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A STUDY TO ASSESS THE EFFECT OF SLOW-PACED BREATHING EXERCISE ON PAIN PERCEPTION AND ANXIETY AMONG PRIMIGRAVIDA IN FIRST STAGE LABOUR, AT SELECTED HOSPITALS, BANGALORE

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ABSTRACT

Childbirth is one of the most marvellous and memorable segment not only in the life of a woman but also for the entire family. Labour is a complex process where the women experiences intolerable pain and anxiety and this puts the women at risk for many complications. labour pain is usually rated as a high score particularly among primipara because the women's fear increases her anxiety and muscular tension which increases the pain she feels.There are many choices for pain relief, both pharmacological (drugs) and nonpharmacological(without drugs) to manage first stage labour. Non-pharmacologic measures have been shown to promote a higher satisfaction with the labour experience because of perceived control and empowerment.Among all these techniques studies has shown that breathing techniques and relaxation is found to be effective without any side-effects.

Keywords : Assess, slow-paced breathing exercise, pain perception, anxiety, primigravida, first stage labour, labour room.

INTRODUCTION

NEED FOR THE STUDY

Labour is a complex process where the women experiences intolerable pain and anxiety and this put the women at risk for many complications. During labour, women will be tense and frightened. Studies says that when an individual is tensed and frightened, body presumes that there is a need to escape from something dangerous and diverts blood to the muscles of arms, legs and heart so that the individual can run away from the situation. Hence when a women in labour experiences anxiety, blood is diverted away from the womb and also oxygen supply for the uterus and the baby will be decreased.

The most common management used by the women in labour is epidural anesthesia. Epidural anesthesia puts the women at a greater risk of many complications. A study conducted inCalifornia to assess the complications on use of pharmacologic measures in labour has stated that, meperidine,

morphine, fentanyl, epidural anesthesia causes decreased FHR variability, hypotension, backache, inadequate or failed block, duralpuncture and postdural puncture headache, urinary retention, systemic toxicity, epidural hematoma and abscess. And the outcome of labour was instrumental delivery, increased labour length, fever, dissatisfaction, apgar score <7 at 1 min, apgar score <7 at 5 min and need for naloxone in the newborn.Research has shown that simple breathing exercises can help to reduce labour pain and anxiety. Studies support that one of the breathing exercise known as Slow- Paced Breathing Exercise is effective in reduction of labour pain and anxiety.

Slow- Paced breathing is a deeper, slower way of breathing, which involves filling the lungs to its full capacity when inhaling and then exhaling as much air as possible. These breathing techniques are used only during contraction. In between contraction women has to relax to conserve energy where breathing should be smooth and deep through the nose and then letting air through the mouth. This type of breathing is also called as cleansing breath.

REVIEW OF LITERATURE

An article on 'nature of labour pain' says that the experience of pain during labour is the result of the complex processing of multiple physiologic and psychosocial factors on the woman's individual interpretation of nociceptive labour pains. The degree of pain changes as the dilatation of the cervix progresses. Maternal tolerance of the changes varies, but is often impacted by the duration of labour.

In a study of primiparous women during the first stage of labour, 60% described the painduring first stage of labour as unbearable, intolerable, extremely severe and excruciating.

Obstetric factors that contribute to the pain of labour include rate of cervical dilatation, perineal distention, intensity and duration of contractions and fetal position and size. As pain intensity increases, women experience decreased pain tolerance. Age and parity may also influence an individual's perception of pain.

An article from Iranian Journal of Nursing and Midwifery Research on 'reasons for cesarean section' states that among all the cesarean deliveries between 2010 -2011 in Iran 37% of women opted for cesarean section due to fear and anxiety.

Literature on 'pain perception and anxiety' indicates that the psychology of painexperience relates to anxiety, which in turn is influenced by cultural factors, the immediate environment and past experiences.

A study conducted by Oregon Health Sciences University School of Nursing involving

4,171 women who used different methods for managing first stage of labour has showed that majority that is 84% of women used non-drug methods, while about half 49% used drugs for relieving pain. Among 84% of women who used non-pharmacologic methods, 55.2% of women found that paced breathing is effective.

An article from the journal of Pain Research and Management found that pacedbreathing exercise and nurse-administered massage significantly reduced the perception of pain during first stage labour.

OBJECTIVES OF THE STUDY

1. To assess the effect of slow-paced breathing exercise on pain perception and anxiety bycomparing post test findings of experimental and control group.

2. To find relationship between pain perception and anxiety among primigravida in experimental group.

3. To determine the association between level of pain perception and selected socio-demographic variables among experimental and control groups.

4. To find the association between degree of anxiety and selected socio-demographic variables among experimental and control groups.

HYPOTHESES

H01–There is no significant difference between post-test scores of experimental and control group.

H02 - There is no significant relationship between pain perception and anxiety of experimental group.

H03 – There is no significant association between level of pain perception and selected socio-demographic variables in experimental and control groups.

H04 - There is no significant association between degree of anxiety and selected socio-demographic variables in experimental and control groups.

MATERIALS AND METHOD

CONCEPTUAL FRAMEWORK:

The conceptual framework selected for the study was Imogene king goal attainment theory.

Methods

APPROACH:The research approach adopted for this study wasan evaluative research approach.

DESIGN:The research design selected for this study wasPost test only Controlgroup design.

SETTINGS:The study was conducted in Labour room of M.S.Ramaiah Memorial Hospital. Bangalore, M.S.Ramaiah MedicalTeaching Hospital. Bangalore, KempeGowda Teaching Hospital. Bangalore.

PARTICIPANTS:

Population: Population of the study was primigravida in first stage labour.

Sample size:40 women (in first stage labour) fulfilling selection criteria.

20- Experimental group

20- Control group

Sampling technique: In this study Purposive sampling technique was used.

Development of the tool:

The tools developed for this study were Modified Behaviour Pain Assessment Scale and Modified State Anxiety Scale. Tool validity was established by professionalexperts.

INTERVENTION

40 primigravida women in first stage labour were selected as the sample. Sample selected by

purposive sampling technique were assigned 20 women to experimental group and 20 women to control group.Slow-paced breathing exercise was taught with demonstration to the women in first stage labour in experimental group with necessary instructions about its practice and checklist was used to evaluate the exercise. Post-test was conducted for both the group using Modified Behaviour Pain Assessment Scale and Modified State Anxiety Scale at the end of 5 subsequent contractions.

RESULTS AND DISCUSSION

The present study assessed the effect of slow-paced breathing exercise on pain perceptionand anxiety of primigravida. Post test Findings showed that in the experimental group 90% of the subjects had mild pain, 10% had moderate pain and 75% of the subjects had mild anxiety whereas 25% of the subjects had moderate anxiety. In the control group 70% of the subjects had moderate pain, 30% had severe pain and 85% of the subjects had severe anxiety whereas 15% of the subjects had moderate anxiety.

Effect of slow-paced breathing exercise was assessed by comparing the post testscores of experimental and control group, the calculated student `t` value of pain was 29.034 which was significant at p_ 0.01 level of significance and the calculated student `t` value of anxiety was 22.406 which was significant at p_ 0.01 level of significance. Hence H01 stated as there is no significant difference between post test scores of experimental and control group was rejected and restated as there is a significant difference between post test scores of experimental and control group.

The inferential analysis using Karl Pearson's correlation coefficient showed that there was a weak positive correlation exists between pain perception and anxiety of primigravida and was not statistically significant at p_ 0.05 level of significance. Hence the null hypothesis H02 stating there is no significant relationship between pain perception and anxiety among primigravida is accepted.

Chi square test revealed that there was no significant association between level ofpain perception and selected socio-demographic variables in experimental group except for type of work, monthly family income, mode of induction and acceleration of labour. Hence the null hypothesis H 03 stated as there is no significant association between level of pain perception and selected socio-demographic variables in experimental group was accepted except for type of work, monthly family income, mode of induction and acceleration of labour.

Chi square test revealed that there was no significant association between level ofpain perception and selected socio-demographic variables in control group except for duration of first stage labour. Hence the null hypothesis H03 stated as there is no significant association between level of pain perception and selected socio-demographic variables in control group was accepted except for duration of first stage labour.

Chi square test revealed that there was no significant association between degreeof anxiety and selected socio-demographic variables in experimental group except for type of work, pregnancy, mode of induction, acceleration of labour, gestational age and duration of first stage labour. Hence the null hypothesis H04 stated as there is no significant association between degree of anxiety and selected socio-demographic variables in experimental group was accepted except for type of work, pregnancy, mode of induction, acceleration of labour, gestational age and duration of first stage labour.

Chi square test revealed that there was no significant association between degreeof anxiety and selected socio-demographic variables in control group. Hence the null hypothesis H04 stated as there is no significant association between degree of anxiety and selected socio-demographic

variables in control group was accepted.

The study concluded that slow-paced breathing exercise was effective in reducing pain perception and anxiety among primigravida.

CONCLUSION

The present study assessed the effect of slow-paced breathing exercise on pain perception and anxiety. The study concluded that there is a significant difference between experimental and control group in reduction of level of pain perception and degree of anxiety among primigravida in first stage labour because of slow-paced breathing exercise.

REFERENCE

[1] Kuti. O, Faponle. A. Physiology of pain in labour: *Journal of Obstetrics and Gynecology. Calcutta*: **2006**; 26(6). p. 332-334.

[2] Faponle. Characteristics of labour pain at two stages of cervical dilation and midwifery management of pain in labour: the CNM Data group. California: **1989** 38(3). p.289-95.

[3] Cheung, Ipwyy, Chan D. Maternal anxiety and feelings of control during labour: Obstetrical and gynecological department. Hongkong: **2007**; 23(2). p.123-30.

[4] U. Wesselman. Pain in childbirth: A Comprehensive reference. USA: **2008**; chapter 539. p. 579-58.

[5] Card Douglas. Women's evaluation of intrapartum non-pharmacological pain relief methods used during labour: *The Journal of perinatal education*. Mumbai: **2001**; 10(3). p.1-3.

[6] Prof A Rudra. Pain Relief in labour: Review article. Culcutta national memorial hospital India: **2004**; 62(3). p.1-2.

[7] Brucker and Zwelling. Complementary therapies for labour and birth: AJOB. USA: **2004**; p.5.

[8] N.Ray, W.Caman. Hyperventilation induced tetany associated with epidural analgesia for labour: *International journal of obstetric anesthesia*. UK: **2005**; 78(14). p.74-76.

[9] Rejane Marie Barbosa et al. Effectiveness of non-pharmacological strategies in relieving labour pain: AJOB. USA: **2009**; 43(2). p.435-41.

[10] AsnatWalfi et al. A rise in pain threshold during labour, A prospective clinicaltrial: *Journal of international association for the study of pain.* UK: **2007**; 132(48).p. 104-108.

[11] Penny Simkin. April bolding. Non-pharmacologic approaches to relieve labour pain, relaxation and breathing exercises: Washington: **2002**; p.86-7.

[12] Nancy Sullivan, Findley Chamberlain. Pain relief during labour and birth: *International journal of obstetrics and gynecology*. **1998**; (43).p.77-82.

[13] Davim RMB, Torres GV. Effectiveness of non-pharmacological strategies inrelieving labour pain: Yala university press, ISBN 03000 72916: **2009**; 43(2). p.435-41.

[14] Arinolao O Sanya, Adermola M Adebiy. Effect of controlled breathing on pain tolerance: Department of physiotherapy. Nigeria: **2000**; p.46-48.

[15] Yildirim G Sahin NH. The effect of breathing and skin stimulation techniques on labour pain

perception of Turkish women: Pain research management. Turkish: **2004**; 62(4). p.183-87.

[16] Lauy JE Murtagh MJ Macphail. A systematic review of women's expectations and experience of pain relief in labour: BMC med. Bangalore: **2008**; p.6-7.

[17] Margaret V, Wideman, Jerome E, Smger. The role of psychological mechanisms in preparation for childbirth: *American psychiatric university*. America: **1984**; p.1357-137.

[18] ClinNurs J. Severity of labour pain: influence of physical as well as psychologicvariables: American College of Obstetrics and Gynecologists andthe American academy of pediatrics guidelines for perinatal care: 6th edition: Washington. DC: **2007**; 6(1). P. 43-56.

[19] Crandon AJ. Maternal anxiety and obstetrics complications: psychosom research institute. USA: **1979**; 23(6). p. 109

[20] James Patterson. American pregnancy association: Patterned breathing during labour: University of lowa maternity centre. USA: **2010**; p. 63- 70.