Volume : 4 | Issue : 11 | November 2015 • ISSN No 2277 - 8179

Research Paper

Effectiveness of Slow Paced Breathing on Pain and Behavioural Responses During Active Phase of Labour

Medical Science

KEYWORDS : Slow paced breathing, Behavioral response and Active phase of labour

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ABSTRACT

INTRODUCTION: A healthy mother brings forth a healthy baby. 1 MATERIALS AND METHODS: Pre test and post test design was used for this study. Sample size was 60 primi mothers among them 30 were in experimental group and 30 were in control group. An observation checklist was used. ANALYSIS: The mean post-test scores of degree of pain experienced by the primi mother in experimental group was significantly lower than the control group. The mean post-test scores of behavioural responses of the primi mother in experimental group were significantly higher than those in control group. Data indicates that there were significant difference in experimental group and control group. CONCLUSION: The intensity of labour progress has improved through slow paced breathing.

INTRODUCTION: Natural childbirth is a profound and powerful human experience which is a mixture of feeling of empowerment, elation and accomplishment.[2] Both pharmacological and non pharmacological methods are available today and it is known that the non pharmacological options involve less risk when used in this process. Although the efficiency of some options has not been proved yet, there is trustworthy evidence of the effectiveness of several techniques that may be used during labour, increasing the parturient' comfort.[3] Breathing exercises use learned breathing patterns to aid the woman's relaxation efforts and also helps her to distract from the painful response. Breathing exercises allows her uterus to do its work without any added effort or waste of energy. In that slow paced breathing refers to a slow rhythmic repetitive breathing pattern used to reduce the level of labour pain using focal.

Registrar General of India's Sample Registration System (RGI-SRS) the maternal mortality ratio (MMR) in India has registered a decline from 212 per 100,000 live births in the period 2007-09 to 178 in 2010-12. It has declined further to 167 per 100,000 live births in the period 2011-13. This means an estimated 44,000 maternal deaths occur in the country every year.

Under MDG 5, the target is to reduce MMR by 75 per cent between 1990 and 2015. Based on the United Nations' Inter-Agency Expert Group's MMR estimates in the publication, Trends in Maternal Mortality: 1990 to 2013, India's target for MMR is 140 per 100,000 live births by 2015, taking a baseline of 560 per 100,000 live births in 1990.[4]

OBJECTIVES:

- To assess the pain and behavioural responses during active phase of labour among primi mothers. evaluate the effectiveness of slow paced breathing on pain and behavioural responses during active phase of labour.
- To find out the association of slow paced breathing on pain and behavioural responses with the selected demographic variable.

MATERIALS AND METHODS:

1. **Setting:** The study was conducted in antenatal ward and labour room of selected Hospitals, Madurai.
2. **Research approach**: Evaluative approach.
3. **Research design**: Pre test and post test design
4. **Sample:** 60 primi mothers among them 30 were in experimental group and 30 were in control group
5. **Sampling technique**: Purposive sampling
6. **Inclusion criteria:**
   - Primi Mothers with 4 cm of cervical dilatation.
   - Primi Mothers who were entered first time for the labour process.
   - Primi Mothers who are having regular and rhythmic uterine contraction.
7. **Exclusion criteria**
   Primi Mothers who are in high risk.
   Multi para mothers.
8. **Data collection instruments:**
   Demographic proforma
   Observation checklist for behavioural response
   Modified numeric pain scale
9. **Description of tool:**
   The tool was developed by referring the related literature. The tool was consisted of 4 parts, Part I consists of base line data includes age, education, religion, occupation and monthly income. Part II consists of obstetrical information includes number of antenatal visit, gestational age at onset of labour and exposure to prenatal education. Part III includes modified numeric pain rating scale. Pain score was categorized as (1 - 4) Low,(5 - 6) Mild, (7 - 8) Severe, (9 - 10) very severe and Part IV consists of observational checklist for assessing the primi mothers behavioural responses during active phase of labour and it has 15 items. Each positive response was scored as one and each negative response was scored as zero. The total score was categorized as 11 – 15 good responses, 6 – 10 fair responses and 0 – 5 poor responses.
10. **Data collection procedure:**
    The investigator obtained permission to conduct the study from the concerned hospital authority and informed consent was taken from subjects. The subjects were divided into control group and experimental group. Initially the subjects were interviewed in order to collect demographic data. Afterwards the investigator assessed pain by using modified numeric pain intensity scale and behavioural responses by using observational check list both in control group and in experimental group. Experimental group was taught to practice slow paced breathing and encouraged to do while contraction begins until contraction subside. Four observations including pre test was made to assess pain and behavioural responses with the interval of one hour both in control and in experimental group.

Major findings of the study:

The data was analyzed presented and under the following heading:

Section I: Description of the primi mother according to demo graphic profile and Obstetrical information

Section II: Description of the primi mother according to pain perception

Section III: Description of the primi mother according to be havioural responses

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Section IV: Comparison between post test pain score and be havioural responses among experimental group and control group

Section VI: Association of pain score and behavioural respons es with their selected demographic profile

Section I: Description of the primi mother according to demographic profile and obstetrical information

- Data shows that (30, 73.3%) of the participants were between the age of 21 – 25 years in experimental group and (30, 56.6%) of them were in control group.
- Data shows that (15, 50%) of the mothers had primary education and (10, 33.3%) of them had no formal education in experimental and control group respectively.
- Data reveals that (15, 50%) of the mother belonged to Hindu in experimental group and (18, 60%) of the mother belonged to Hindu in control group.

Section II: Description of the primi mother according to pain perception

- Data shows that majority of the primi mothers in pre test, (24, 80%) of them were in experimental group and (21, 70%) of them in control group had low level of pain score. (6, 20%) of the participants were in experimental group and (9, 30%) of the participants were in control group had mild level of pain score.
- After the pretest four observations were done in both the groups. In experimental group of the participants had severe and very severe pain and in control group had very severe pain.

Section III: Description of the primi mother according to behavioural responses

- In experimental and control group, majority of the participants (29, 96.6%) and (28, 93.3%) were showed good behavioual response in pre test.
- In 1st observation, majority (27, 90%) of the participants were showed good response in experimental group and (20, 66.6%) in control group.
- Data shows in 2nd observation, (25, 83.3%) of the participants were showed good response in experimental group and (14, 46.6%) of the participants were showed fair response in control group.
- Data shows in 3rd observation, (24, 80%) of the participants were showed good response in experimental group and (6, 20%) of the participants were showed poor response in control group.

Section IV: Comparison between post test pain score among experimental group and control group

Table: 1 Comparison between post test pain score among experimental group and control group

Sl. no	Group	Observation	Mean ±S.D	't' value
1	Experimental group	O_1	4.5±0.7	7
	Control group	O_1	5.8±0.7	
2	Experimental group	O_2	6 ± 0.8	8.55
	Control group	O_2	7.8±0.8	
3	Experimental group	O_3	7±0.9	12.8
	Control group	O_3	9.2±0.4	

$t_{(58)}$, P>0.05 significance level

- Data shows that the mean post-test scores of degree of pain experienced by the primi mother in experimental group was significantly lower than the control group.

Section V: Comparison between post test behavioural responses among experimental group and control group

Table 2: Comparison between post test behavioural responses among experimental group and control group

Sl. no	Group	Observation	Mean ±S.D	't' value
1	Experimental group	O_1	11 ± 075	7
	Control group	O_1	10.5 ± 0.7	
2	Experimental group	O_2	10.9 ± 0.64	8.55
	Control group	O_2	8.4 ± 2.3	
3	Experimental group	O_3	10.7 ± 0.63	12.8
	Control group	O_3	7 ± 1.8	

$t_{(58)}$, P>0.05 significance level

The mean post-test scores of behavioural responses of the primi mother in experimental group were significantly higher than those in control group. Data indicates that there was a significant difference in experimental group and control group.

Section VI: Association of pain score and behavioural responses with their selected demographic profile

There was no association of pain and behavioural response between experimental and control group.

DISCUSSION:

Nursing personnel are need to train the mothers regarding slow paced breathing techniques during the active phase of labour in the hospital as a part of child birth preparation.

CONCLUSION:

The study findings were indicated that slow paced breathing can be practiced during active phase of labour to reduce labour pain and improve the good behavioural responses.

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