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Effectiveness of back massage on level of labor pain, among Primi-gravida mothers

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Abstract

Labor pain is one of the most severe pain women experiences in her life, Lower back pain can be a constant source of discomfort throughout the entire labour process. The first stage is characterized by several physical and psychological changes of which the most important one to be managed is the pain due to intermittent uterine contractions objective of the study was to assess the effectiveness of back massage on level of labor pain among primi-gravida mothers. A quantitative research approach with quasi experimental non-randomized control design was used in this study. 40 antenatal primi-gravida mothers in labor pain were selected, 20 in experimental group and 20 in control group. Data was collected using demographic variables and Visual Analogue Scale of pain. Data was analyzed by using descriptive and inferential statistics. On assessing the pre-test and post-test level of labor pain among the primi-gravida mothers. During latent phase, in experimental group on pre-test majority 70% had moderate pain and on post-test majority 25% had mild pain. In control group on pre-test majority 75% had moderate pain, and on post-test majority 65% had moderate pain. During active phase in experimental group on pre-test majority 55% had moderate pain and on post-test 80% had moderate pain. In control group on pre-test 60% had moderate pain and on post-test majority 75% had severe pain.

Summary: This study has proven that providing back massage has reduced that level of labor pain in first stage of labor among the primi-gravida mothers compared to those who had received only routine care.

Keywords: Effectiveness, back massage, labor pain, primi-gravida mother

Introduction

Women enters motherhood accepting the new role of a mother. A human can only bear pain up to 45 del(unit). But at the time of giving birth a mother feels up to 57 del(unit) of pain, which is similar to 20 bones getting fractured at a time. Yet, mother's goes through the worst pain ever, to give birth to the best gift of her life, their baby. Lower back pain can be a constant source of discomfort throughout the entire labor process. The first stage is characterized by several physical and psychological changes causing fear of labor pain there by increasing the number of caesarean section. So it is very important to manage pain due to intermittent uterine contractions thereby removing the fear of labor pain and increasing the number of normal delivery.

A similar type of study was conducted by Karki P, a to identify the effect of back massage on pain perception during the first stage of labor among primi mothers in a teaching hospital at Patan Hospital in Patan Academy of Health Sciences, Laliutpur Kathmandu, Nepal. Mustard oil massage was provided to the primi mothers in experimental groups, and control group primi mothers received routine care. Results revealed that there was significant difference in reduction of pain level found after intervention in experimental compared to control group ($p<0.001$).

Statement of the problem: A study to assess the effectiveness of back massage on the level of labor pain among the primi-gravida mothers admitted at selected hospital of Tinsukia District, Assam

Objective of the study: To assess the effectiveness of back massage on level of labor pain among primi-gravida mothers.

1. To determine the pre-test and post-test level of labor pain among the primi-gravida mothers in first stage of labor.
2. To assess the effectiveness of back massage on level of labor pain in first stage of labor among the primi-gravida mother in experimental group.
3. To compare the post-test level of labor pain among the primi-gravida mother in experimental and control group.
4. To find out the association between the pre-test level of labor pain among the primi-gravida mother with their demographic variables.

Hypothesis

Hypothesis is tested at 0.05 level of significance

H₁: There is significant difference between the pain score among primi-gravida mothers in first stage of labor after back massage in experimental group.

H₂: There is significant difference between the post-test pain score among primi-gravida mothers in first stage of labor between the control group and experimental group.

H₃: There is significant association between pre-test level of labor pain of primi-gravida mothers and their demographic variables.

Materials and Methods

- The research design selected for the study was quasi experimental nonrandomized control group pre-test post-test design.

- **Study area:** The study was conducted at separate Antenatal Observation ward of Margherita FRU/CHC, for both the Experimental group and Control group.
- **Sample selection:** 40 antenatal primi-gravida mothers who have fulfilled the inclusion criteria were chosen .20 samples were included in experimental group and 20 samples in control group.
- **Protocol:** Visual Analogue pain scale was used to assess the level of pain. After pretest, intervention was provided from T10 to S1 level of vertebrae using effleurage (2 min) and petrissage (2 min) to the experimental group for a number of times as per the requirement of the sample up to 30 minutes. Post-test was conducted using same Scale to assess the level of pain after 30 minutes of pre-test. Samples in the control group received only routine care.

Results

Analysis of the collected data was done using SPSS version 24.0

Table 1: Effectiveness of back massage on the level of labor pain among the primi-gravida mothers in experimental group. N=20

| Experimental Group | Mean | SD | Mean D | t value | Df | p value |
|--------------------|-----------|------|--------|---------|-------|---------|
| Latent phase | Pre-test | 4.80 | 1.10 | 1.65 | 12.56 | 19 |
| | Post-test | 3.15 | 0.81 | | | |
| Active phase | Pre-test | 7.65 | 0.93 | 1.95 | 11.48 | 19 |
| | Post-test | 5.70 | 1.03 | | | |

*Significant at 0.001 level



Fig 1: Mean and SD of pain score of labour pain among the Primigravida Mothers in experimental group in latent and active phase.

Table 1 and Fig 1: Illustrates that in latent phase mean pre-test pain score was 4.80 ± 1.10 and mean post-test pain score 3.15 ± 0.81 among experimental group, with mean difference of 1.65 with obtained test value ($t=12.56$ at $df=19$, $p=0.001$). And In active phase mean pre-test pain score was 7.65 ± 0.93 and mean post-test pain score 5.70 ± 1.03 among

experimental group with mean difference of 1.95 with obtained test value ($t=11.48$ at $df=19$, $p=0.001$) was statistically significant. It can be concluded that back massage was effective on reducing the level of labor pain among the experimental group primi-gravida mothers after intervention.

Table 2: Comparison of post-test level of labor pain among the primi-gravida mothers in experimental group and control group. N=40

| Comparison Post-test | Experimental group Mean \pm SD | Control group Mean \pm SD | Mean D | t value | df | p value |
|----------------------|----------------------------------|-----------------------------|--------|---------|----|---------|
| Latent Phase | 3.15 \pm 0.81 | 6.10 \pm 0.78 | 2.95 | 11.65 | 38 | 0.001* |
| Active phase | 5.70 \pm 1.03 | 8.05 \pm 0.94 | 2.35 | 7.516 | 38 | 0.001* |

*Significance at 0.001 level

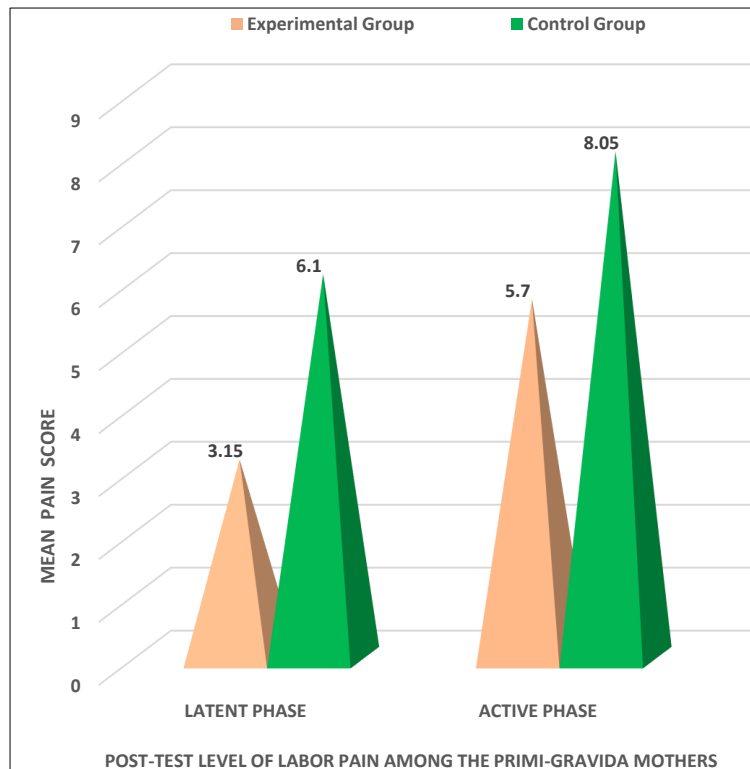
**Fig 2:** Post-test Mean labour pain score among the Primi-gravida mothers in experimental group and control group.

Table 2 and Fig 2: Illustrates the comparison of post-test level of labor pain among the primi-gravida mothers in experimental group and control group which was tested by using unpaired “t” test.

In latent phase among experimental group mean post-test pain score was 3.15 \pm 0.81 was lesser than in control group was 6.10 \pm 0.78 with mean difference of 2.95 with obtained test value (t=11.65 at df=38, p=0.001) was statistically significant at $p < 0.05$.

In active phase among experimental group mean post-test pain score was 5.70 \pm 1.03 was lesser than in control group i.e., 8.05 \pm 0.94 with mean difference of 2.35 with obtained test value (t=7.516 at df=38, p=0.001) was statistically significant at $p < 0.05$.

Findings revealed that back massage was effective in reducing level of labor pain in latent phase and active phase among the primi-gravida mothers in experimental group as compared to control group.

Discussion

From this study it can be concluded that there is significant difference between the pain score among primi-gravida mothers in first stage of labor after back massage in experimental group.

In consistent to the present study, another study conducted by Jibhakate K et al., “A study to Assess the Effectiveness of back Massage on Pain during Labor among Mothers in selected Maternity Hospitals of Nagpur” also revealed the effect of back massage on experimental group, showed that the mean pain intensity score at pre-test was 1.86 \pm 0.57 and at post-test it was 1.30 \pm 0.46.

In latent phase among experimental group mean post-test pain score was 3.15 \pm 0.81 was lesser than in control group was 6.10 \pm 0.78 with mean difference of 2.95 and In active phase among experimental group mean post-test pain score was 5.70 \pm 1.03 was lesser than in control group was 8.05 \pm 0.94 with mean difference of 2.35.

In consistent to the present study, another study conducted by Bajaj, S; Sarkar, S; Sharma, V; “On Effectiveness Of Back Massage On Labor Pain Relief Among Primi-gravida Mothers During First Stage Of Labor” on comparing between the post back massage labor pain scores of primi-gravida mothers during first stage of labor in the experimental and control group, in experimental group pain score mean was 6.6 and in control group pain score was 9.1.

Conclusion

The present study was conducted to assess the effectiveness of back massage on the level of labor pain among the primi-gravida mothers admitted at selected hospital of Tinsukia District, Assam.

After conducting the study, the following conclusion can be drawn from the study findings:

Antenatal primi-gravida mothers experienced mild, moderate, severe level of labor pain.

Back massage is safe, cost effective and easy to learn which leads to alleviate and reduce level of labor pain in first stage of labor, making it more manageable.

- Thus concluded that, among the sample (N=20) in the experimental group the finding reveals that there was a difference in the mean pre-test and post-test score.

- Among the sample experimental group (N=20) and control group (N=20) findings revealed that there was difference in the post-test mean score between both the groups.

Thus, it can be stated that back massage was effective in reducing the level of labor pain among the primi-gravida mothers in the first stage of labor.

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