International Journal of Research in Engineering, Science and Management
Volume-2, Issue-9, September-2019
www.ijresm.com | ISSN (Online): 2581-5792

Effectiveness of Jasmine Oil Massage on Back Pain and Selected Fetomaternal Parameters Among Primigravida Mothers

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***Abstract*: This paper presents an effectiveness of jasmine oil massage on back pain and selected fetomaternal parameters among primigravida mothers.**

***Keywords*: jasmine oil massage, back pain, fetomaternal**

1. Introduction

Child birth is linked to the experience of pain. Labour pain is often described as the most intense pain ever experienced, and in many cases, it is the aspect of childbirth most feared by the expectant mother. The goal of eliminating labour pain is based on the assumption that pain inevitably equals suffering. Many pharmacological approaches are carried out to relive pain which causes deleterious effect on mother's and fetus health. Massage therapy is one of the most wonderful methods that can be used during labour with numerous physical and emotional benefits. An aromatherapy massage given by partner or a member of birth team is a wonderful way to help the women to relax and soothe the pain of contractions. The oils help reduce friction on the skin at the same time as having therapeutic benefits. Women who have experienced skillful massage during labour say that the massage was helpful and pain relieving. Pain in labour is nearly universal experience for child bearing women. Pain and its relief for women in labour has been a subject of interest since the dawn of mankind. Pain during childbirth is generally handled with pharmacological techniques. Complementary, non-pharmacologic methods of pain relief are a part of nursing practice that can be safely introduced in early labour. Massage is one of the best non pharmacological therapy useful in labour. It has the potential benefits such as decreasing the intensity of pain, relieving the muscle spasm, promoting general relaxation and reducing anxiety. A back massage is always comforting, particularly if the woman is experiencing back pain.

Jasmine oil is one of the essential oil used in labour. Jasmine's ability to reduce pain and spasms and increase contraction strength makes it one of the best essential oils for labour. Massage around the lower back with jasmine, clary sage, rose and lavender has been reported to provide 3subjective benefit in labour. It stimulates the body to release endorphins, which are natural pain killing and mood lifting substances. Massage is hence recommended by child birth experts as it has been shown to ease pain and reduce anxiety in the first stage of labour and also linked with the shorter labours and a low risk for postpartum depression

2. Methodology

The research design used for this study was quasi experimental design [Pretest post test control group design]. The research approach used for the study was evaluative approach which was conducted in govt Hospital, Ninital. Conceptual frame work adopted in the present study was modified Wiedenbach's- helping art of clinical nursing theory (1969). The sample size was hundred primi mothers. The samples were selected by convenient sampling method for control and experimental group. Visual analogue scale was used to measure the level of low back pain, fetomaternal parameter grading was used to measure the fetomaternal parameters, and rating scale was used to assess the level of satisfaction on Jasmine oil back massage The convenient sampling technique was used to select 100 samples out of which 50 for experimental groups and 50 for control group. The samples for control and experimental group were selected on alternative days. For experimental group 1-2 samples were selected per day. The investigator gave brief introduction to the primi mothers.

The pretest was assessed for both experimental group and control group by using visual analogue scale for low back pain and fetmaternal parameter grading for fetomaternal parameters. The Jasmine oil back massage was given for 10 minutes in every one hour with 10 ml of Jasmine oil in experimental group for three times. The post test was done after 15 minutes of Jasmine oil back massage. Primi mothers in control group were given routine hospital care, and then the post test was done after one hour of pre test. Finally, the post test level of satisfaction on Jasmine oil back massage was assessed by using rating scale among experimental group. The collected data were analyzed and tabulated using descriptive and inferential statistics

3. Result and discussion

The finding of the study reveals that Regarding age in experimental group, majority of primi mothers (70%) belonged

to the age group of 18-25 years and least (30%) belonged to age group of 26-30 Years. In control group majority of mothers (70%) belonged to the age group of 18-25 years and least (40%) belonged to the age group of 26-30 years. With regard to education in experimental group, majority of the mothers (50%) had Higher secondary education, (30%) were illiterate, (10%) were graduate and least (10%) had only primary school education. In control group majority of mothers (40%) had primary education, (16%) had Higher secondary education, (14%) were illiterate and least (30%) were graduate. Regarding the residence in experimental group majority of the mother (57%) were from rural area and least (43%) were from urban area. In control group majority of the mother (50%) were in rural area, and least (50%) were in urban area. Regarding type of family, in experimental group majority of the primi mothers (57%) were from nuclear family and least (43%) were from joint family. In control group majority of the primi mothers (53%) were from nuclear family and least (47%) were from joint family.

In regard to income, in experimental group majority of mothers (73%) monthly income were above Rs 5000, (20%) of mothers it was between Rs.3000- Rs.5000, and least (7%) were below 3000. In control group majority of mothers (46%)were having onthly income of Rs.3000- Rs. 5000, (34%) of mothers it was above Rs5000, and least (20%) were in below Rs 3000.With reference to religion both experimental group and control group majority of primi mothers belonged to Hindu religion. In experimental group (67%) and incontrol group (87%) were from Hindu. Less number of primi mothers (23%) and (10%) were Christian and Buddhist in the experimental group whereas (10%) and (3%) of primi mothers were Christian and Buddhist in the control group.

Pre test and post test level of low back pain in experimental group depicts that, during pre test majority of primi mothers (47%) had severe level of low back pain and (43%) had moderate level of low back pain. Whereas in post test majority of (81%) primi mothers had moderate level of low back pain and (30%) had severe level of low back pain. Pre test and post test level of fetomaternal parameters in experimental group depicts that, during pretest and post test all the samples (99%) fetal heart rate range were in normal limits. In regard to Uterine contraction duration, during pretest all the samples (98%) Uterine contraction duration were in normal range whereas in post test majority (74%) of primi mothers uterine contraction duration were in normal range; all the mothers (98%) Uterine contraction frequency, systolic blood pressure and diastolic blood pressure were in normal range both in pretest and post test.

Pre test and post test level of low back pain in control group depicts that, during pre test majority of primi mothers (77%) had moderate level of low back pain and (23%) had moderate level of low back pain, whereas in post test majority of (64%) primi mothers had severe level of low back pain and (36%) had moderate level of low back pain. Pre test and post test level of fetomaternal parameters in control group depicts that, during pretest and post test all the samples (100%) fetal heart rate range were in normal limits. Majority of primi mothers (97%) Uterine contraction duration ranges were in normal limits both in pre test and post test; all the mothers (100%) Uterine contraction frequency, systolic blood pressure and diastolic blood pressure were in normal range both in pretest and post test.

The data analysis showed that the post test mean score of level of low back pain 8(SD±0.547) was lower than the pretest mean score 10(SD±1), the paired‘t’ value was 11.12 (table value=3.33) at $p<0.05$ level of significance shows that there is a significant difference in the level of low back pain between the pretest and post test in experimental group. The findings are consistent with the findings of Jeyalakshmi S., (2008) who had conducted a study on effectiveness of Jasmine oil massage therapy upon the low back pain of parturient mother in the first stage of labor at Andhra Mahila sabha, Chennai. The study findings are showed that, the post test mean score of level of low back pain 6.12(SD+0.491) was lower than the pre test mean score 7.82(SD+0.656), the paired ‘t’ value was 17.433 which was showed that there is a significant difference in the level of low back pain between pretest and post test.

Hence the research hypothesis H1: There is a significant difference between the pretest and post test level of low back pain in experimental group was accepted. In regard to fetomaternal parameters, the post test mean score of uterine contraction duration 65(SD+8.700) was higher than the pretest mean score 59.03(SD+5.542), the paired ‘t’ value was 5.150 (table value = 4.239) at $p<0.05$ level of significance shows that there is a significant difference in the uterine contraction duration between pretest and post test. The post test mean score of uterine contraction frequency 2.719(SD+0.496) was lower than the pre test mean score 3.819(SD+0.629), the paired ‘t’ value was 8.909 (table value = 1.699) at $p<0.05$ level of significance shows that there is a significant difference in the uterine contraction frequency between pretest and post test. The mean of other fetomaternal parameters like fetal heart rate, systolic blood pressure and diastolic blood pressure were same in both pretest and post test.

The findings are consistent with the findings of Jeyalakshmi S., (2008) who had conducted a study on effectiveness of Jasmine oil massage therapy upon the low back pain of parturient mother in the first stage of labor. The study findings are showed that, in experimental group the mean and standared deviation of uterine contraction frequency interval before therapy was high 4.21(SD+0.642) compared to after therapy 3.46 (SD+ 0.501). Uterine contraction duration was low in before therapy 57.67(SD+6.045) compared to after therapy 71.83(SD+7.234). This showed that massage therapy increased the uterine contraction duration and decreased the frequency interval of contraction. The mean of other fetomaternal parameters such as fetal heart rate, mother’s pulse rate, and blood pressure were same before and after therapy.

Hence the research hypothesis H2: There is a significant

difference between the pretest and post test level of fetomaternal parameters in experimental group was accepted.

The data analysis showed that the post test mean score of level of low back pain 8(SD±0.547) was lower than the pretest mean score 10(SD±1), the paired 't' value was 11.12 (table value=3.33) at p<0.05 level of significance shows that there is a significant difference in the level of low back pain between the pretest and post test in control group. The findings are consistent with the findings of Jeyalakshmi S., (2008) who had conducted a study on effectiveness of Jasmine oil therapy upon the low back pain of pertinent mother in the first stage of labor. The findings are showed that, the post test mean score of level of low back pain 8.37(SD±0.454) was higher than the pretest mean score 7.68(SD±0.0.593), the paired't' value was 6.085 shows that there is a significant difference in the level of low back pain between the pretest and post test in control group.

In control group the pretest mean score of fetomaternal parameters such as uterine contraction duration 53.55(SD+6.46), systolic blood pressure 116.3(SD+6.31) and diastolic blood pressure 74(SD+5.53) were lower than the post test. The pretest mean score of fetal heart rate 136.9(SD+3.66) and uterine contraction frequency 3.43(SD+0.75) were higher than the post test. The findings are consistent with the findings of Jeyalakshmi S., (2008) who had conducted a study on effectiveness of olive oil massage therapy upon the low back pain of pertinent mother in the first stage of labor. The findings are showed that in control group the mean, standard deviation of fetomaternal parameters such as mothers pulse rate 66.98(SD+6.28), uterine contraction duration 56.17(SD+7.82), systolic pressure 116.23(SD+8.33), diastolic pressure 76.93(SD+3.44) were low in before therapy compared to after therapy.

The data analysis showed that the mean post test level of low back pain in the experimental group 6(SD+0.547) was significantly lower than the mean post test level of low back pain in the control group 7(SD+1.095). Independent 't' value was 4.310 (table value = 1.645) at p<0.05 level of significance shows that there is a significant difference in the level of low back pain between experimental group and control group. The study findings are consistent with the findings of Khoda Karami, Safarzadeh (2006) who had conducted a study to evaluate the effect of massage therapy on severity of labor pain. The findings of the study shows that the mean of pain severity at the first stage of labor was significantly different between the experiment group and the control group, at the start of active phase (p=0.009), end of transitional phase (p=0.014) and end of first stage (p=0.01). Also, the duration of the first stage of labor was different in experimental group and control group. It is supposed that the results of the study would introduce massage therapy as a non-pharmacological measure during delivery to reduce the labor pain.

Hence the research hypothesis H3: There is a significant difference in the post test level of low back pain between experimental group and control group was accepted Regarding the fetomaternal parameters, the post test mean score of uterine contraction duration 63(SD+8.700) in experimental group was higher than the post test mean score of uterine contraction duration 57.50(SD+7.82) in control group. Independent 't' value was 7.422 (table value = 1.645) at p<0.05 level of significance shows that there is a significant difference in the uterine contraction duration between experimental group and control group. The post test mean score of uterine contraction frequency 2.719(SD+0.496) in experimental group was higher than the post test mean score of uterine contraction frequency 2.039(SD+0.094) in control group. Independent 't' value was 4.963 at p<0.05 level of significance shows that there is a significant difference in the uterine contraction frequency between experimental group and control group. There was no significant difference found in other fetomaternal parameters like fetal heart rate, systolic blood pressure and diastolic blood pressure between experimental group and control group

Hence the research hypothesis H4: There is a significant difference in the post test level of fetomaternal parameters between experimental group and control group was accepted

The level of satisfaction on Jasmine oil massage in experimental group depicts that, majority 20(66.6%) of primi mothers were adequately satisfied; and least10(33.3%) of primi mothers were moderately satisfied. The study findings are consistent with the findings of Mei-Yueh Change (2002) conducted a study on effectiveness of massage on pain and anxiety during labor. The study findins are showerd that Twenty-six of 30 (87%_ experimental group subjects reported that the massage was helpful, providing pain relief and psychological support during labor.

The finding of the study shows that there is No significant association was found in the level of low back pain when compared to the age, education, residence, type of family, income, and religion (p>0.05) in the experimental group. The study findings are consistent with the findings of Jeyalakshmi S., (2008) who had conducted a study on effectiveness of Jasmine oil massage therapy upon the low back pain of pertinent mother in the first stage of labor. The findings are in experimental group there was no significant association existing between the selected demographic variables such as age, educational status, and area of residence, type of family, family monthly income and level of low back pain. Hence the research hypothesis H5; There will be a significant association between the level of low back pain in experimental group with their selected demographic variables was rejected

4. Conclusion

Pain in labor is a nearly universal experience for child bearing women. Labor pain is a challenging issue for nurses designing intervention protocols. The present study assessed the effectiveness of jasmine oil massage on low back pain and selected fetomaternal parameters in Govt Hospital., Ninital Based on statistical findings, it is evident that the olive oil back massage among primi mothers reduce the level of low back pain

and uterine contraction frequency, increase the uterine contraction duration in the experimental group comparing to control group. Therefore, the investigator felt that more importance should be given to the assessment of low back pain by using standardized tool following which olive oil back massage can be given as a non-pharmacological measure to reduce low back pain during first stage of labor.

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