



## **A STUDY TO ASSESS THE EFFECTIVENESS OF EFFLEURAGE TO REDUCE LABOR PAIN DURING 1<sup>ST</sup> STAGE OF LABOR AMONG PRIMIGRAVIDA WOMEN IN A SELECTED HOSPITAL, BHUBANESWAR**

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### **ABSTRACT**

Pregnancy is a special event. The labor & birth process is an exciting situation to the women & her family. The time of labor & birth though short in Comparison with the length of pregnancy but it is most dramatic & significant period of pregnancy for expectant mothers. Labor pain is the most severe pain a woman experienced in her life, which may lead to undesirable, psychological effects, lowered self-confidence & anxiety. Nurse should be introduced with alternative methods of pain relief to reduce the labor pain. Some studies suggest effleurage plays an important role in reducing the labor pain during 1<sup>st</sup> stage of labor. Yet there is little research in this area. Therefore, the investigators choose this topic i.e. "a study to assess the effectiveness of effleurage to reduce the labour pain during 1<sup>st</sup> stage of labour among primiparous mothers, in scb medical college & hospital, cuttack". The tool was a structured interview schedule consisting of socio-demographic variables & a rating scale for assessing the pain. An extensive review of literature was done. The study was conducted in SCB Hospital, Cuttack (Labor room). Convenient sampling was used to select 30 primiparous laboring mothers. The data was analyzed by Chi-square & paired t-test. The Chi-square test reveals that the calculated value of socio-demographic variables was less than the tabulated value. The hypothesis  $H_0$  is accepted. The paired t-test elicits that t-value was significantly greater than the tabulated value. So, the hypothesis  $H_1$  is accepted. Hence, it can be state that there is no significant association between socio demographic variables with the pain scores but there is some significant difference between the pre& post intervention pain score.

**Keywords:** Effleurage, Labour Pain, Primiparous Mother, 1<sup>st</sup> stage of Labour.

### **INTRODUCTION**

**"We know Nature is Misty, God is a Generator, That's why he Generated an Equivalent Person to him. She is none other than the MOTHER."**

Pregnancy is a special event. In 1970 Lamaze subsequently described it as a psycho-prophylactic method, this emphasized child birth as a natural physiological process. The labor & birth process is exciting situation to the women & her family. The time of labor and birth though short in comparison with the length of pregnancy but it is the most dramatic & significant period of pregnancy for expectant women [1].

Pain is an unpleasant and distressing symptom i.e. personal and subjective, which is usually a symptom of injury or illness, yet pain during labour is almost universal pain detrimental to the labor process. Labor pain is influenced by many factors including the coping abilities, past experience of pain, birth environment, psychological factors etc. Pain and its relief for women in labour has been a subject of interest since the down of mankind. Labor pain is the most severe pain a woman experienced in her life. The severity and duration of labour pain may lead to undesirable psychological effect, lowered self confidence & anxiety [2].

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An ideal labour pain relief method should meet certain criteria as having the least possible side effect for mother & fetus, having permanent effects, could be administered easily, having appropriate sedative effect without intervening the uterine contractures. Ms. M. Kananga Durga, Dr. Latha Venkatesan, Mrs. Lizy Sonia A. draw their conclusion of study that as pain management in labour by pharmacological method may affect the condition of the baby or the mother, in the other hand non-pharmacological method, which is safe for both, was preferred by the researcher for pain relief. Non-drug method helps the women to cope with labour. According to a study conducted in Rajiv Gandhi University of Health Science, 2010-11 “among the non-pharmacological methods, applied to reduce the labour pain, massage therapy or effleurage is most effective one [3].”

Massage is responsible for release of endorphin, which is a natural painkilling & mood lifting substances. Massage also has a mechanical effect that removes wastes, improves mobility, reduces muscle tension & relieves pain. Massage is recommended by child birth experts because, massaging during pregnancy & labour can help in maintaining flexibility of your body & sooth in between contraction. It may also help you to cope with physical, emotional, psychological transformation, the mother may experience during phase of pregnancy. According to reflexology, Effleurage is a massage technique which involves a series of long, smooth, rhythmic strokes over the skin using either finger tips or the palms. “According to a study conducted in Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore, (2010-11), the new supportive methods like effleurage could change the labour into a pleasant & desirable experience” [4].

### Objectives

- To assess the knowledge of mother regarding non-pharmacological pain relief method during labour such as effleurage.
- To teach the method of effleurage to the mothers.
- To administer effleurage for reduction of pain as measured by pain scale.

## MATERIALS AND METHODS

### Research Design

Quasi experimental study design with pre & post intervention was used to conduct the study.

### Setting of the Study

The present study was conducted among primiparous women at SCB Medical College & Hospital, Cuttack.

### Population

All the primiparous labouring mothers, who are admitted in SCB Medical College & Hospital, Cuttack are

the population of the study.

### Sampling

#### Sample

In present study sample was the primiparous labouring mother admitted in SCB Medical College & Hospital, Cuttack.

#### Sample Size

The sample size comprised of 30 primiparous laboring mothers, admitted in SCB Hospital, Cuttack.

### Method of data collection

The actual collection of data normally proceeds according to pre-established plan to minimize confusion, delay & mistakes. The researcher plan typically specifies procedures for the actual collection of data. The instruments selected in all research should as far as possible be the vehicle that would be electing data for drawing conclusion pertinent to the study.

### Development of tools

Data collection tool or instrument is also called as data collection device. It is like equipment which is designed or developed carefully by the researcher.

Instruments & tools for data collection consist of

1. Socio-demographic profile
2. Observational pain rating scale for assessing pain intensity

### Data collection procedure

#### Ethical consideration

Prior to the data collection procedure, the permission was obtained from concerned authority of SCB Hospital, Cuttack & informed consent was obtained from the samples.

### Period of data collection

The data was collected from 26.02.2014 to 03.03.2014. During this period the researcher collected both pre-intervention & post-intervention pain assessment scales & also implemented the effleurage therapy.

### Stages of data collection

The data was collected in following 3 stages.

#### Pre-intervention pain assessment

Before implementation of effleurage pain of mothers was assessed by the Non-verbal pain assessment scale by observing the behavioral manifestations & also the procedure and its benefits were explained to the mothers & their families.

#### Implementation of effleurage

Immediately after taking pre-intervention pain assessment effleurage was implemented for 30 min during

1<sup>st</sup> stage of labour.

### Post intervention pain assessment

Evaluation was done after 30 min of implementation of effleurage by again assessing the intensity of labour pain scale.

### Plan for data analysis

Descriptive statistics was used for data analysis. The collected data was organized, tabulated & analyzed using descriptive statistics i.e. mean, mean deviation percentage standard deviations.

### RESULT

Highest percentage (33%) of primiparous mothers was in the age group of 22-25 years. Whereas more or less similar (30%) of them were in the age group of 22-25 years. Whereas more or less similar (30%) of them were in the age group 25-30 years, then after (27%) of primiparous mothers belong to the age group 18-22 years & lowest percentage i.e. (10%) of them were in the age group of above 30 years [5-8].

Distribution of subjects according to education reveals that 10 (33%) mothers were in the primary level in their education, 9(30%) were illiterate, 8(27%) were belongs to the secondary group & rest only 3(10%) were graduate or above.

Depending upon the areas of living, the highest percentage i.e. 15(50%) of primimothers live in the rural area, 11(37%) of mothers live in the urban & rest 4(13%) live in slum areas.

According to age at marriage, mainly 23(77%) of primiparous mothers became married in between 15-25 years, 7(33%) were got married in age between 25-30 years & no primimothers got married in the above 30 years [9-12].

In relation to gestational age of mother, (57%) of mothers have 37-40 weeks of gestation, 11(37%) of mothers have gestational age of 30-37 weeks. Then 1 i.e. 3% each sample belongs to the group of gestational age of <30 weeks.

With regards to the knowledge or idea of non-pharmacological therapies of samples to reduce labour pain, the data shows that (8%) of mothers have idea about the non-pharmacological therapy to reduce labour pain & rest (22%) didn't have any idea. In relation to the idea about effleurage table no-12 shows that 8(33%) mothers have knowledge about effleurage in reducing labour pain and 22(67%) doesn't have idea.

In regards to the sources of information about effleurage, the data collected elicits that 4(13%) of mothers got the knowledge from their relatives, 2(6.6%) got the idea from TV or Internet, 1(3%) knows about effleurage from newspaper & none of them got information about effleurage from the health workers.

### Section-II: Comparison between pre-intervention & post-intervention Pain Score

Area wise distribution of subjects according to the level of labour pain along with its behavioral characteristics was assessed & it shows that during pre-intervention pain assessment of breathing, the highest score '2' is acquired by 48 samples with mean of 0.6 which is 60% of the total mean. Then medium score '1' is obtained by 12 samples with mean score 0.4 which is 40% of the total mean and none of them acquired '0' in pre-intervention assessment. But in post-intervention assessment of breathing, 5 samples have the score '0' means normal birthing with 0.16 mean which is 16% of total mean, 19 samples have the score '1' with the mean 0.64 which is 64% of the total mean & only 6 samples acquired the score '2' with the mean 0.2 which is 20% of the total mean. Thus this table shows that the effleurage can make breathing cocalization normal fully or up to some extent.

During pre-intervention assessment in the area of negative vocalization, the maximum no of samples i.e. 16 acquired the severe pain score '2' with mean of 0.53 which is 53% of the total mean. 14 samples acquired the pain score '1' with mean of 0.47 & mean percentage 47%. None of them have the normal pain score '0'. But in post-intervention assessment, 2 primimothers have pain normal pain score '0' with 0.06 & 6% of mean & mean percentage respectively. Then 23 labouring primimothers obtained the score '1' with the mean of 0.77, which is 77% of total mean and rest of the samples i.e. 5 acquired score '2' with mean of 0.17 & mean percentage of 17%. As comparing the table, it can be started that effleurage is effective in reducing the labour pain.

Area wise distribution of subjects according to the level of labour pain along with its behavioral characteristics was assessed & tabulated in the table no. it shows that during pre-intervention pain assessment of body language, the highest score '2' is acquired by 13 samples with the mean of 0.43 which is 43% of the total mean and none of them acquired '0' in pre-intervention assessment & post-intervention assessment of body language. 27 samples have the score '1' with mean 0.73 which is 73% of the total mean & only 8 samples acquired the score '2' with mean 0.27 which is 27% of total mean. Thus this table shows that the effleurage can make body language normal or up to some extent [13-15]. During pre-intervention assessment in the area of consolability, the maximum no of sample i.e. 17 acquired the severe pain score '2' with mean of 0.57 which is 57% of the total mean. 13 samples acquired the pain score '1' with the mean of 0.43 & mean percentage 43%. None of them have the normal pain score '0' in the pre-intervention & also in the post-intervention assessment. Then 25 laboring primimothers obtained the score '1'

with mean of 0.83 which is 83% of the total mean and rest of the samples i.e. 5 acquired the score '2' with mean 0.17 & mean percentage 17%. As comparing the table, it can be stated that effleurage is effective in reducing labour pain [16].

#### **Difference between pre & post-intervention pain score**

The difference between the pre & post-intervention pain score was also obtained by 't' test. In this 't' value (6.45) is greater than tabulated value. Hence, it is found to be highly significant level of  $P=0.05$  level of significant or 5% level of significant.

#### **CONCLUSION**

On the basis of the study, the following conclusion was drawn.

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With respect to level of pain in post intervention assessment only 12 samples have severe pain & 18 samples have moderate pain, whereas in pre-intervention 27 samples have severe pain & only 3 samples have moderate pain.

As the hypothesis  $H_1$  is proved true, so it is concluded that effleurage in reducing labour pain is more effective. As the hypothesis  $H_0$  is proved, it can be stated that no association was seen between level of pain and the socio demographic variables.

Thus the objectives made by the researcher has been achieved as the level of pain has been assessed in pre & post- intervention phase comparison of effectiveness of effleurage between pre & post-intervention pain score has been done.