International Journal of Allied Medical Sciences and Clinical Research (IJAMSCR)

ISSN: 2347-6567

IJAMSCR |Volume 3 | Issue 2 | April-June- 2015
www.ijamscr.com

Research article *Medical research*

To evaluate the effectiveness of selected intervention in reducing level of pain perception among primi gravida mothers.

***Angel Rajakumari.G[1], Soli.T.K[2], Sheela.R[3], Muthulakshmi.A[4]**

[1]*Professor, Department of obstetrics and Gynecology, Annai Dora College of Nursing, Aundipatty, Tamilnadu, India.*

[2]*Staff Nurse, King Saud Hospital, KSA, India.*

[3]*Asst.Professor, Vignesh nursing college, Tiruvannamalai, Tamilnadu, India*

[4]*Principal, Annai Dora College of Nursing, Aundipatty, Tamilnadu, India.*

***Corresponding Author: Angel Rajakumari.G**

ABSTRACT

AIM

To evaluate the effectiveness of massage therapy in terms of level of pain perception among primi gravida mothers

PARTICIPANTS AND SETTING

The study was conducted in Nirmala Hospital, in Suryapet, Telugana, India in with 700 annual births. The primi gravida mothers were recruited and were allocated by non-probability purposive sampling technique into the two arms of the study, but only 20 in study and 20 in control group participants.

INTERVENTION

The study group received massage therapy to apply sacrum, buttocks, shoulders, waist, foot and hand during active phases of labour. The massage therapy was given by investigator for 20 minutes again the same step is repeated in a 10 minutes interval.

MEASUREMENT AND FINDINGS

In active stage of labour (3-6 cm of cervical dilatation) the women completed the demographic and obstetrical information and pain was measured by 0- 10 Modified combined numerical categorical pain intensity scale. This study revealed that there was high significant difference found in pain at $p<0.001$level between study and control group.

CONCLUSION

The study concluded that, clinical implementation of massage therapy usage during labour could be an effective non pharmacological intervention in reducing pain perception.

KEYWORD: Massage therapy, Pain perception, first stage of labour, primi gravida mothers.

INTRODUCTION

Pregnancy is the special event not only in the life of the woman but also in the entire family. The labor and birth process is an exciting, anxiety provoking but rewarding time for the women and her family.

Childbirth is a natural biological process. The nature of pain experienced during labor depends on the cervical dilatation of the study was conducted with 78 women labour to find out the ways does labour pain changes as cervical dilatation increases. They were asked to describe the nature of their pain using 3 self report scales. Pain was typically characterized as "discomforting"," excruciating" and horrible when closer to delivery. Study was concluded that when the cervical dilatation increases, the pain intensity also increases.[1] Duration of labor pain and induced anxiety would affect the function of respiratory, circulation and endocrinology system, which would lead to an increase in number of dystocia. This would cause an increase in instrumental and manipulative delivery and even lower Apgar scores. Harmful effects of severe labor pain on mother and fetus, especially in high risk pregnancies, makes labor pain relief, a must. Also, the duration of labor pain would affect the outcome of pregnancy and complications of the labor Increased duration of delivery is accompanied by higher risk of infection, physical and mental harms and death for baby and higher probability of postpartum hemorrhage, infections, exhaustion, anxiety and psychosis.[2] Today, various pharmacological and no pharmacological interventions are used to relief the labor pain. Most of the analgesics have side-effects for mother and baby.[3] Pharmacological pain relief methods include administration of narcotics, sedatives, inhaling analgesia, pudendal, paracervical and spinal blockage and epidural anesthesia (6). Fetal respiratory depression is the side effect of pethidine as a common labor pain relief; especially if it is used 2 to four hours prior to birth. Epidural anesthesia could lead to sympathetic blockage and consequently, decreased maternal cardiac output, bladder distension, prolongation of second stage of the delivery and catheter displacement. To relief labor pain, nitroxide, also could be administered. It would not cause second stage prolongation, but as all other anesthesia drugs, would pass the placenta and suppress fetal central nervous system.[4] Non-pharmacological pain relief approaches have different advantages such as lack of side-effect for mother and fetus and also being pleasant for both of them. Some of these approaches are muscle relaxation, respiratory techniques, hydrotherapy, music therapy, and massage therapy. Some cultures have used massage therapy as a pain relief during labor, for hundreds of years. Massage therapy is a scientific art that implement systematic hand techniques on soft tissue, muscles, tendons, ligaments, and fascia and uses hand, foot, knee and forearm in its techniques. Massage would cause the endorphin release and reduce the ischemia by amplification of local blood supply. All of these would stimulate the sympathetic system and relax the skeletal muscles.[5]

MATERIALS AND METHODS

This was a randomized interventional study. The study was conducted in Nirmala Hospital, suryapet, Telagana India with 700 annual births. Formal approval was obtained from the institutional review board and from the labour room director of the Nirmala hospital suryapet to conduct the present study. Primi gravida mothers were recruited and were allocated by non probability sampling technique into the two arms of the study. Out of 50 primi gravida mothers, 20 of them were allotted to study group and 20 of them to control group participants completed. The inclusion criteria for sample selection includes primi gravida mothers at gestational age 37 to 40 weeks with initial cervical dilation>3cm with single fetes with cephalic presentation and who had normal vitality. The study group received massage therapy interventions. Each massage therapy lasted 20 minutes. Massage therapy was done using effleurage method as a type of Swedish massage technique. The massage is administered on sacrum, buttocks, shoulders, waist, foot and hand during different phases of labor In active stage of labour (3-6 cm of cervical dilatation) the women completed the demographic and obstetrical information and pain was measured by 0- 10 Modified combined numerical categorical pain intensity scale. Demographic variables were computed by using descriptive statistics. Pain scale was analyzed by using inferential statistics to assess the effectiveness of massage therapy during the first stage of labour. Frequency and percentage distribution was used to analyze the demographic and obstetric data of the primi gravida mothers in experimental and control group. Mean and standard deviation was used to compute the pre and post assessment level of pain perception among primi gravida mothers in experimental and control group. Paired 't' test is used to assess the effectiveness of massage therapy on labour.

THE QUESTIONNAIRE FOR PRESENT RESEARCH STUDY COMPRISES OF TWO SECTIONS
SECTION I

It consists of demographic variables of the primi gravida mothers such as age, education, area of residence, type of family and gestational age.

SECTION II

Modified combined numerical categorical pain intensity scale, which is a modified pain scale selected for the assessment of the labour pain. The scale is grouped into five categories.

0	-	No pain
1 – 3	-	Mild pain
4 – 6	-	Moderate pain
7 – 9	-	Severe pain
10	-	Excruciating pain

RESULTS

Table 1: Comparison of pre and post-assessment level of pain perception of mothers received massage therapy

N =20

Session	Experimental Group				't' value
	Pre assessment		Post assessment		
	Mean	S.D	Mean	S.D	
Session I	10.09	0.92	5.4	1.08	14.78*** (S)
Session II	9.48	0.461	5.14	0.716	22.79***(S)

***p<0.001 level, S – Significant

The above table 1 shows that the 't' values in session I and session II were 14.78 and 22.79 which was significant at p<0.001 level respectively. It reveals that the primi gravida mothers' level of pain perception has reduced after massage therapy. There was a significant reduction in the level of pain perception among primi gravida mothers after massage therapy.

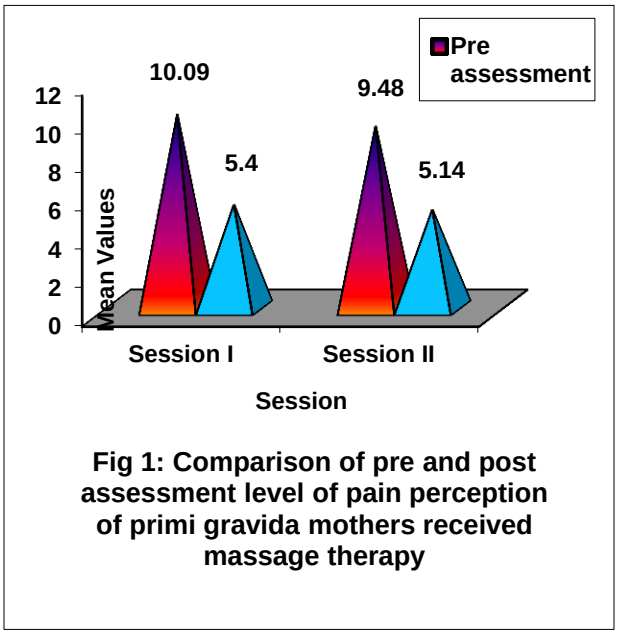

Fig 1: Comparison of pre and post assessment level of pain perception of primi gravida mothers received massage therapy

Table 2: Comparison of pre and post-assessment level of pain perception of the primi gravida mothers in the experimental and control group

N = 40

Group	**Pre assessment**		**Post assessment**		**'t' value**
	Mean	**S.D**	**Mean**	**S.D**	
Experimental	7.26	0.631	7.93	0.663	3.273*** (S)
Control	12.70	0.902	12.17	0.903	1.85

***p<0.001level, S–Significant

The above table 2 shows that the obtained' value in the experimental group was 3.273, which was significant at p<0.001 level and the 't' value of 1.85 in the control group was not significant at any level.

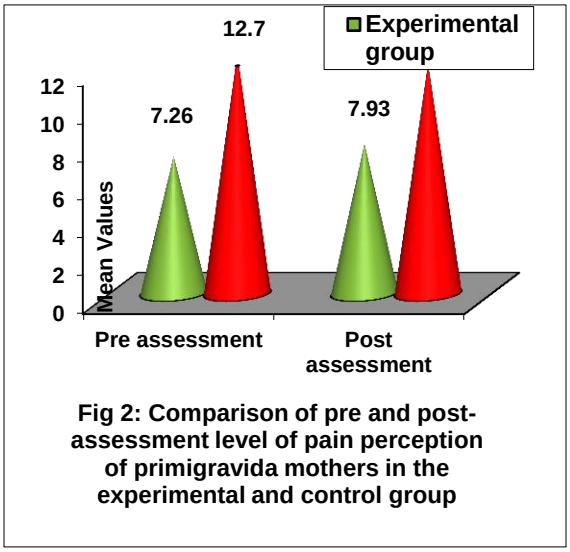

Fig 2: Comparison of pre and post-assessment level of pain perception of primigravida mothers in the experimental and control group

DISCUSSION

Massage therapy during delivery would lead to relaxation and consequently, a rapid and easy delivery. So, using new supportive pain relief methods such as massage therapy during delivery would change the delivery process into a desirable experience, by providing an effective emotional support. If this happens, labor induced pain and anxiety and therefore, tendency toward elective cesarean would be reduced. Today, the indication of many cesareans is not saving the life and health of mother and baby, but it is performed to avoid labor pain. The above table 1 shows that the 't' values in session I and session II were 14.78 and 22.79 which was significant at p<0.001 level respectively. It reveals that the primi gravida mothers' level of pain perception has reduced after massage therapy. There was a significant reduction in the level of pain perception among primi gravida mothers after massage therapy. The above table 2 shows that the obtained' value in the experimental group was 3.273, which was significant at p<0.001 level and the 't' value of 1.85 in the control group was not significant at any level.

CONCLUSION

Massage therapy induces muscle relaxation, increases the mother's peace, induces endorphin release, and increases the internal oxytocin, causing uterine contraction and decreased bleeding after delivery. As shown by the findings of our study, massage therapy is very effective for pain during labor, reducing pain severity in the first stage of labour. It is hoped that the results of the present research contribute to the improvement and promotion of the quality of obstetrical care.

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How to cite this article: Angel Rajakumari.G, Soli.T.K, Sheela.R, Muthulakshmi.A, To evaluate the effectiveness of selected intervention in reducing level of pain perception among primi gravida mothers. Int J of Allied Med Sci and Clin Res 2015;3(3):200-204.
Source of Support: Nil. **Conflict of Interest:** None declared.