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A Descriptive Clinical Study on the Effectiveness of Aromatherapy during First Stage of Labour in Selected Hospitals at Kolar District Karnataka

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Abstract: *Aromatherapy is the therapeutic applications of oil originating from various parts of herbal plants. The aim of the study was to assess the effectiveness of aromatherapy in first stage of labour with 30 experimental & 30 control groups of total 60 expectant mothers during first stage of labour. The research was a quasi experimental design after pilot study, the main study was performed with 10ml warm olive oil was back massaged for 10 min and scored the labour pain along with the socio-demographic variables were noted. There was significant difference between the labour pain level among first stage labour mothers in both experimental and control group after the application of aromatherapy to experimental group. All these indicated that aromatherapy is effective in reliving labour pain level and this procedure provide maximum comfort and satisfaction.*

Keywords*: Aromatherapy, primigravida, labour pain level, and socio-demographic variables.*

I. Introduction

Aromatherapy, a branch of herbology is one of the fastest growing therapies in the world today. **(1)** It is thought to enhance the parasympathetic response through the effect of touch, smell and encountering relaxation at a deep level. Regular aromatherapy helps to relax and relieve the discomforts like such as backache, swollen ankles during pregnancy and labour, birth and the postnatal period. The oils contain chemicals which act like drugs, some natural oils may are not suitable for pregnant mums since they may cause increase blood pressure. Essential oils may have hormone-like activity and their structure is similar enough to a hormones structure for them to interact with the same receptor. Oestrogenic activity has been found in certain plants due to their content of the chemical oestrone. Phytoestrogens are compounds that occur in plants and whilst they are not identical to human oestrogen, they are similar in structure and thereby elicit an oestrogenic response by reacting with oestrogen receptors. **(2)**

The following essential oils have been listed by the 'International Federation of Professional Aroma therapists" as being safe to use during pregnancy, in the correct low doses. Benzoin, Bergamot, Black pepper, Chamomile german, Chamomile roman. Early Stage – From 37 Weeks, Cypress, Eucalyptus, Frankincense, Ginger, Grapefruit, Geranium, Juniper, Lavender, Lemon, Mandarin, Marjoram Sweet, Neroli, Olive oil, Petitgrain, Rose Otto, Sandalwood, Sweet Orange, Patchouli, Sandalwood, Tangerine, Tea tree and Ylang ylang**.(3)**

In common oils that are used in pregnancy are lavender, citrus oils (Chamomile, frankincense, grapefruit, mandarin, neroli, orange & Ylang ylang). Essential oils have the power to rejuvenate the mind, body, emotions and spirit. Based on the folk & ancient practice the essential oils heal by "therapeutically" stimulating the olfactory senses, mental responses, circulatory and respiratory functions. These essences of essential oils are energizing and stimulate the release of endorphins, which may heals be less likely to use pain medication**. (4)**

Comparing to all the non pharmacological methods of pains relief during labour, back massage has many important benefits for the mother, such as it the mother as well as to the fetus. Olive oil is healthy and having more health benefits. Using aroma oils, olive oil, promote relaxations thereby reducing the labour pain perception without any side effects and any health professional could give. Hence the research was focused on a descriptive clinical study for the effectiveness of aromatherapy during first stage of labour to evaluate the effectiveness of aromatherapy on pain relief during first stage of labour among mothers in the selected Sri Narasimha Raja Hospital, at Kolar district.

II. Methodology

The descriptive clinical study was to evaluate the effectiveness of aromatherapy on pain relief during first stage of labour among mothers. The objectives are to assess the level of labour pain among mothers in experimental & control group before and after aromatherapy in relation to socio-demographic variables. The

study was conducted in Sri Narasimha Raja Hospital, Kolar district. with 30 experimental & 30 control groups of total 60 expectant mothers during first stage of labor in selected hospitals at Kolar. The research was a quasi experimental design with the non- equivalent control group was selected for the study.

Inclusion Criteria:

The following were the inclusion criteria in our study, first stage labour mothers with primigravida of 4-8cm cervical dilatation, the age group in between 18-37 years, willingness to participate in the study and are able to communicate in kanada or English. **(5, 6)**

Exclusion Criteria:

The exclusion criteria in our study was labour mothers of multigravida, admitted in caesarean section, women in second and third stage of labour & with bad obstetric history of gynecology problems and receiving narcotics & pain medication. **(5, 6)**

Procedure

The first stage labour mothers with primigravida were explained about the procedure, the position the mother was in left lateral position covered by the mother with bed sheet. The nursing care taker was in a hygienic process. The mothers in the control group did not use any pain reduction strategies where as in the experimental group aromatherapy. Mother was enquired about the pain index to mark the pain level. 10ml warm olive oil was back massaged for 10 min and repeats for every one hour during the active phase by placing one hand on top of the other in the small of the back and allows heat to build up under the hands and gently moved the hands in an anticlockwise circular movement with firm contact on the skin. After 10 min the pain index was noted.

Data collection tools were validated and reliability was established after pilot study, the main study was collected. The collected data were analyzed & interpreted using descriptive & inferential statistics. Frequency & percentage were computed to summarize the socio demographic variables, phase wise frequency and percentage distribution of labour pain among experimental and control group after aromatherapy and variable wise mean pain. Level of expectant mothers of experimental and control group pain values were computed to find out the relationship between the level of pain and selected socio demographic variables before and after aromatherapy and the 't' test was computed to find out the difference in the pain levels of the mothers in experimental and control group.

Description of the study tool:

The study consists of Section A & B. **(7, 8)**

Section A: Collecting and interpreting the socio-demographic data (age, education, occupation, family income, type of family, religion and area of residence).

Section B: Assess the level of first stage labour pain with a modified visual analog scale. The modified visual analog scale comprise of 10 cm horizontal line with end points marked as "mild pain" and" worst possible pain".

Modified visual analog scale

0 cm 1 2 3 4 5 6 7 8 9 10 cm

Description of scale (cm)	**Intensity of pain**
0 – 2 cms	Mild pain
2.1 – 4 cms	Moderate
4.1 – 6 cms	Severe pain
6.1 – 8 cms	Very severe pain
8.1 – 10	Worst possible pain

Table: 1 Frequency and percentage distribution according to their age.

	Experimental group		Control group	
Age	Frequency	Percentage	Frequency	Percentage
18-22 years	11	36.6	08	26.7
23-27 years	08	26.7	16	53.3
28-32years	08	26.7	03	10.0
33-37 years	03	10.0	03	10.0
total	30	100	30	100

Table: 2 Frequency and percentage distribution according to their educational status

Educational status	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Illiterate	04	13.3	0	0
Primary school	15	50.0	15	50.0
Secondary school	09	30.0	10	33.3
Graduate and above	02	6.7	05	16.7
total	30	100	30	100

Table: 3 Frequency and percentage distribution according to occupation

Occupation	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
House wife	19	63.3	20	66.7
Coolie	08	26.7	07	23.3
Private employee	03	10.0	01	3.3
Govt. employee	0	0	02	6.7
others	0	0	0	0
total	30	100	30	100

Table: 4 Frequency and percentage distribution according to their family income per month

Occupation	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
≤ 3000	10	33.3	08	26.7
3001-5000	11	36.7	15	50.0
5001-7000	09	30.0	07	23.3
≥7000	0	0	0	0
total	30	100	30	100

Table: 5 Frequency and percentage distribution according to type of family

Type of family	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Nuclear	13	43.3	18	60.0
Joint	15	50.0	10	33.3
Extended	02	6.7	02	6.7
Total	30	100	30	100

Table: 6 Frequency and percentage distribution according to their religion

Religion	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Hindu	13	43.3	20	66.7
Muslim	17	56.7	06	20.0
christian	0	0	04	13.3
Any others	0	0	0	0
total	30	100	30	100

Table: 7 Frequency and percentage distribution according to area of residence

Area of residence	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Rural	17	56.7	15	50.0
Urban	13	43.3	15	50.0
total	30	100	30	100

Table: 8 Assessment of pain level of labour in pre test

Pain level	Ranges of score	Experimental group		Control group	
		Frequency	Percentage	Frequency	Percentage
Mild pain	2-2cm	0	0	0	0
Moderate pain	2.1-4cm	0	0	01	3.3
Severe pain	4.1-6cm	21	70	16	53.4
Very severe pain	6.1-8cm	09	30	13	43.3
Worst possible pain	8.1-10cm	0	0	0	0
total		30	100	30	100

Table: 9 Assessment of pain level of labour in post test

Pain level	Ranges of score	Experimental group		Control group	
		Frequency	Percentage	Frequency	Percentage
Mild pain	2-2cm	0	0	0	0
Moderate pain	2.1-4cm	0	0	0	0
Severe pain	4.1-6cm	15	50	0	0
Very severe pain	6.1-8cm	15	50	01	3.3
Worst possible pain	8.1-10cm	0	0	29	96.7
total		30	100	30	100

Table: 10 Distribution of modified visual analog scores, mean, differences in mean and standard deviation in the first stage labour

Modified visual analog scale score	Experimental group		Control group	
	Pre test	Post test	Pre test	Post test
Minimum	4.4	4.5	04	66.7
maximum	6.8	7.7	6.8	20.0
mean	5.56	6.14	5.82	13.3
Difference in mean	0.58		3.15	
Standard deviation	0.60	0.79	0.68	0.42

Description Of Socio-Demographic Variables

In experimental group 36.6%of respondents were between the age group of 18-22 years old 10 % of them were between the age group of 33-37 years, 53.3 % were between the ages of 23-27 years, 10% of them were between the age group of 28-32 years in control group as noted in **Table: 1** and the **Table: 2** describe the majority (50%) of them were completed primary schools and only 6.7 % had completed graduate and above in experimental group. In control 50% were completed primary school and 6.7 % have completed graduate and above. The majority 63.3% of the first stage labour mothers were housewives and 26.7 % were cooli in experimental group in control group 66.7 % of first stage labour mothers were housewives and 3.3 % were working in private sector as in **Table: 3**. In experimental group 36.7 % have RS. 3001-5000 income per month in experimental group 50 % have Rs.3.001-5000 (**Table: 4)** income per month in control group. In experimental group50 % were in joint family and only 6.7 % were in extended family. In control group 60% were in nuclear family and only 6.7% were in extended family depicted in **Table: 5.**

The **Table: 6** explain the majority 56 % of the first stage labour mothers were Muslims in experimental group. In control group 66.7 % of responders were Hindus. In **Table: 7** experimental groups 56.7 % of the first stage labour mothers were living in rural area and 43.3 % were living in urban area. Similarly, in control group 50 % of the first stage labour mothers were living in rural area and 50 % were living in urban area. The mean pain scores among experimental and control group were same. The pre test mean score of pain in experimental group the minimum score was 4.4 and maximum score was 6.8 with X=5.56, S.D=0.60 as the control group the minimum score was 4.0 and maximum score was 6.8 with X=5.82, S.D=0.68 and calculated't' value was 1.63. This indicates that there was no significant (P>0.01) difference of mean pain scores among experimental and control group were mentioned in **Table: 8.**

Table: 9 discuss the post test mean score of pain in experimental group the minimum score was 4.5 and maximum score was 7.7 with X=6.14, S.D=0.79 as the control group the minimum score was 7.9 and maximum score was 9.8 with X=9.01, S.D=0.42 and calculated't' value was 17.45. This indicates that there was significant (P<0.01) difference of mean pain scores among experimental and control group. No significant association was found between all the variables selected for the study in the post test score of pain at P>0.05 level **Table: 10**.

III. Conclusion

Labour for most women is accompanied by much physical pain and emotions requiring special care in the form of gentle touch, back massage etc. Aromatherapy in the form of back massage not only provides physical comfort but also convey the message of carrying, sympathy, love and reassurance. **(9, 10)** Essential oils may have hormone-like activity if their structure is similar enough to a hormones' structure for them to interact with the same receptor. Phytoestrogens are compounds that occur in plants and whilst they are not identical to human oestrogen, they are similar in structure and thereby elicit an oestrogenic response by reacting with oestrogen receptors. The study revealed that majority of the first stage labour mothers had severe pain and only few of them had very severe pain before the application of aromatherapy. There was significant difference between the labour pain level among first stage labour mothers in both experimental and control group after the application of aromatherapy to experimental group. All these indicated that aromatherapy is effective in reliving labour pain level and this procedure provide maximum comfort and satisfaction.**(11)** The nursing science is the discovery of new knowledge to improve nursing practice. Nursing scientist seeking to develop evidence based

practices in clinical area. In conclusion good supervision and appreciation of aromatherapy application in the labour pain need to be encouraged by nurses in the hospitals and community areas.

References

[1]. Thomas DV. Aromatherapy: mythical, magical, or medicinal? Holist Nurs Pract. 2002 Oct; 16 (5):8-16.
[2]. Tisserand, R., & Young, R. Essential oil safety. New York, NY: Churchill Livingstone.2013.
[3]. Buckle, J. Clinical aromatherapy: Essential oils in practice (2nd ed.).London, England: Churchill Livingstone.2003.
[4]. Buckle, J. Literature review: should nursing take aromatherapy more seriously? British Journal of Nursing, 2007: 16 (2), 116-120.
[5]. Burns, E., Zobbi, V., Panzeri, D., Oskrochi, R., & Regalia, A. Aromatherapy in childbirth: A pilot randomized controlled trial. BJOG An International Journal of Obstetrics and Gynaecology, 2007; 114, 838-844.
[6]. Kaviani, M., Azima, S., Alavi, N., & Tabaei, M. H. The effect of lavender aromatherapy on pain perception and intrapartum outcome in primiparous women. British Journal of Midwifery, 2014; 22, 125-128.
[7]. Luo, T.Z., Huang, M.L., Xia, H.A. and Zeng, Y.C. Aromatherapy for Laboring Women: A Meta- Analysis of Randomized Controlled Trials. Open Journal of Nursing, 2014; 4, 163-168.
[8]. Coleman Smith, V. Aromatherapy as a comfort measure during the childbearing year. International Journal of Childbirth Education, 2012; 27, 26-30.
[9]. Oweis A, Abushaikha L. Jordanian pregnant women's expectations of their first childbirth experience. International Journal of Nursing Practice. 2004; 10264–271
[10]. Lubna Abushaikha RN and Arwa Oweis RN . Labour pain experience and intensity: A Jordanian perspective International Journal of Nursing Practice 2004; 10: 264–271.
[11]. Burns, E. E., Blamey, C., Ersser, S. J., Barnetson, L., & Lloyd, A. J. An investigation into the use of aromatherapy in intrapartum midwifery practice. Journal of Alternative and Complementary Medicine, 2000; 6(2),141-147.