

Full Length Research Paper**A Study to Assess the Effect of Sacral Massage on Pain during First Stage of Labour among the Mothers in Government Medical College and Hospital: A Case Study of Tiruvannamalai, India**Jayanthi Gopal¹, R. Sheela², O. Chandra Sekhara Reddy³ and Kota Vasudeva Rao⁴¹Lecturer, Ambo University, Ambo, Ethiopia.²Lecturer, Vignesh Nursing College, Tiruvannamalai, Tamilnadu, India.³Associate Professor, Ambo University, Ethiopia.⁴Assistant Professor, Ambo University, Ethiopia***Corresponding Author: O. Chandra Sekhara Reddy****Abstract**

Labour is a complex physical and psychological process. Pregnant women are commonly anxious about the pain they experience during labour and birth. Hence, relaxation technique like sacral massage should be encouraged to promote comfort. Sacral massage can provide a focus of attention and provide pain distraction or relief for the labouring mother. Sacral massage stimulates release of endorphins and reduces the need for analgesic drugs. It distracts the mother from the perception of pain and relieves anxiety and help the mother to cope with the labour pain process. Hence the aim of the study is to assess the effectiveness of sacral massage in reducing the labour pain.

Key words: Sacral massage, pain, first stage, mothers, effect**Introduction:**

The reproductive process through which a new baby is conceived, incubated and ultimately born in the new world. Labour purely is physical sense. It may be described as the process by which the fetus, placenta and membranes are expelled through the birth canal. Whatever happens during labour can affect the relationship between the mother and baby and it can influence on future pregnancies. Labour is consider to be normal, when the mother is at near to term, no complications exist, a single fetus presence by vertex, and labour is completed first stage (Annamma Jacob, 2005).

Labour is a complex physical and psychological process. Pregnant women are commonly anxious about the pain they experience during labour and birth. Hence, relaxation technique like sacral massage should be encouraged to promote comfort. Labour pain is probably the most painful event in the lives of women; consequently, majority of women today requires pain control. Labour pain is more than a physiological process; it is emotional and complex with feelings of fulfillment and achievement. Midwives are therefore required to give control of pain rather than eradicating it (Basavanthappa B.T, 2006).

Massage stimulate the body to release endorphins, which are natural pain killing substances and stimulates for the production of oxytocin, decreases stress hormones and neurological excitability. The individual cell of the body depends on abundant supply of blood and lymph because these fluids supplies nutrients, oxygen and carry waste and toxins. Hence, this can be achieved (Mc Crea BH and Wright ME, 1998).

The woman can focus on tactile stimuli such as touch, massage, or stroking. She may focus on auditory stimuli such as music, humming, or verbal encouragement. The use of these techniques keeps the sensory input perceived during the contraction form reaching the pain center in the cortex of the brain from Nichols Institute Diagnostics (Adele Pillitteri, 2003).

The retrospective, descriptive survey examined which non-pharmacologic pain relief techniques laboring women use most often the chosen techniques. Of the non-pharmacological strategies rated by the sample breathing techniques, relaxation, acupressure, and massage were found to be the most effective. (Sato, Y., Nagao, H.1983)

Jimenez suggested that the focus must change from pain management to comfort management, as educators equip clients with skills that can result in increased comfort. The use of nondrug interventions should complement, not replace, pharmacologic interventions for the management of labour and delivery pain. Although non-pharmacologic methods can be effective in helping patients relax during labour, few well-controlled studies demonstrate that these methods actually reduce perceived pain. Therefore, this study

examined which non-pharmacologic pain relief techniques laboring women used most often and the effectiveness of the techniques used (Thomas, C. L.1989).

Reducing pain and enhancing progress in labour: A guide to non pharmacologic methods for maternity caregivers.” This review examined currently available evidence supporting the use of alternative and complementary therapies for pain management in labour. Women receiving hypnosis/imagery were more satisfied with their pain management in labour compared with control (Prabhakara, G.N, 2005).

The essence of midwifery can be with women providing comfort in labour. Touch communicates caring and reassurance. Manual healing method used today during delivery includes touch and massage therapy. Painful uterine contractions can be treated by applications of pressure with the hands to woman’s back, hips, thighs and sacrum. By massage therapy, pharmacological management during first stage of labour can be reduced. So less negative effect will be there on fetal and mother.

Methodology

Research methodology is a way to systematically solve the research problem. It contains of various steps that are generally adopted by a researcher in studying the problem along with the logic behind them. The methodology of research indicates the general pattern of organizing the procedure for gathering valid and reliable data needed for the study.

The paper deals with the methodology that was selected by the investigator in order to find out the effectiveness of sacral massage on labour pain among intranatal mothers .The methodology of study includes research approach, research design, variables, settings, population, sample, sampling criteria, sampling technique, development and description of tool, reliability of tool, pilot study, data collection process and plan for data analysis.

Research design

The research design is the architectural backbone of the study .The research design is the overall plan for obtaining answer to the questions being studied and for handling some of the difficulties encountered during the research process .The research design selected for the study was quasi experimental design

Variables

Variables are qualities, properties or characteristic of persons, things or situation that change / vary. The variables under the study were:

Independent variable: An independent variable is the treatment or experimental activity that is manipulated or varied by the researcher to create an effect on the dependent variable. In this study independent variable is sacral massage.

Dependent variable: It is the response, behavior, or outcome that is predicted or explained in research. In this study dependent variable is pain during first stage of labour.

Extraneous variable: An uncontrollable variable that greatly influences the result of the study.The extraneous variable in the present study includes age, educational qualification, religion, occupation.

Settings: The study will be conducted at government medical college and hospital Tiruvannamalai.

Population: In this study population refers to pregnant women who are in first stage of labour.

Sample technique

- ❖ The entire set of individual or objects having some common characteristics are called as population. Sample is a subset of population, selected to participate in the study. Sampling is the process of selecting a portion of population to represent entire population.
- ❖ The sample of present study compromised of 30 intranatal mother who are coming for labour pain in government medical college and hospital, Tiruvannamalai.
- ❖ The sampling technique adopted for sample is non-probability convenience sampling.

Sample size

Sample size is 30 women. Out of which 15 women will be for experimental group and 15 women for control group.

Data collection method

Formal permission will be obtained from the concerned authorities and participants after explaining the purpose of the study by the investigator. Confidentiality will be assured to the samples and pre test will be conducted for intranatal mothers i.e., in treatment group and control group (30 samples). Pain level will be assessed by numerical rating scale. After the pre test, back massage will be given during the time of contraction till the pain subsides only for experimental group followed by post-test.

Descriptive and inferential statistics will be used to analyze the data on the objectives of study, frequency and percentage were used to

S No.	Score	Diagnosis	Frequency		Percentage (%)	
			Experimental	Control	Experimental	Control
1.	3 &<3	Mild pain	-	-	-	-
2.	>3&<7	Moderate pain	11	12	73.3%	80%
3.	7&>7	Severe pain	4	3	26.7%	20%

summarize sample characteristics and clinical variables level of pain and perception of both experimental and control group.

- ❖ Mean standard deviation, paired-t test and unpaired t-test will be used to calculate effectiveness of back massage in reduction of pain in both experimental and control group.
- ❖ Chi square test will be computed to find association between selected variables with pain and control group.

Table 1: Pain of intranatal mothers in experimental and control group.

n=30

χ^2 (tab) value at 0.05 LOS is 5.99

Ns=not significant

The study reflected that in experimental group 11 (73.3%) of the mother were having moderate pain, 4 (26.7%) had severe pain, and in control group 12 (80%) had moderate pain, 3 (20%) had severe pain.

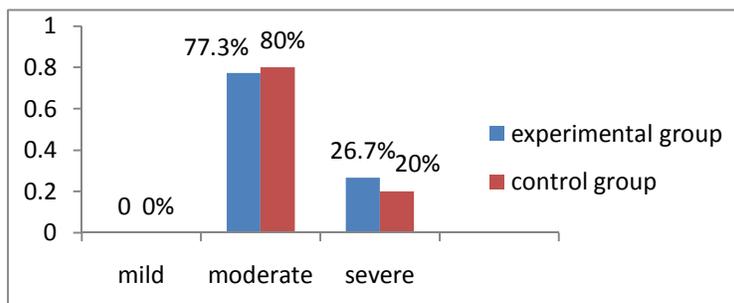


Fig 1: The percentage distribution of pain level of mothers in the experimental and control group.

Effect of sacral massage on pain among intranatal mothers

In order to determine the effect of sacral massage on pain, the significant difference between mean of pre-test and post-test scores of sample were computed using a paired ‘t’ test. To test the statistical significance of difference between the mean of pre-test and post-test scores of the sample the following hypothesis were started at 0.05 level of significance.

Table 2: Mean, Mean difference, Standard error of difference and ‘t’ value of pre-test and post-test pain scores of sample

Score	Mean	Mean Difference	SE(D)	df	‘t’ value	LOS
Pre experimental	7.73					
Post experimental	6.13	1.6	-1.7	1.4	5.74	P<.05

n=30

χ^2 (tab) value at 0.05 LOS is 5.99

Ns=not significant

The data showed in the table – depicts the mean post-test pain score is significantly less than their mean pre-test scores. The calculator ‘t’ value for pain is 5.74 which is greater than the table value at 0.05 level. The paired ‘t’ test shows that the sacral massage was found to be effective for reducing pain.

Association between pain and selected demographic variables.

This section deals with the analysis of association between pain and selected demographic variables using Yates correction. In order to find out the association between pain and selected demographic variables the following hypotheses were formulated.

Table 3: Association between the Pain and Age

Age	Pain level		Chi-square value	df	LOS
	Mild	Moderate Severe			

n=30

20-25yrs	-	8	6			
26-30yrs	-	6	3	0.06	2	p>.05
31-35yrs	-	4	3			

n=30 χ^2 (tab) value at 0.05 LOS is 5.99 Ns=not significant

The above table shows that there was no significant association between the pain and age ($\chi^2=0.1813, p>0.05$) at 0.05 level of significance. Hence, a null hypothesis is accepted and research hypothesis is rejected.

Table 4: Association between the Pain and Educational status

Education	Pain level			Chi-square value	df	LOS
	Mild	Moderate	Severe			
Literate	-	12	5	0.432	1	p>.05
Illiterate	-	6	7			

n=30 χ^2 (tab) value at 0.05 LOS is 5.99 Ns=not significant

The above table shows that there was no significant association between the pain and age ($\chi^2=0.432, p>0.05$) at 0.05 level of significance. Hence, a null hypothesis is accepted and research hypothesis is rejected.

Table 5: Association between the Pain and Occupational status:

Occupation	Pain level			Chi-square value	df	LOS
	Mild	Moderate	Severe			
House wife	-	10	8	0.0213	1	p>.05
Working	-	6	6			

n=30 χ^2 (tab) value at 0.05 LOS is 5.99 Ns=not significant

The above table shows that there was no significant association between the pain and age ($\chi^2=0.0213, p>0.05$) at 0.05 level of significance. Hence, a null hypothesis is accepted and research hypothesis is rejected.

Table 6: Association between the Pain and Religion

Religion	Pain level			Chi-square value	df	LOS
	Mild	Moderate	Severe			
Hindu	-	13	6	3.6	2	p>.05
Muslim	-	3	2			
Christian	-	4	2			

n=30 χ^2 (tab) value at 0.05 LOS is 5.99 Ns=not significant

The above table shows that there was no significant association between the pain and age ($\chi^2=3.6, p>0.05$) at 0.05 level of significance. Hence null hypotheses is accepted and a research hypothesis is rejected.

Table 7: Association between the Pain and Gravida

Gravida	Pain level			Chi-square value	df	LOS
	Mild	Moderate	Severe			
Primi	-	13	7			

Multi	-	6	4	3.6	1	p>.05
χ^2 (tab) value at 0.05 LOS is 5.99				Ns=not significant		

n=30

The above table shows that there was no significant association between the pain and age ($\chi^2=3.6, p>0.05$) at 0.05 level of significance. Hence a null hypothesis is accepted and a research hypothesis is rejected.

Conclusion

The focus of study conducted was to evaluate the effectiveness of sacral massage among pregnant mothers in government medical college and hospital in tiruvannamalai. The study involved selection of 30 samples by the non-probability convenience sampling technique and collected of data and interpreted by using descriptive and inferential statistics these conclusions were drawn on the basis of the study finding includes. The present study related the pregnant mother having pain in the labour progress. Provided the sacral massage to the mothers. Improved 't' test which was computed between pre test and post test scores of the sample group indicates that the sacral massage was effective. The present study shows that there is significant difference between pre-test and post-test pain in pregnancy. The present study shows that there is no significant association between the variables.

Acknowledgement

Author expresses sincere thanks to Dr.Chandrasekar., MD, DGO Dean of the Government Medical College and Hospital in Tiruvannamalai for granting permission to collect data required for this study.

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