were selected by using Simple Random Sampling, the parturient mothers were allocated to the interventional group 1, group 2 and group 3 and the researcher collected the baseline and maternal variables. Pre assessment of intensity of labour pain was done by using Numerical Pain Scale and VAS. The researcher provided the massage for 10-20 min for every hourly with group one with routine back massage, group two with jasmine oil back massage and group three with coconut oil back massage and the post interventional pain scores were assessed by using both scale.

RESULTS

Assess the Effectiveness of Routine Back Massage, Jasmine Oil Back Massage, Coconut Oil Back Massage on Labour Pain among Parturient Mothers by Numerical Pain Scale and Visual Analogue Scale

The data in Table 1, shows that by the Numerical Pain Scale the mean post interventional score of routine back massage 6.21 is lower than the mean pre interventional score 8.13 in which the calculated "t" value within the group was 7.75 (p value 0.001)

The mean post interventional score of jasmine oil back massage 5.67 is lower than the mean pre interventional score 8.07 in which the calculated "t" value within the group was 14.24 (p value 0.001)

The mean post interventional score of coconut oil back massage 5.84 is lower than the mean pre interventional score 7.91 in which the calculated "t" value within the group was 11.82 (p value 0.001)

TABLE 1: Assess the effectiveness of routine back massage, jasmine oil back massage, coconut oil back massage on labour pain among parturient mothers by numerical pain scale

Groups	Pre-Test		Post-Test		t value	p value
	MEAN	SD	MEAN	SD		
Routine Back Massage	8.13	0.675	6.21	1.242	7.75	0.001(S)
Jasmine Oil Back Massage	8.07	0.837	5.67	1.355	14.24	0.001(S)
Coconut Oil Back Massage	7.91	0.852	5.84	0.742	11.82	0.001(S)

Table 2: Assess the effectiveness of routine back massage, jasmine oil back massage, coconut oil back massage on labour pain among parturient mothers by visual analogue scale

Groups	Pre-test		Post-test		t value	p value
	MEAN	SD	MEAN	SD		
Routine Back Massage	7.34	0.920	6.46	0.833	4.05	0.001(S)
Jasmine Oil Back Massage	7.40	0.805	5.89	0.819	7.55	0.001(S)
Coconut Oil Back Massage	6.56	0.921	5.34	1.00	8.82	0.001(S)

The data in Table 2, shows that by Visual analogue scale the mean post interventional score of routine back massage 6.46 is lower than the mean pre interventional score 7.34 in which the calculated "t" value within the group was 4.05 (p value 0.001).

The mean post interventional score of jasmine oil back massage 5.89 is lower than the mean pre interventional score 7.40 in which the calculated "t" value within the group was 7.55 (p value 0.001).

The mean post interventional score of coconut oil back massage 5.34 is lower than the mean pre interventional score 6.56 in which the calculated "t" value within the group was 8.82 (p value 0.001).

Here, the present study proves that there is significant difference between pre and post interventional pain score among parturient mothers receiving routine back, jasmine oil back massage, coconut oil back massage by Numerical Pain Scale and Visual Analogue Scale. Hence H_1 is accepted and H_0 is rejected.

Compare the Effectiveness of Routine Back Massage versus Jasmine Oil Back Massage versus Coconut Oil Back Massage on Labour Pain among Parturient Mothers by Numerical Pain Scale and Visual Analogue Scale

Table 3(a) shows that the post intervention mean score on pain reduction among parturient mothers receiving routine back massage (6.21), jasmine oil back massage (5.67), coconut oil back massage (5.84) with SD of 1.242, 1.36, 0.47 respectively. Calculated F value is 1.164 was not significant at 0.05 level of significance.

TABLE 3 (a): Comparison of post interventional pain score by Numerical Pain Scale using repeated measures ANOVA:

Groups	Post Interventions Pain score		Mean difference of group1 and group2	Mean difference of group2 and group3	Mean difference of group1 and group 3	F (p-value)	Level of significance)
	MEAN	SD					
Routine Back Massage	6.21	1.242	0.54	0.07	0.37	1.164 (0.320)	p>0.05 (NS)
Jasmine Oil Back Massage	5.67	1.36					
Coconut Oil Back Massage	5.84	0.74					

Table 3 (b): Comparison of post interventional pain score by Visual Analogue scale using repeated measures ANOVA

Groups	Post Interventions Pain score		Mean difference of group1 and group2	Mean difference of group 2 and group 3	Mean difference of group 1 and group 3	F (p-value)	Level of significance)
	MEAN	SD					
Routine Back Massage	6.46	0.833	0.57	0.45	1.12	5.366 (0.007)	P<0.05 (S)
Jasmine Oil Back Massage	5.89	0.819					
Coconut Oil Back Massage	5.34	1.007					

Table 3(b) shows that the post intervention mean score on pain reduction among parturient mothers receiving routine back massage (6.46), jasmine oil back massage (5.89), coconut oil back massage (5.34) with SD of 0.833, 0.819, 1.007 respectively. Calculated F value is 5.366 was significant at 0.05 level of significance.

Hence, the present study shows that alternate hypotheses H_1 rejected and null hypotheses H_0 accepted by the Numerical Pain Scale while alternate hypotheses H_1 accepted and null hypotheses H_0 rejected by the Visual Analogue Scale.

DISCUSSION

The present study shows that routine back massage, jasmine oil back massage, coconut oil back massage is effective on labour pain among parturient mothers by using Numerical pain scale and Visual Analogue Scale.

A true experimental study was conducted to assess the effectiveness of jasmine oil massage on labour pain. Forty primigravida women recruited using purposive sampling techniques and randomly allotted to experimental and control group. A significant difference was

found with the experimental group (t_cal 9.869, p<0.05). So, the study concluded that jasmine oil massage proved to reduce first stage labour pain. It is also cost effective and easily accessible. [4] The above study is consistent with the current study results that jasmine oil back massage is effective.

An experimental study was done to assess the effects of massage on pain during labour, sixty primiparous women expected to have a normal childbirth in Taiwan were randomly assigned to either the experimental or the control group. The experimental group had significantly lower pain reactions and reported that massage was helpful, providing pain relief and psychological support during labour. [6] The above study result is similar with the current study result that back massage is effective.

The study also proves that routine back massage versus jasmine oil back massage versus coconut oil back massage on labour pain is effective as a whole by both scale but no difference found between the massages by Numerical Pain Scale while coconut oil back massage is must better when compared by Visual Analogue Scale among parturient mothers.

A randomized clinical trial study was conducted to assess the effects of aromatherapy with jasmine and salvia on pain severity and labour outcome. Each group underwent aromatherapy and pain severity was measured before 30 and 60min after incense aromatherapy. Pain severity and duration of first and second stage of labour were significantly lower in the aromatherapy group of salvia 30min after the intervention. No significant difference was found among the three groups regarding pain severity 60 min after aromatherapy. So, the study concluded that salvia had beneficial effects on pain relief and shortened the labour stages. [7] The above study result are similar to the present study in which it proves that coconut oil is more effective than the jasmine oil back massage in relieving the labour pain.

A prospective randomised study was conducted to assess the effects of treatment for labour pain: Verbal reports versus Visual Analogue Scale scores. The aim of this study was to compare women's verbally reported effect of treatment for labour pain with changes in VAS scores. The distribution of the VAS scores 30 min after administration of pain relief showed that the women verbally responding that treatment was "very effective", also rated their pain significantly lower on the VAS. This study confirms that verbal reports and changes in VAS scores are reliable indicators of treatment effect for labour pain. [8] The above study was contradictory to the present study result that is proved Visual Analogue Scale was effective.

The present study further shows that there is no association between pre interventional pain score with selected Baseline variable and Maternal variables by using Numerical Pain Scale and Visual Analogue Scale among parturient mothers.

The findings were consistent with the study conducted to assess the effective nursing intervention on pain during labour among parturient mothers. The results shows that no statistical significant association was found in post-assessment level of labour pain perception of experimental and control groups with selected demographic variables such as age, religion, type of family, education, work pattern and area of residence and also with obstetrical information such as gestational age and cervical dilatation. [9]

RECOMMENDATION
- The study can be conducted among larger samples.
- A similar study can be conducted were the researcher will be blind.
- A similar study can be conducted among larger samples with coconut oil back massage.
- The study can be done on different samples to assess the effectiveness of these complimentary therapies on pain

among patient with back pain, dysmenorrhoea.

Limitations

- Difference in the results of comparison by Numerical Pain Scale and Visual Analogue Scale may be because the researcher was not blind.

CONCLUSION

Labour pain is a challenging issue for nurses designing observation protocols. The present study effectiveness of routine back massage versus jasmine oil back massage versus coconut oil back massage on labour pain among parturient mothers are assessed. Based on statistical findings, it is evident oil massage is an effective method during labour in reducing the pain intensity and also helps in labour progress. The researcher also found that not much change are found between the oil massage but back massage as a whole is the best method a health provider can provide to labouring mothers in reducing the labour pain.

REFERENCES

1. Facts from fiction. The human body handles 45 Del (units) of pain.
   Available from: http:// facts from fiction. blogspot. In/2012/05/ human- body handles- 45-dels-units-of.html
2. Lowe NK. The pain and discomfort of labour and birth. JObstetGynecol Neonatal Nurs.1996 [cited 2015 May 13]; 25(1):82-92 Available from: http://www.ncbi. nlm. nih. gov/ pubmed/8627407.
3. Pillitteri A. Maternal and Child Health Nursing. 5th ed. Philadelphia, PA: Lippincott William & Wilkins; 2007.
4. Joseph RM, Fernandes P. Effectiveness of jasmine oil massage on reduction of labour pain among primigravida mothers. Journal of Health Sciences. Nitte University. 2013 [cited 2015 April 20]; ISSN 2249-7110: 104-107. Available from: http:// nitte. edu.in/ journal/dec%202013/104-107% 20 Reeja %20Mariam.pdf
5. Divinemama. Benefits of coconut oil before, during and after pregnancy. Available from: www.divine-mama. com/blogs/mamahood/8242857-the- benefits-of-coconut-oil-before-during- and-after-pregnancy
6. Chang MY, Wang SY, Chen CH. Effects of massage on pain and anxiety during labour: a randomised controlled trial. JAdvNurs. 2002 [cited 2015 Sept 25]; 38(1):68-73Available from: http:// www.ncbi. nlm. nih.gov/ pubmed/ 11895532
7. Kavia M, Maghbool S, Tabaei MH. Effect of aromatherapy with jasminum officinale and salvia officinal on pain severity and labour outcome. Iran J Nurs Midwifery. 2014 [cited 2016 March 7]; 19(6):666-672. Available from: http://www. ncbi. nlm. nih. gov/ pmc/ articles/PMC4280734/
8. Martensson L, Bergh I. Effect of treatment for labour pain: Verbal reports versus visual analogue scale scores - A prospective randomized study. International Journal of Nursing and Midwifery. 2011 [cited 2016 Jan 12]; 3(4):43-47. Available from: http:// www.academicjournals.org/article/articl e1379408309_M%C3%A5rtensson%20 and%20Bergh.pdf.
9. Bharathi BJ. Effective nursing interventions on pain during labour among primi mothers. The Nursing Journal of India.2010 [cited 2016 April 13]; Vol. Cl No.6 Available from: http://www. tnaionline.org / june- 10/9. htm

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