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## Effectiveness of semi sitting position on labour pain intensity, comfort and fetal well being among primi parturient mothers

**C Sumathi and A Viji**

### Abstract

**Background:** Semi sitting position has been found to have the advantages are enhance mother comfort, able to cope up with pain, improved fetal circulation and tend to assist for fetal descend due to gravity and shortening the duration of labour.

**Aim:** To assess the maternal needs both physical and psychologic as well as fetal well being.

**Materials and Methods:** The true experimental-basic experimental post test only design with 60 primi parturient were selected by simple random sampling technique at Sri Ramakrishna Vivekananda hospital, Thiruvanniyur, Chennai. Modified Visual analogue-numerical and categorical pain assessment scale, comfort level and fetal wellbeing were used to collect the data. The collected data was organized, tabulated, analysed and interpreted by using descriptive and inferential statistics.

**Results:** The calculated value of student independent t-test showed a significant difference in labour pain intensity  $t=19.13$ ,  $P=0.001$ , comfort  $t=22.96$ ,  $P=0.001$  hence the research hypothesis H1 which was formulated as "there is a significant difference in labour pain intensity and comfort between experimental and control group" was accepted and proved that semisitting position increases labour pain with good uterine contraction promotes comfort, improves fetal circulation and shortening the duration of labour.

The calculated value of Chi square value showed that there was no significant difference in fetal well being  $\chi^2=1.02$ ,  $P=0.32$  hence the research hypothesis H1 which was formulated as "there is a significant difference in fetal well being between experimental and control group" was rejected.

**Keywords:** Semi sitting position, labour pain intensity, comfort, fetal well being, primi

### Introduction

The labour and birth is a time of excitement and anticipation, along with uncertainty, anxiety and fear. The memories and experiences of labour and birth remain with women throughout their lives. The overall aim of caring for women during labour and birth is to engender a positive experience for the women and her family, while maintaining their health and preventing complication. The best position during labour, it is important to consider the maternal needs, both physical and psychological as well as fetal well being.

Pain and Childbirth are bound up together in our cultural expectations. The pain experienced by the women in labour is caused by the uterine contractions, the dilatation of the cervix, by the stretching of the vagina and pelvic floor to accommodate the presenting part.

Semisitting position is the elevation of headend of primiparturient mothers to 45° with backrest and leg flexed during labour. Semisitting position has been found to have the advantages are enhance mother comfort, improved fetal circulation and tend to assist for fetal descend due to gravity and shortening the duration of labour.

Electronic fetal heart rate monitoring is commonly used to assess fetal well being during labour. Fetal heart rate pattern are classified as reassuring, non reassuring, or ominous. Reassuring patterns correlate well with a good fetal outcome. Nonreassuring patterns such as fetal tachycardia, bradycardia and late decelerations with good short-term variability require intervention to rule out fetal acidosis. Ominous patterns require emergency intrauterine fetal resuscitation and immediate delivery.

Semisitting position helps to provide comfort, easy to beardown, able to cope up with pain, improved fetal circulation and shortening the duration of labour, which is supported by Olson C, olson R (1990) States that, a study to evaluate the relationship between maternal

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birthing position and perineal outcome was undertaken on 335 patients in a rural family physician's practice whose babies were delivered vaginally between December 1980 and 1988. The most common birthing position used by the women was the semisitting position in the birthing bed (44% ; n-146). Ninety – your women (28%) gave birth from the conventional lithotomy position, 80 (24%) used the birthing chair, and less than 5% used a side lying Position.

Comfort refers to feeling of physical and psychological well being experienced by primiparturient mothers in labour process, which supported by Carole ann Kenner (2000) states that Intervene to Decreases anxiety, promote hygiene and help the client to find comfortable positions that reduce labor pain and facilitate child birth.

### Need For the Study

The primiparturient mother can push in any position. She prefers like sitting, semisitting, sidelying and kneeling position. Studies reveal that many women prefers semisitting and sidelying positions as it promotes their pushing efforts. In addition to it, squatting enlarges the pelvic outlets slightly and adds the force up gravity to mother's effort. This is especially an advantages if the mother has a small pelvis and a large fetus.

Among the variety of position during the labour, Semisitting position has been found to have the advantages are enhances mother comfort, improve fetal circulation and tend to assist for fetal descend due to gravity. Many women prefer this semisitting position because they have a security of the backrest, it is also familiar to care giver and allows easy observation of the perineum.

### Statement of the Problem

A study to assess the effectiveness of semi sitting position on labour pain intensity, comfort and fetal well being among primi parturient mothers at Sri Ramakrishna Vivekananda Hospital, Chennai.

### Objectives

1. To assess the labour pain intensity, comfort and fetal well being in experimental group and control group.
2. To compare the level of labour pain intensity, comfort and fetal well being between experimental and control group.
3. To associate the labour pain intensity, comfort and fetal well being with their selected demographic variables of experimental and control group.

### Operational Definition

1. **Effectiveness:** It is the outcome of semi-sitting position on labour pain intensity, comfort and fetal well being among primiparturient mothers.
2. **Semisitting:** It is the elevation of head end of primiparturient mothers to 45° with backrest and leg flexed during labour.
3. **Labour pain intensity:** The level of labour pain perceived by primiparturient mothers due to uterine contraction.
4. **Comfort:** It refers to feeling of physical & pshchological well being experienced by primiparturient mothers during the process of labour.

5. **Fetal well being:** It refers to the fetal Heart Rate to be stable between 110 – 160 beats per minutes during labour as measured by cardiotocography.
6. **Primi parturient mothers:** Those who are pregnant for first time and those who are in the process of labour with starting from 7 cm of cervical dilatation till delivery of baby and expulsion of placenta with its membranes.s

### Research Hypothesis

1. There is a significant difference in labour pain intensity, comfort and fetal well being between experimental and control group.
2. There is a significant association of labour pain intensity, comfort and fetal well being with selected demographic variables of experimental group and control group.

### Metrials and Methods

**Research approach:** The Evaluative research approach

**Research design:** True experimental-basic experimental post test only design

**Setting of the study:** The study was conducted at Sri Ramakrishna Vivekananda hospital, Thiruvanmiyur, Chennai.

**Sample:** The participants of the study include the primiparturient mothers who fulfilled the inclusion criteria were selected as study samples.

**Sampling technique:** Simple random sampling technique was adopted to select samples.

**Sample size:** The sample size for the present study was 60 Primiparturient mothers.

### Criteria for the Selection of the Sample

#### Inclusion criteria

1. Mothers with vertex presentation
2. Mothers fit to assume semisitting position
3. Mothers in transient phase with 7cm of cervical dilatation
4. Mothers who were willing to participate
5. Mothers who can interact in Tamil and English

#### Exclusion criteria

1. Mothers with complicated pregnancy(diabetes mellitus, pregnancy induced hypertension, anemia, cardiac disease etc)
2. Mothers had analgesia during labour
3. Multigravida mothers
4. The mother who developed complications such as cord around the neck, obstructed labour, fetal distress during labour
5. Mother with preterm delivery

### Development and Description of the Tool

The tool for data collection consists of two sections.

**Section A**

It consists of demographic data such as age, religion, education, occupation, types of work, residence, body mass index and gestational age(weeks) and cervical dilatation.

**Section B**

**It consists of 3 parts**

Part – I – Modified Visual analogue-numerical and categorical pain assessment scale.

Part – II – Comfort level assessment

Part – III- Fetal well being assessment

**Procedure for Data Collection**

A formal order was obtained from chief medical officer of Sri Ramakrishna Vivekananda hospital. The investigator started the data collection procedure for the main study in the same setting as that of the pilot study. During this period

semisitting position was given to 30 primiparturient mothers and the tool was used to collect the data. The investigator maintained good inter personal relationship with the mother throughout the study and the mother expressed their desire to learn and readiness to follow the instruction given by the investigator. A time limit of 3.45 – 4.00 hours was taken for the investigator to do a experimental study for each sample.

**Plan for Data Analysis**

The data was analyzed in the term of object of the study using the descriptive and inferential statistics.

**Results and Discussion**

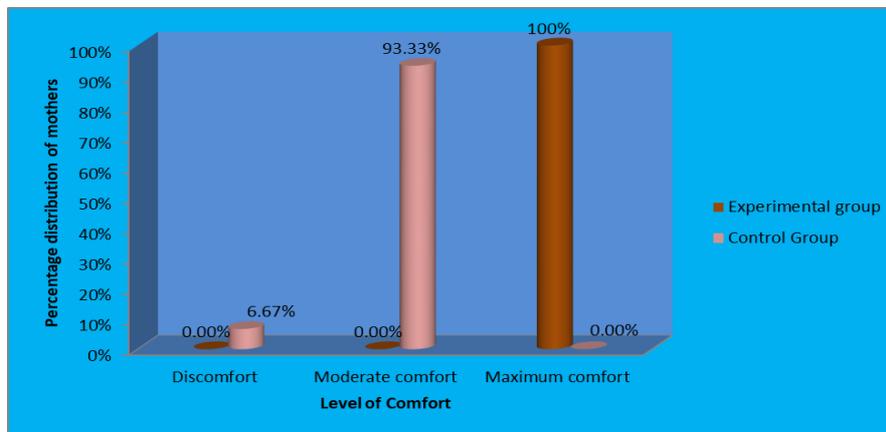
The investigator found that the semisitting position increased labour pain intensity with good uterine contraction, provides maximum comfort, normal fetal well being and shortened the duration of labour.

**Table 1:** Frequency and percentage distribution of labour pain intensity in experimental group and control group.

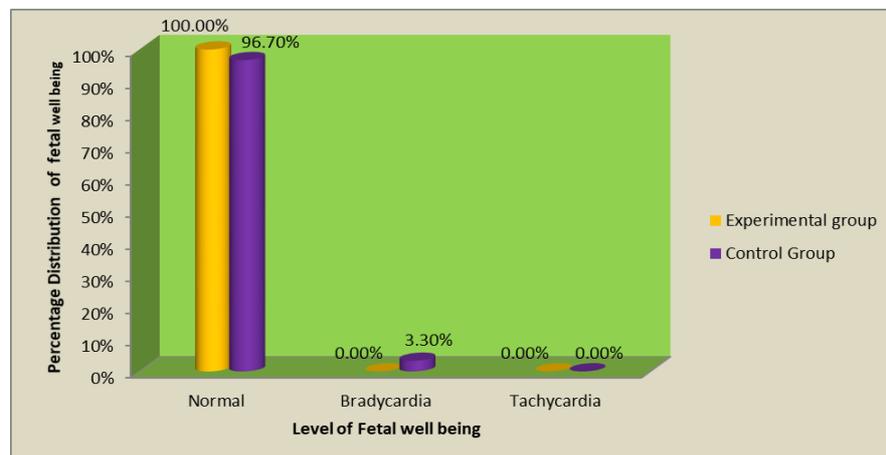
Level of pain	Experimental		Control	
	Frequency	Percentage	Frequency	Percentage
No pain	0	0.0%	0	0.0%
Mild pain	0	0.0%	0	0.0%
Moderate pain	0	0.0%	0	0.0%
Severe pain	0	0.0%	0	0.0%
Excruciating pain	30	100.0%	30	100.0%
Total	30		30	

Table 1 describes the Frequency and percentage distribution of labour pain intensity in experimental group and control group. It is evident that 30(100%) of the mothers had

excruciating pain in experimental group and also in control group.



**Graph 1:** Percentage distribution of level of comfort of primiparturient mothers



**Graph 2:** Percentage distribution of Level of fetal well being of primiparturient mothers

The calculated value of student independent t-test showed a significant difference in labour pain intensity  $t=19.13$ ,  $P=0.001$ , comfort  $t=22.96$ ,  $P=0.001$  hence the research hypothesis H1 which was formulated as “there is a significant difference in labour pain intensity and comfort between experimental and control group” was accepted and proved that semisitting position increases labour pain with good uterine contraction promotes comfort, improves fetal circulation and shortening the duration of labour.

The calculated value of Chi square test showed that there was no significant difference in fetal well being  $\chi^2=1.02$ ,  $P=0.32$  hence the research hypothesis H1 which was formulated as “there is a significant difference in fetal well being between experimental and control group” was rejected.

There was a significant association of labour pain intensity with demographic variables like age at  $P=0.05$  level, type of work at  $P=0.03$  level hence the research hypothesis H2 which was formulated as “there is a significant association of labour pain intensity with selected demographic variables of experimental group” was accepted. But there was no significant association of labour pain intensity with other demographic variables like religion, education, occupation, residence, BMI and Gestational age hence the research hypothesis H2 which was formulated as “there is a significant association of labour pain intensity with selected demographic variables of experimental group” was rejected. There was a significant association of comfort with demographic variables like occupation at  $p=0.01$  level, type of work at  $p=0.002$  level hence the research hypothesis H2 which was formulated as “there is a significant association of comfort with selected demographic variables of experimental group” was accepted. But there was no significant association of comfort with other demographic variables like age, religion, education, residence, BMI and gestational age hence the research hypothesis H2 which was formulated as “there is a significant association of comfort with selected demographic variables of experimental group” was rejected.

### Conclusion

This study assessed the effectiveness of semisitting position on labour pain intensity, comfort and fetal well being among primiparous mothers. The results of the study concluded that semisitting position increased labour pain intensity with good uterine contraction, enhanced mothers comfort, improved fetal circulation and shortened the duration of labour. Therefore, the investigator felt that semisitting position should be given those who are in process of labour with starting from 7cm of cervical dilatation till delivery of baby and expulsion of placenta with its membrane during labour.

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