

# Effectiveness of Slow Paced Breathing on Labour Pain Perception among Primigravida Mothers Admitted In Maternity Unit of Selected Hospital Of Belgaum, Karnataka

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## ABSTRACT

**Introduction:** The first time mothers out of unawareness, fear, anxiety results in an uncooperative attitude and a stressful childbirth experience so primigravida mothers require education in preparation for childbirth and pain reduction strategies. Slow paced breathing exercises secure more oxygen in order to have strength and energy for mother and child and bring a purpose for each contraction, making them more productive.

**Objective:** The study aimed to evaluate the effectiveness of slow paced breathing on labour pain perception among primigravida mother in terms of behavioural response in the experimental group as compared to control group during first stage of labour and to evaluate the post test behavioural response scores to labor pain perception among primigravida mothers in the experimental group as compared to control group during first stage of labour.

**Material and Methods:** The study was conducted on 60 primigravida mothers 30 in experimental and 30 in control group admitted in maternity unit, by using simple random sampling method (lottery method). In the present study randomized control trial was chosen. Data was collected by using observational checklist on behaviour response of primigravida mother. Data was analyzed using descriptive and inferential statistics.

**Results:** The majority of primigravida mothers in the experimental group (66.67%) and control group (70%) showed positive response and least percentage of primigravida mothers in the experimental group (33.33%) and control group (30%) showed positive response. In the post test after the intervention of slow paced breathing 100% of primigravida mother showed positive

response in experimental group but in the control group, it showed 100% negative response.

**Conclusion:** The study findings showed that there is a significant difference in the post test behavioural response scores of primigravida mother in response to labour pain perception in the experimental group as compared to control group. The results of this present study clearly indicated that the use of slow pace breathing is an effective method of reducing pain perception among women during labour.

**Keywords:** Slow paced breathing; Behaviour response; Labour pain perception; Primigravida mother; First stage of labour

## INTRODUCTION

Nine transformative months full of excitement, planning and peering at the awesome unfolding of life.<sup>1</sup> The period child birth is the time when a woman's power and strength emerges full force but it is vulnerable time and a time of many changes, persisting opportunities for personal growth.<sup>2</sup> Laboring women often experience intense pain uterine contractions resulting in visceral pain.<sup>3</sup> Compared to other types of pain, labor pain is unique in the sense that it is normal and self limiting, can be prepared for, and ends with a baby's birth.<sup>4</sup> The non pharmacologic approach to pain management includes a wide variety of techniques that address not only the physical sensations of pain, but also attempt to prevent suffering by enhancing the psycho emotional and spiritual components of care.<sup>5,6</sup> Slow paced breathing has long been used as a relaxation method and as a non pharmacological method for stabilizing various problems involving autonomic and emotional dysfunction. It has been used for management of pain.<sup>7</sup> The aim of the study is to evaluate the effectiveness of slow paced breathing

on labour pain perception among primigravida mother in terms of behavioural response in the experimental group as compared to control group during first stage of labour and also to evaluate the post test behavioural response scores to labor pain perception among primigravida mothers in the experimental group as compared to control group during first stage of labour. Women and their families are not sensitized to prepare for safe deliveries. There is a need to improve the essential maternal and newborn health care services at the health facilities. Especially birth preparedness in the country needs to be explored at a larger level.<sup>8</sup>

**MATERIALS AND METHODS**

The conceptual framework for the study was based on Modified Weidenbach’s Prescriptive Model.<sup>9</sup>The study was carried out in selected maternity unity of hospital at Belgaum. The study comprised of selected 60 primigravida mothers, 30 in experimental and 30 in control group admitted in maternity unit, by using simple random sampling method (lottery method). In the present study randomized control trial was chosen. Data was collected by using observational checklist on behaviour response of primigravida mother. Data was analyzed using descriptive and inferential statistics.

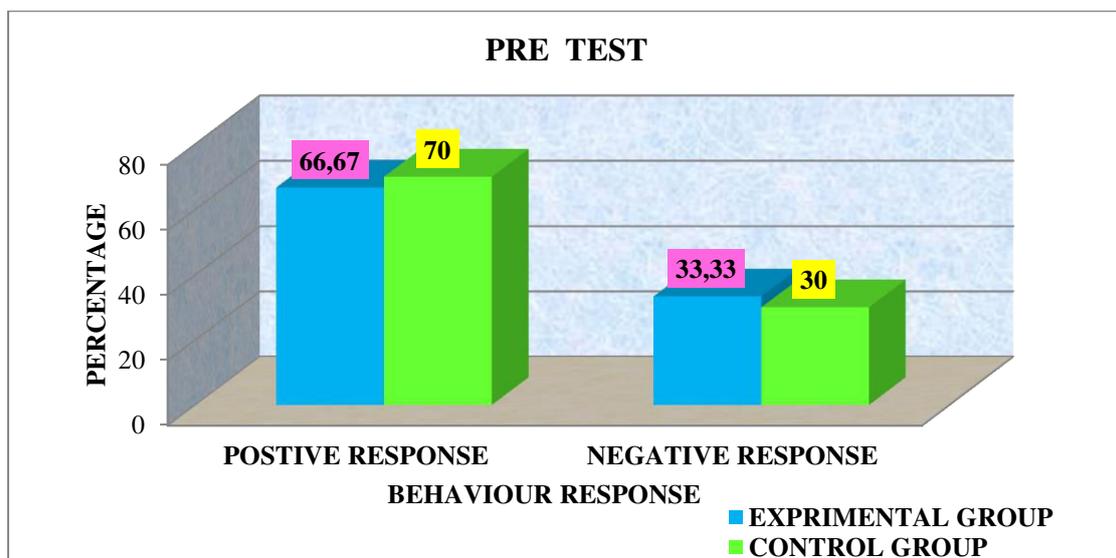
**RESULTS**

**Section I: Description of socio demographic variables.**

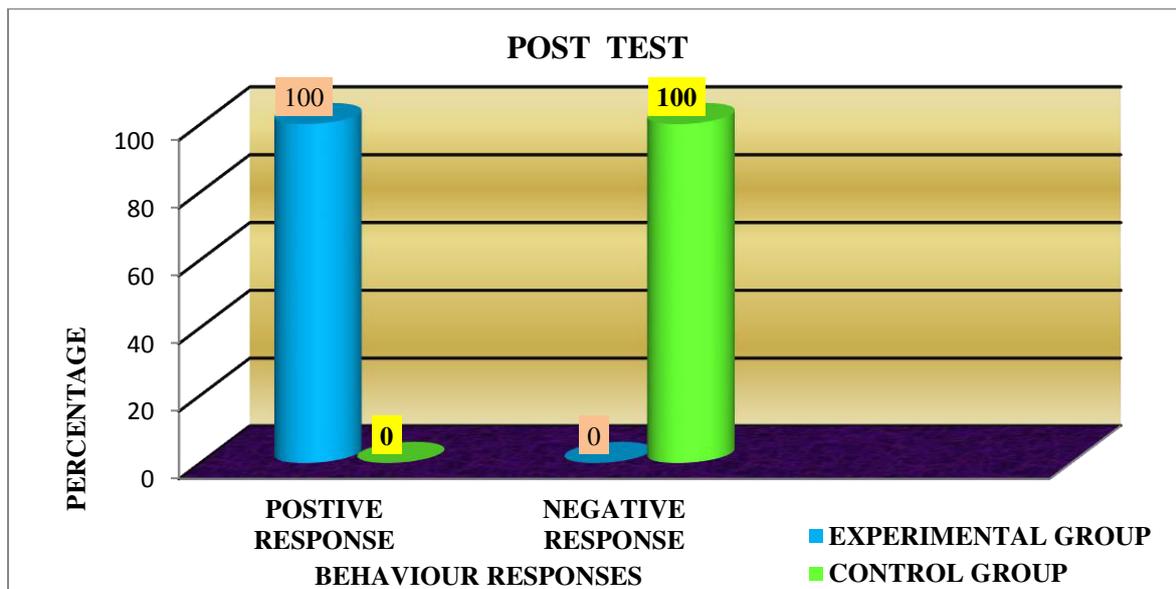
The finding showed that majority of the primigravida mother 20(66.67%) in the experiment group and 18(60%) in the control group were in the age group of 22-25years and about 18(60%) of primigravida mother in the experiment group and 16(53.33%) in the control group were secondary level educated. Religious depicted that maximum primigravida mother 20(66.67%) from experiment group and 22(73.33%) from control group were Hindus. Occupation depicted that about 24(80%) of primigravida mother in the experiment group and 26(86.67%) in the control group were Housewife. Family status depicted that about 18(60%) of primigravida mother in the experimental group and 20(66.67%) in the control group belonged to nuclear family.

**SECTION II: Finding on distribution of behavioural response scores of primigravida mother in response to labour pain perception in the experimental group as compared to control group**

Data analysis for responses in experimental group revealed that the majority of primigravida mothers in the experimental group (66.67%) and control group (70%) showed positive response and least percentage of primigravida mothers in the experimental group (33.33%) and control group (30%) showed positive response. In the post test after the intervention of slow paced breathing 100% of primigravida mother showed positive response in experimental group but in the control group, it showed 100% negative response.



**Graph 1: Percentage distribution of primigravida mothers according to pretest behaviour response score in response to labour pain perception in experiment group as compared to control group**



Graph 2: Percentage distribution of primigravida mothers according to post test behaviour response score in response to labour pain perception in experiment group as compared to control group.

**Section III: Effectiveness of slow paced breathing on reduction of labour pain perception among primigravida mothers.**

Table 1: Mean difference, standard error and paired 't' test values of behaviour response scores of primigravida mother in response to labour pain perception in the experimental group and control group  
 n= 60

	Mean Difference	Standard error	t value	df.	Table value
Experimental Group	10.40	0.65	15.16	29	2.05
Control Group	-5.37	0.34	-15.75	29	2.05

P<0.05

Table 1: Showed that in experimental group the obtained 't' value was 15.16 which was significant at p<0.005 level and this revealed that slow paced breathing exercise was effective in reducing labour pain perception.

Table 2. Comparison of effectiveness of before and after the intervention of slow paced breathing exercise for reduction in pain perception score between the experimental group and control group  
 n= 60

	Unpaired 't' test	df. value	Table value
PRETEST SCORE	-0.323	58	1.67
POST TEST SCORE	17.467	58	1.67

P<0.05

Table 2: Revealed that comparison of the mean pretest score of pain between experimental and control group by unpaired t test -0.323 suggesting significant difference. While the mean post test scores of pain between experimental and control group obtained were 17.467. This suggests that there was highly significant difference observed. This shows that slow pace breathing which has given, was in reducing the pain perception among primigravida women in the experimental group observed.

**Discussion**

The finding of behaviour response in this study shows that in pretest, the majority of primigravida mothers in the experimental group (66.67%) and control group (70%) showed positive response and least percentage of primigravida mothers in the experimental group (33.33%) and control group (30%) showed negative response. In the post test after the intervention of slow paced breathing 100% of primigravida mother showed positive response in experimental group but in the control group, it showed 100% negative response. Similar finding were seen in study conducted in Mangalore that post test after the intervention of slow paced

breathing the majority of primigravida mothers in the experimental group (86.67%) showed positive response and least percentage of primigravida mothers (13.33%) showed negative response but majority of primigravida mothers in the control group (86.67%) showed negative response and least percentage of primigravida mothers (13.33%) showed positive response.<sup>9</sup>

The finding of the mean pretest scores between experimental and control group in this study by utilizing structured observation checklist of behaviour response by unpaired 't' test analysed. The P value = 0.748(t= -3.23) suggested no significance difference after comparing the pretest behaviour response scores of labour pain perception. While after comparing the post test score between experimental and control group were P value = 0.00(t=17.467) and also shows the calculated unpaired 't' value (t= 17.467) was greater than the table value (t<sub>58</sub> =1.67) is where highly significance was observed. Similar finding were seen in study conducted in Bangalore that the mean scores of the subjects in experimental group was 2.53, which is lesser than the control group 5.70. The calculated unpaired 't' value(t=9.759) was greater than the table value(t<sub>58</sub> =1.67) at 0.005 level of significance which shows there is a significance difference between the experimental group and control group.<sup>10</sup>

Similar finding were seen in study conducted at KMCH hospital, Coimbatore that the mean scores of the subjects in experimental group was 4.28, which is lesser than the control group 6.22. The calculated unpaired 't' value(t=7.96) was greater than the table value at 0.005 level of significance which shows there is a significance difference between the experimental group and control group.<sup>11</sup>

### Conclusion

The study findings showed that there is a significant difference in the post test behavioural response scores of primigravida mother in response to labour pain perception in the experimental group as compared to control group. The paired t test between mean post test behavioural response scores with mean pretest behavioural response scores in response to labour pain perception in experimental group indicated significant reduction in labour pain perception compared to control group. And unpaired t test between post test behaviour score in response to labour pain perception in experimental group and post test behaviour score in response to labour pain perception in control group showed that there is significant reduction in labour pain perception in experimental group compared to control group.

The results of this present study clearly indicated that the use of slow pace breathing is an effective method of reducing pain perception among women during labour. As a non-pharmacological nursing intervention, slow breathing is easy to administer, cost effective, harmless, does not require much training, and it is appealing to the mother. This intervention may be used by health care practitioners (medical and nursing staff, student nurses) as part of their routine when providing care with women during the labour process. It is hoped that the findings added knowledge to the existing body of literature on research related to non-pharmacologic management during labour and childbirth.

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