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Effect of supportive education intervention package on pain and anxiety during labour among primigravida mothers

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Abstract
A quasi experimental study was conducted to determine the effect of Supportive Education Intervention Package on pain and anxiety during labour among sixty primigravida mothers. The subjects selected by purposive sampling of their 36th week of gestation from OPD and OBG ward of Government Taluk hospital, Nedumangadu, Thiruvananthapuram district. Data were collected by using socio demographic proforma, Numerical Pain Rating Scale and Beck Anxiety Inventory. Thirty subjects in the experimental group received Supportive Education Intervention Package in two sessions at their 36th and 37th week of gestation and thirty subjects in the control group received routine care. At 36th week, antenatal mothers were given video teaching on breathing exercise, bearing down techniques and different positions in labour; lecture on pain relieving measures and medical and nursing management in labour. Posttest was conducted within one hour after delivery for both control and experimental groups. The result showed that the pain and anxiety in the experimental group were less than that of control group at ($p<0.01$). The findings showed that this non – invasive technique can be effectively used to decrease the pain and anxiety during labour and encourage mothers for normal vaginal delivery.

Keywords: supportive education intervention; primigravida; gestation; pain; anxiety; labour.

1. Introduction
Labour is considered to be one of the most painful experiences in life. Labour pain is an inevitable and intricate part of the childbirth. The intensity of the pain experienced during labour affects maternal psychology, labour progress and fetal well-being. It also contribute psychological factors, such as stress, anxiety, fear, sense of loss of control and sense of abandonment. Physiological factors, such as uterine contractions and cervical dilatation though essential parts of labour, are the major contributors to labour pain. There is a wide spectrum of factors which may influence labor pain including personal, physical and medical characteristics. Understanding the patient's suffering and ensuring safe labour with minimal pain is one of the basic principles of modern obstetrics.

Childbirth education has influenced the practice of obstetrics remarkably during the past fifty years. In the early 20th century, most women gave birth in the comfort and familiarity of their own homes, but there also were high rates of maternal and infant mortality. Advances in obstetric technology and maternal–fetal medicine shifted birth from the home to the hospital. The likelihood for medical intervention during pregnancy and childbirth has subsequently increased, requiring more consumer education and preparation. As perinatal morbidity and mortality have declined, the expectations for a perfect outcome have increased. Women have become more knowledgeable, self-confident, and participatory in their childbirth experiences, shifting the focus to more family-centered maternity care. Involvement of the expectant father, once limited to pacing in the waiting room, is now routinely intimate. The women's movement has had an enormous impact on traditional childbirth. Women began to question the safety and necessity of obstetric interventions, anesthetics and analgesics, and routine hospital procedures. Women currently are demanding more knowledge about, and control over, their childbirth experience. In addition, women are having fewer children and consequently are spending more time and effort in preparation for parenting through attendance at various childbirth education classes. Information about reproduction and birth formerly obtained through the extended family now is based on scientific study and is obtained through formal childbirth education programs.

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2. Materials & Methods
Research approach
The investigator adopted quantitative approach for the study since the primary objective of the study was to determine the effect of S E I P on pain and anxiety during labour among primigravida mothers.

Research design- Quasi experimental research design
Setting of the study
The setting chosen for the study was the antenatal ward, obstetrical and gynaecological OPD and labour room of Government Taluk Hospital, Nedumangadu.

Population
The population of the study was primigravida mothers undergoing normal vaginal delivery.

Sample selection Criteria
Inclusion criteria
The study included primigravida mothers of
- 36th week of gestation.
- Who were present at the time of data collection.
- Who were willing to participate in the study.

Exclusion criteria
- High risk pregnancy like gestational diabetes mellitus, pregnancy induced hypertension, respiratory and cardiovascular diseases, previous caesarean section, epilepsy, mental retardation, psychiatric illness, bleeding disorders, renal problems, intrauterine growth retardation.
- Primigravida mothers who use any form of analgesics.

Sample
The sample for this study consisted of all primigravida mothers who were in 36 weeks of gestation and came to OPD or antenatal ward of Goverment Taluk hospital, Nedumangadu and had fulfilled the selection criteria.

Sampling technique
In this study the investigator had used purposive sampling to select the subjects who met the selection criteria.

Description of the tool
Tool used for the study included the following section

Tool 1
- **Section A – Structured questionnaire**

Sociodemographic profoma: Consists of demographic variables such as age, religion, education, occupation, type of family, recreational activity and support system.

Tool 2
- **Section B –Numerical pain rating scale**

It is a subjective pain assessment tool which comprises of points from 0-10. The pain score was classified as no pain, mild pain, moderate pain, severe pain and worst pain.

Tool 3
- **Section C – Beck anxiety scale**

It is a subjective anxiety assessment tool which comprises of twenty one items. Each item has four scores.
Sum of the items were taken as grand score and it was interpreted as

0-21 -very low anxiety
22-35 -moderate anxiety
>36-potential cause for concern

Data collection process
Data collection was carried out for a period of two month from 8-12-2013 to 28-1-2014 after obtaining written permission from Medical Superintendent, Govt. Taluk hospital Nedumangadu. The data collection process began with identifying the primigravida mothers who met the inclusion criteria. Thirty subjects each were allocated to both experimental and control group. The purpose of the study was explained to each subjects and an informed consent was obtained prior to the main study. Confidentiality was ensured to all subjects.
The subject's sociodemographic data were collected through structured questionnaire. Supportive education intervention package was given to thirty subjects in the experimental group in two sessions during their visits for antenatal check up at 36th and 37th weeks of gestation. First session was at 36 weeks of gestation included
- lecture class about pregnancy
- events in third trimester
- labour – causes, onset, induction, stages and management
- video teaching about breathing exercise, bearing down effort and positioning, pain relieving measures, medical and nursing management in labour.
- Second session was at 37th weeks of gestation included
- introduction of nursing staff
- orientation of antenatal ward, labour room and postnatal ward.

The routine care was given to control group. The pain and anxiety tool were assessed by Numerical pain rating scale and Beck anxiety scale for both control and experimental group within one hour after delivery. Each tool was administered for five to ten minutes.

Results
a. Distribution of subjects according to socio demographic variables

In the present study more than half of the (53.3%) subjects in the control group were 20-30years of age and (56.7%) of the subjects in the experimental group were < 20 years of age. Both in the control and experimental group 43.3% of the subjects belong to Hindus. 30% subjects in the control and 20% subjects in experimental group were belong to Christians. Half (50.0%) of the subjects in the control group and 43.3% of the subjects in the experimental group educated up to SSLC. Five subjects in the experimental group were graduates and no graduates were there in control group. Majority (60.0%) of the subjects in the control group and 73.3% of the subjects in the experimental group were housewives. In the control group 20% of the subjects were Government employees and same percentage were self-employed. More than half (66.7%) of the subjects in the control group and 76.7% of the subjects in the experimental group were in nuclear family. Majority (70.0%) of the subjects in the control group and experimental group 86.7% were getting support from family members. On test of homogeneity in terms of sociodemographic variable, it was found that there was no significant difference between control and experimental groups, thus the group were homogenous.

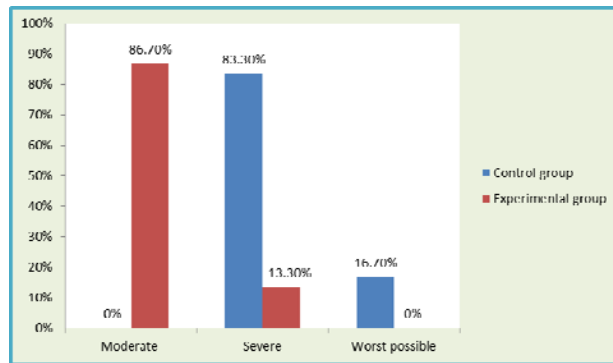**b. Effect of supportive education intervention package on pain during labour (n=60)**

Fig 1: Distribution of subjects in both groups according to pain level

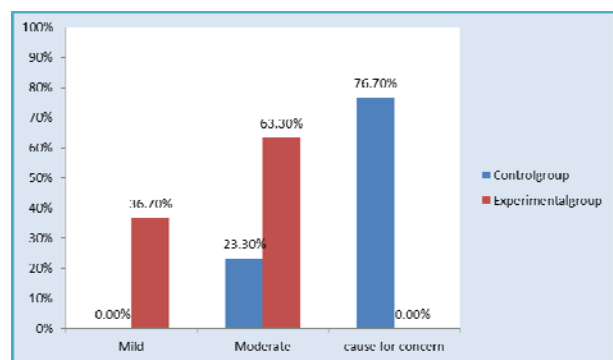**c. Effect of supportive education intervention package on anxiety during labour (n=60)**

Fig 2: Distribution of subjects in both groups according to anxiety level after SEIP

d. Association between pain & anxiety in labour with selected socio demographic variables

The study found that there was significant association between pain with variables such as religion and education since the Fisher's exact value 0.009 and 0.043 respectively. The variables such as age (P#0.060), education (P#0.043), occupation (P#0.318), type of family (P#0.449), support system (P#0.143) were not significantly ($p>0.05$) associated with pain during labour among primigravida mothers. The study found that there was no significant association between anxiety with selected socio demographic variable such as age (p#0.125), religion (p#0.660), education (p#0.340), occupation (p# 0.597), type of family (p#0.143), support system (p#0.657), recreational activity (p# 0.200) since ($p>0.05$) during labour among primigravida mothers.

Discussion

In the present study the subjects of experimental group experienced significantly reduced pain (5.6 (SD=.8), (t =17.8***, p=0.000) than that of control group (8.90 (SD= 0.7) during labour. In a previous study conducted by Kaur K (2013) on effect of video on 'Breathing Exercises during labour' on pain perception and duration of labour among primigravida mothers also showed that significant difference in pain perception and duration of labour among experimental and control group ($p<0.01$).

In the present study there is a reduction in mean anxiety score of subjects in the experimental group (22.4 (SD=3.5), (t =13.23***, p=0.000) than that of control group (35.2 (SD= 4.0), which is highly significant. A study conducted by Gayathri on effectiveness of planned teaching programme (PTP) on knowledge and reducing anxiety during labour among primigravida mothers showed that PTP helped in reducing anxiety about labour and there was positive correlation between knowledge and reducing anxiety in experimental group. All supporting studies revealed that planned education antenatally has significant effect on reduction of anxiety during labour.

In the present study variables such as religion and education were significantly associated with pain during labour among primigravida mothers. A study conducted by H.E Onah *et al* (2007) on antenatal mothers says that there was significant positive correlation between the parturients' pain scores and their educational levels.

In the present study variables such as age, religion, education, occupation, type of family, support system and recreational activity were not significantly ($p>0.05$) associated with anxiety during labour among primigravida mothers.

The study proved that S E I P has a significant effect on reduction of pain and anxiety during labour among primigravida mothers. Thus it can be widely used in the hospitals to reduce pain and anxiety among antenatal mothers.

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