

# Effectiveness of Patterned Breathing Technique on Pain During First Stage of Labour-A Narrative Review

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## Abstract

**Introduction:** Labour pain is a complex, personal, subjective, multifactorial phenomenon which is influenced by psychological, biological, socio-cultural and economic factors. The result of breathing and relaxation techniques on labour pain was found to be the most helpful means for helping the mother during labour to reduce pain and discomfort. **Aim:** The aim of this narrative review is to find information on the effectiveness of Patterned Breathing Technique on labour to reduce the painful experience of the mothers. **Methodology: Intervention-**Patterned Breathing Technique. **Types of studies-** Quasi experimental, Pre experimental, True Experimental study. **Types of participants-** Primigravida mothers. **Setting-** Labour room of maternity hospital. **Outcome-** This narrative review result has appeared that Patterned Breathing Technique will be effective on labour.

**Keywords:** *Patterned Breathing Technique, Primigravida mothers.*

## Introduction or Background

Pregnancy and childbirth is one of the graceful time in every woman's life which bring physical and emotional changes in the body. Pregnancy is one of the biggest imagination and it changes into a worse dream when labour pain progress.

Pain is observed to be both a physical and behavioral approach, and also it was a response from injury or physical changes as the effect in behavioral changes in our body. Pain is described as a combination of event that is very special for the human being. From the last 20 years, the approach of pain was esteemed as being what an individual understand about it (Montes-SL, 1999)

Childbirth is never the same and it may clash between women and between labour. It's said that considerable pain that mother nature delivers to a human, is during labour. Studies have shown that around 70% of women experience awful labour and around 10% of them experience an almost painless labour. The remaining women experience labour, which is no more shocking nor painless. There are many non-pharmacological methods for relieving labour pain. The suitable method

is surely the one that is successful and safe. (Bobak IM, Jensen MD, 1993)

Breathing exercise is one of the nonpharmacological methods for reducing pain during pregnancy and labour. Research has appeared that simple breathing exercises can help to reduce labour pain and level of anxiety.

A relaxation technique is the non-pharmacological method of pain control during labor (Steer, 1997). Relaxation has been of the cornerstones of prepared childbirth which enhance comfort and decrease the number of pain impulses that are recognized by the brain

A quasi experimental study has conducted to find out the effectiveness of Pattern Breathing Technique among primigravida mother during 1<sup>st</sup> stage of labour and finding revealed that in experimental group primigravida mothers before practicing of Patterned Breathing Technique mean pre-test score is 2.6 of pain level was less than control group which is 2.8 with a mean difference of 0.2 with a z value of 1.68 which is less than 0.05 level of significance which reply it's not significant. But in post-test overall mean post-test score of pain level after practicing Pattern Breathing

Technique among primigravida women in experimental and control group has p-value of 0.000 which is less than 0.05 level of significance. So the study concluded there is a significance reduction in pain level after practicing Pattern Breathing Technique<sup>6</sup> (**Dr. V Indra, 2017**).

Another quasi-experimental study was directed to evaluate the effectiveness of Pattern Breathing Technique in reduction of pain during first stage of labour among primigravida mother. In experimental group the mean pre-test score (on admission) and overall mean post-test scores (at 1st, 2nd, 3rd, 4th and 5th hour) of pain level before and after practicing Patterned Breathing Technique among primigravida women was assessed and p-value 0.00, which is less than 0.05 level of significance. The pre-test score (on admission) and overall mean post test scores (at 1st, 2nd, 3rd, 4th and 5th hour) of pain level without practicing Patterned Breathing Technique during the first stage of labor, among primigravida women in control group, has p-value 0.00, which is less than 0.05 level of significance. Both result shows that Pattern Breathing Technique is effective in reduction of pain in first stage of labour<sup>1</sup> (**Ms. Elizabeth Thomas, Ms. Savita Dhiwar, 2011**)

<sup>2</sup>J. Jayabharathi, R. Sridevi (2017) conducted a pre-experimental study aim was to find effectiveness of breathing exercise, done among 20 primipartuent mother. After implementing Breathing exercise 11 (55%) mother had mild pain, 8 (40%) had moderate pain and 1 (5%) had severe pain with mean 3.25+/- 1.61 and t value of 5.070. Hence the study intended value was greater than the table value so practicing Breathing exercise is highly effective for reduction of labour pain perception in primigravida women at first stage of labour.

<sup>5</sup>Gupta B, Raddi SA.etal (2017) conducted an another true experimental study to found out effectiveness of slow Paced Breathing on labour pain perception among primigravida in first stage of labour. Study finding indicate that the mean difference in pre-test and post-test scores in experimental group was 10.40 with paired t test value of 15.16 which suggest there is significant difference at  $p < 0.005$ . While obtaining independent t test value of post-test pain score in between experimental and control group was  $t=17.467$  was greater than the table value. Hence the study concluded that slow Paced breathing is effective in reducing pain perception among primigravida women.

The outcome of another experimental study was to find out the effectiveness of selected aspect of Lamaze method on pain and anxiety in labor. Mean score of labour pain in intervention group was 4.55 and in control group was 7.55 with a standard deviation of 1.234 and 0.944 respectively. Computed paired t test value is 3.96 which is highly significance at  $p < 0.001$ . This proves that the intervention of selected Lamaze technique on pain, anxiety and labor outcome during the first stage of labor are highly effective.<sup>3</sup> (**Akashaykumari Jhala, 2017**)

<sup>4</sup>Fawziya Mohammed Nattah, Wafa Abdul Kariam Abbas (2015) conducted a study to find out level of pain on breathing exercise in first stage of labour among primimothers. Three types of breathing exercise were intervening and level of pain was assessed. Different type of breathing protocol was assessed by ANOVA and p value is 0.001 thus signifies there is a mean pain score difference in three group and low mean score in slow Deep Breathing exercise, mean= 2.82+/-0.60. Study concluded that slow breathing is effective in reduction of pain perception.

## Findings

The systematic search was conducted by formulating the terms separately and in integration with all synonyms, also according to the database. Likewise, a manual Google scholar search was undertaken using the keywords and search synonyms from already articles. An addition of 6 articles was found in the database. Initial search recovers 1170 articles over which 270 articles were selected manually. 150 articles were rejected as a result of replication in the database. Replication was removed and reviewed 120 articles for acceptability. 114 more studies were rejected because of unreachable of the full text. Hence 6 articles were screened which includes quantitative study.

## Discussion

These findings are supported by a study conducted by an experimental study conducted by L Sruthi reported that mean labour pain score in group I (Experimental) is 3.750 and in group II (Control) is 5.0950. The mean difference in group I was less than of group II with t value of 5.174 ( $P < 0.05$ ) which suggest a significant reduction on pain score in group I and group II.

### **Conclusion**

There was a significant depletion in labour pain on the first stage of labour regarding primigravida mothers after practicing the patterned breathing technique, thus it has demonstrated to be an effective technique for reducing labour pain. Therefore, this intervention should be encouraged as hospital policy and implemented as routine care for all the primigravida mothers in first stage of labour for reducing labour pain.

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**Ethical Clearance:** Prior permission was obtained from the Medical superintendent of District Women Hospital.

Informed written consent was taken from each participant under the study. Objective of the study was maintained with honesty, privacy confidentiality and anonymity.

**Conflict of Interest:** Nil

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