

**EFFECT OF GB-21 ACUPRESSURE ON PERCEPTION OF
LABOUR PAIN AMONG PARTURIENT MOTHERS AT
SRI RAMAKRISHNA HOSPITAL, COIMBATORE**

REG. NO. 301220056

A Dissertation Submitted to
The Tamilnadu Dr. M. G. R. Medical University,
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In Partial Fulfillment of the Requirement for the
Award of the Degree of

MASTER OF SCIENCE IN NURSING

2014

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LEVEL ON PERCEPTION OF LABOUR PAIN

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Abstract

An interventional study was conducted to assess the effect of GB-21 acupressure on perception of labour pain among parturient mothers at Sri Ramakrishna Hospital, Coimbatore. Labour pain is a challenging issue for nurses designing intervention protocol. Acupressure have been widely employed during labour, however relatively little study has been undertaken examining the effects of acupressure on parturient mothers. Quasi experimental pre test and post test with control group design was adopted to meet the objectives of the study. Informed consent was obtained from the selected parturient mothers after brief explanation of the study and intervention. Purposive sample of 24 parturient mothers were included for the study. Selected samples were equally assigned to experimental and control group. Acupressure was administered for experimental group during active phase of first stage of labour at 4cm and 6cm of cervical dilatation over 20 minutes. The control group received routine nursing care. The perception of labour pain was assessed using Numerical Rating Scale and Behavioural Rating Scale. Both descriptive and inferential statistical methods were used to test the hypotheses. The findings of the study reveals that application of GB-21 acupressure is effective in reducing perception of labour pain among parturient mothers.

Effect of GB-21 Acupressure on Perception of Labour Pain Among Parturient Mothers at Sri Ramakrishna Hospital, Coimbatore

Labour is an important and an exciting life event which involves many new sensations. When the mother having the baby, these sensations are part of giving life to the baby. Everyone needs to suffer during child birth due to pain. Pain in labour is a nearly universal experience for child bearing women and it can be intense with tension, anxiety and fear make it worse. It is however experienced differently by mothers giving birth. The majority of women though need some sort of pain relief drugs during child birth, but safety of child takes first priority. The alleviation of pain is important. It is not the amount of pain a women experiences, but whether she meets her goal for herself in coping with the pain that influences her perception of birth experiences as “good” or “bad”. Technological advances and obstetrical developments have made delivery safer for both the mother and the baby. The current focus of care during labour also aims to achieve a favorable satisfactory delivery experience. Childbirth is a process by which the baby inside the womb adjusts itself to its surroundings and passes out of the uterus to be born as a new individual in the world. Many women would like to have labour without using drugs and find alternative methods to manage pain. These methods include acupressure, breathing technique, massage therapy, music and warm compress.

Onset of labour involves uterine distension, activation of fetal hypothalamic pituitary axis prior to the onset of labour which increases estrogen and prostaglandin from placenta. With the onset of labour there is an increase in the oxytocin receptors and synthesis of myometrial contractile protein which thereby increases the excitability of myometrial cell membranes. The first stage of labour is considered

from the onset of regular uterine contractions to the full dilatation of the cervix. Events of first stage of labour include latent phase, active phase and transitional phase.

The first stage of labour averages about 13-14 hours for a nullipara and about 6-7 hours for a multipara. Latent phase involves dilatation from 0-3cm in which contractions occur usually every 5-20 minutes, lasting for 20-40 seconds and of mild intensity. Active phase involves dilatation from 4-7 cm, contractions occur usually every 2-5 minutes, lasting for 30-50 seconds and of mild to moderate intensity. After reaching the active phase, cervical dilatation averages 1cm per hour in primi gravida and 1.5cm per hour in the multi gravida. Transitional phase involves dilatation from 8-10 cm in which contractions occur every 2-3 minutes, lasting for 50-60 seconds and of moderate to strong intensity. Some contractions last up to 90 seconds.

Pain threshold is remarkably similar in all persons though sexual, social, ethnic and cultural differences play a definite role in the individual's perceptions of pain. The cultural expression of pain varies from individual to individual. Asian women believe it shameful to scream during labour (Mattson and smith, 1993). Pain may be local with cramps and tearing or bursting sensation because of cervical dilatation, effacement and uterine ischemia (decreased blood flow and therefore local oxygen deficit) from the contraction of arteries in the myometrium.

Sometimes pain stimuli that are particularly intense can be ignored. Certain nerve cell groupings within the spinal cord, brainstem and cerebral cortex have the ability to modulate the pain impulse through a blocking mechanism. This gate control is helpful in understanding the approaches used in parent education for childbirth

preparation programs. Cognitive activities of concentration on breathing and relaxation require selective and directed cortical activity, which activates and closes the gating mechanism as well.

The midwives look for cues to identify the women's desired level of control in management of pain and its relief. There are many choices for pain relief, pharmacological and non pharmacological to manage the first stage of labour. They are non pharmacological methods like narcotics, neurotransmitters, tranquilizers, sedatives, intrathecal narcotics and non pharmacological method like acupressure, relaxation, position change, massage, hydrotherapy, local application of heat or cold and music therapy.

Labour pain and methods to relive it are concerns of childbearing women and families. Approximately 4 million women and families annually in India alone are undergoing this difficulty. The subject of labour pain is relatively neglected in the health and medical literature. Non pharmacological measures have been shown to promote a higher satisfaction with the labour experience because of perceived control. Among all these techniques acupressure is found to be effective without any side effects. Acupressure can help the mother to cope with the pain due to contractions.

Acupressure is an ancient healing art developed in Asia over 5,000 years ago, using the fingers, hands, elbow or other devices. The term acupressure refers that application of pressure on acupuncture points on the surface of the skin to stimulate the body's natural-curative abilities. These points lie on energetic channels running from the surface of the skin to connect to the body's internal organs. When stimulated they are thought to work through various processes, with western medical research

demonstrating the release of beta-endorphins, serotonin, nor epinephrine and oxytocin while acupuncturists refer the effects in terms of improving and regulating blood, energy and emotions so that the body can work more efficiently. It is thought that when an acupressure point is pressed, muscle fibers elongate and relax, allowing blood flow more freely and toxins to be released and eliminated.

1.1. NEED FOR STUDY

Child bearing is a natural physiological event. Before the labour itself all women should have adequate information about changes in the labour for clear understanding of the entire labour process. Women in labour should be encouraged to trust their own instincts, listen to their body and verbalize feeling in order to get help and support and to ensure the women has some control over the birth of the baby.

Pregnant women usually do not have sufficient knowledge about child birth and postpartum care. Their knowledge is incomplete and full of exaggerations. Thus the delivery is awaited with fear, anxiety and lack of confidence. For this reason many of the health care providers recommended child birth preparation classes to the expectant parents.

Natural child birth is beautiful experience with many safe options and benefits. Women usually dream of a perfect birth. One unique aspect of child birth is association of physiologic process with pain and discomforts requiring appropriate pain management. Intervention of pain and discomfort during labour and childbirth is a major part of modern obstetric care of parturient mother.

A study on reduction of pain in child birth at 2005 revealed that 69% of birthing mothers used atleast one non pharmacologic method to relieve pain and increase comfort during their labour. Most frequently used were breathing techniques, position changes, movement followed by relaxation and visualization or hypnosis. As many as one in five parturient mothers used hands on technique such as massage and labour acupressure. These two hands on technique were rated very helpful by vast majority which is 91% of the mothers. The popularity of these pain relieving methods is based on the simplicity and easiness to use them anywhere without any special and expensive tools. This is an addition to highly satisfactory level of relief from labour pain.

A wide variety of pain relief measures are available to women in labour. This descriptive survey design study examined that, which non-pharmacologic pain relief techniques is used most often by parturient women and the effectiveness of chosen techniques. Of the 10 non pharmacological strategies rated by the sample (N=46), breathing technique, relaxation, acupressure and massage were found to be most effective. The results provide directions for childbirth educators in designing and implementing an effective childbirth education curriculum that assist women to have good birth experiences. Acupressure –the application of finger pressure or deep massage to traditional acupressure point located along the body's meridians or energy flow lines has been reported to reduce labour pain and promote progress.

Akbarzadeh et.al. (2012) conducted a Comparative Study on Effect of Two- Staged Acupressure at GB-21 and SP-6 Points on the Labour Pain of Active Phase in Nulliparous Women. Many women avoid invasive and medication methods to reduce labour pain. The aim of the survey is to compare the effect of Two-staged acupressure

at GB-21 and SP-6 points on the labour pain of active phase in nulliparous women who were admitted at selected hospitals of Shiraz university of medical sciences. This clinical trial study was implemented on 150 pregnant women who referred to the labour room of maternity ward of Hafez and Shooshtari hospitals of Shiraz city . In this study effects of acupressure at two points of acupoint (SP-6) and gallbladder 21 (GB-21) in two stages of intervention dilatation (3-4, 7-8 cm) on labour pain were compared with each other and with control group. Sample participants were divided into three groups of acupressure at GB-21 point, acupressure at SP-6 point, and control. Pain measurement was done immediately before, 30 and 60 minutes after intervention using the numerical-visual chart (VAS) in all three groups. In the control group, contact without pressure on acupressure points was applied with the same condition of intervention group. Data collection tools included information form and numerical pain rating scale. Collected data were analyzed. The study shows that use of acupressure in two stages of dilatation (3-4 and 7-8 cm) is noninvasive, easy and effective in reducing pain in labour and can be used easily used in delivery room. Since there is no difference in reduction of pain intensity in two points, using any of the points can be effective

During the clinical exposure to the labour room, researcher has come across many incidents of intranatal, postnatal and neonatal side effects after the introduction of drug like pethedine, epidural analgesia. Unnecessary use of muscle relaxant drug, which again increased the expenditure as well as additional maternal and fetal side effects was also noted. In hospital, nurses have more contact than other professionals with the women during childbirth and her family. Nurses thus have great influence on shaping the child birth experiences of both the women and her family. In this regard

investigators thought using acupressure as a non pharmacological methods for the parturient mothers will help them to pass through labour without much pain and help them to adopt labour and make it as an exciting experience for mothers.

1.2. STATEMENT OF THE PROBLEM

EFFECT OF GB-21 ACUPRESSURE ON PERCEPTION OF LABOUR PAIN AMONG PARTURIENT MOTHERS AT SRI RAMAKRISHNA HOSPITAL, COIMBATORE.

1.3. OBJECTIVES

- 1.3.1. Assess the perception of labour pain among parturient mothers during active phase of first stage of labour.
- 1.3.2. Assess the perception of labour pain after application of GB-21 acupressure among parturient mothers during active phase of first stage of labour.

1.4. OPERATIONAL DEFINITIONS

1.4.1. Effect

It refers to the extent to which acupressure brings changes in perception of labour pain in active phase of first stage of labour as measured by Numerical Rating Scale and Behavioural Rating Scale.

1.4.2. Acupressure

Acupressure refers to which is the application of pressure in the acupoint balance the energy flow which relieves pain and which will be administered by the investigator who has undergone a basic training in acupressure.

1.4.3. GB-21 Acupressure

It refers to the application of acupressure in the midpoint between the bony prominence of the neck (C7) and top of the shoulder point called GB- 21 point to relieve pain during active stage of labour.

1.4.4. Pain Perception

It refers to the level of pain experienced by the mother during the active phase of first stage of labour which is measured by Numerical Rating Scale and Behavioural Rating Scale.

1.4.5. Parturient Mothers

It refers to both primi and multigravida mothers who are admitted for normal vaginal delivery in the labour ward at Sri Ramakrishna hospital

1.5. CONCEPTUAL FRAME WORK

Wieden Bach's helping art clinical nursing theory (1994) was modified and adopted as the conceptual frame work for this study. The research process was carried out based on the three components of nursing care namely identification, ministrations and validation.

1.5.1. IDENTIFICATION

Mothers who are in first stage of labour and willing to give consent to participate in the research were screened for the inclusion criteria. Data on the demographic will be collected using questionnaire.

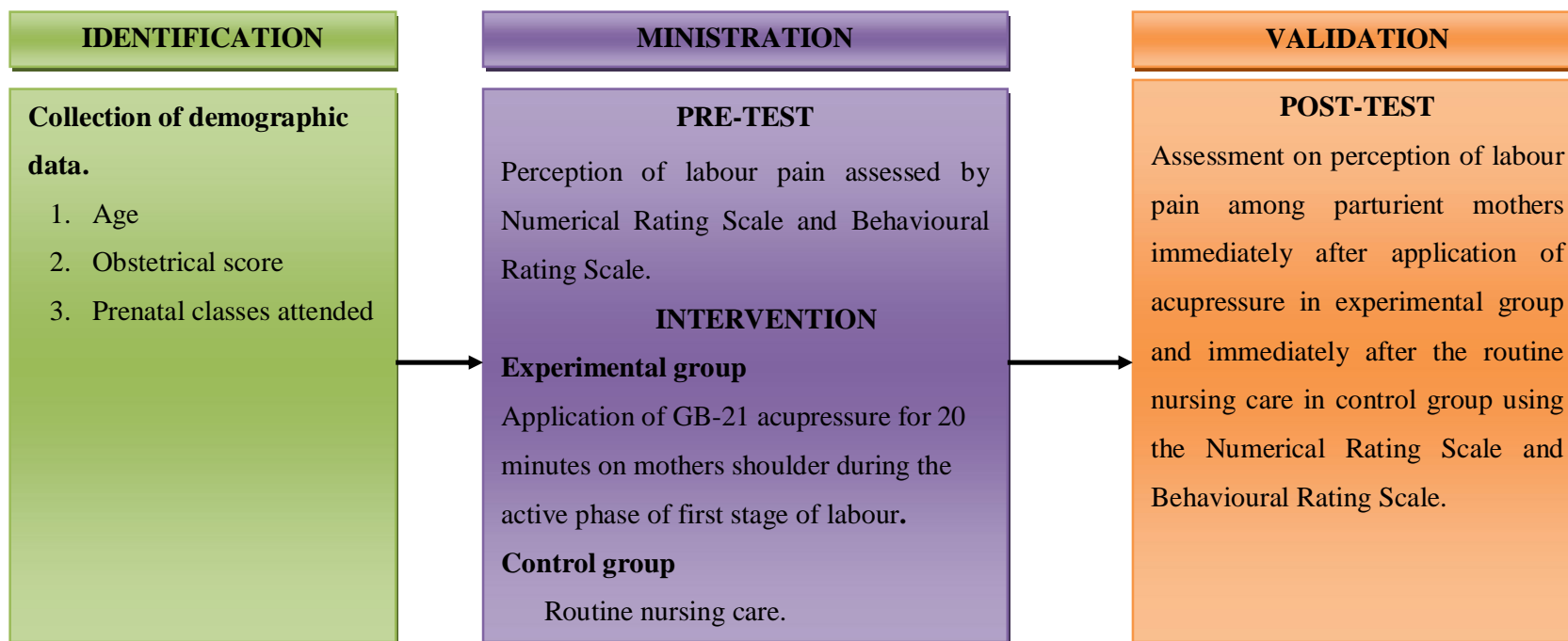
1.5.2. MINISTRATION

The mothers in active phase of first stage of labour were equally assigned to experimental and control group. A pre-test to assess the level of perception of labour pain for the experimental and control group is done using the Numerical Rating Scale and Behavioural Rating Scale. The experimental group would receive the intervention such as acupressure on GB-21 point for 20 minutes and the routine nursing care during active phase of first stage of labour. The control group would receive routine nursing care.

1.5.3. VALIDATION

For the experimental group post test was done on the perception of labour pain immediately after the application of acupressure with the help of Numerical Rating Scale and Behavioural Rating Scale. For the control group, the post test was done immediately after the implementation of routine nursing care.

FIG. 1.1
CONCEPTUAL FRAMEWORK BASED ON MODIFIED WIEDEN BACH'S HELPING ART OF CLINICAL NURSING THEORY
(1994)



WIEDEN BACH'S THEORY (1994)

1.6. PROJECTED OUTCOME

Acupressure at GB-21 point will reduce the perception of labour pain among active phase of first stage of parturient mothers.

REVIEW OF LITERATURE

Literature review is an essential component for the researcher which helps the investigator to familiarize with practical and theoretical issues relating to the problem area and helps the researcher to generate ideas and focus the research problem and its major aspect. It is necessary to obtain most current facts relevant to the problem and literature review assists the researcher to have an insight in the selection and development of the theoretical and methodological approaches of the problem.

The review is under the following components

- 2.1. Literature related to pain perception of the parturient mothers.
- 2.2. Literature related to complimentary therapy on labour pain.
- 2.3. Literature related to effect of acupressure on pain perception during labour.

2.1. LITERATURE RELATED TO PAIN PERCEPTION OF THE PARTURIENT MOTHER

Elizabeth et.al (1998) conducted a study on statistical analysis of total labour pain using the visual analogue scale. In this study, mothers were initially asked to measure the amount of overall pain or discomfort they were feeling. These measurements were completed less than 48 hour after the event. It reinforces the concept that the interval between delivery and pain scoring should be minimized. Hence, the use of retrospective visual analogue scale scores of average pain seemed to be the best approach to measure total labour pain.

Lena Martens son et.al (2011) conducted a comparative study on sterile water injections and acupuncture for pain relief and relaxation during labour. A randomized controlled trial was carried out for 128 pregnant women at term were randomly assigned to receive acupuncture (n=62) or sterile water injections (n=66). The primary endpoint was to compare the differences between pre-treatment pain levels and maximum pain in the 2 groups. The results of this study reveals that sterile water injections yielded greater pain relief ($p<0.001$) during childbirth compared to acupuncture. The secondary outcome showed that women in the sterile water group had a higher degree of relaxation ($p<0.001$) compared to the acupuncture group.

Koehn (2000) explained that labour is described as painful for most women. When pregnant women, as well as their male partners are asked in a child birth preparation class, what is the first thing that comes in to their mind when they think of labour, a typical response is pain.

Catherin et.al (2000) conducted a study to assess the recall on memory of labour pain among thirty three mothers. During active phase (5-7 cm), the pain perception was assessed by Numerical pain intensity scale. The memorability of labour pain was also investigated through recording the effect on women of watching a video tape of the second stage of their child birth. Inductive and deductive analysis suggested that women did not completely forget labour pain and recall was often vivid but not always entirely accurate and more likely to give rise to positive consequences like improved coping with other types of pain, increased confidence in ability to cope, increased self efficacy and self esteem.

Baker et.al (2001) conducted a study to examine the perception of pain by labouring women and their attending midwives, from the onset of labour to delivery. The short form McGill Pain Questionnaire was used to determine pain perception. Thirteen midwives completed the Questionnaire every 15 minutes beginning at the time of admittance to the delivery suite. Peak pain ratings for the preceding 15 minutes were obtained without reference to prior ratings or each other's scores. The analysis showed that parturient mothers and midwives pain scores were similar at mild to moderate pain levels, but midwives significantly underestimated pain intensity at levels that mothers described as severe.

Manizhen pirdel et.al (2007) conducted a study on perceived environmental stressors and pain perception during labour among primipara and multipara women. Significant positive correlation were found between pain and tension from environmental factors in primipara ($r=0.16$, $p<0.01$) and in multipara women ($r=0.22$, $p<0.05$). The result reported that performance of routine diagnostic test in hospitalized women and other invasive medical care during labour process all influenced the pain perception.

Lena Martens son et.al (2011) conducted a study on effect of treatment for labour pain with verbal report versus visual analogue scale scores. The aim of this study was to compare women's verbally reported effect of treatment for labour pain with changes in visual analogue scale scores. This comparative prospective study was carried out in a labour ward with approximately 2,500 deliveries annually in western part of Sweden. Women ($n=122$) at gestational week 37 to 42 with spontaneous onset of labour, requesting pain relief, were randomized to one of two treatments such as acupuncture or sterile water injections. Pre test was done by using visual analogue

scale post test was done at 30, 60, 90, 120, 150 and 180 minutes after treatment. The women were asked to verbally report the effectiveness of the treatment within two hours after delivery. Non-parametric tests were used. The women verbally responded, the treatment was effective. When compared to these women, the women who rated on visual analogue scale was significantly lower. Hence the study confirmed that verbal reports and changes in visual analogue scale scores were reliable indicators for treating labour pain.

Ratna & Spalding (2002) conducted a prospective survey of 1091 parturient to ascertain the mother's expectations for labour pain relief, to measure the actual pain during all stages of labour and to question their satisfaction and adequacy of pain relief. Over 80% of the women described their pain as severe to intolerable, only 4% of multiparous had low pain score (0-2) dissatisfaction with childbirth experience was very high.

Shrestha et al. (2013) conducted a study to determine the factors influencing perception of labour pain among parturient women. A descriptive study was conducted with 300 term parturient since active labour (cervical dilatation of 3-5 cm with three uterine contractions in 10 minutes each lasting for ≥ 30 seconds) were analysed for socio-demographic data, clinical profile and pain assessment. Visual analogue scale was used for pain assessment. The intensity of labour pain was graded as severe by 32%, moderate by 57% and mild by 11% of parturients. Almost half of the parturients in the age group of ≤ 19 years described labour pain as severe as compared to women between 20-34years (30.4%) and ≥ 35 years (20%). Among the nulliparous parturients, 37% described it as severe compared to only 20.7% in \geq Para1. In those with \geq higher secondary level education, 35.9% described labour pain

as severe as compared to those women who had education of \leq primary level (26.9%) and upto secondary level (27.1%). Labour pain was seen to be more severe in advanced labour with more than half describing it as severe when the cervix was dilated to 5cm, as compared to only 25.9% and 29.4% of the parturients at 3 and 4cm cervical dilatation respectively. The study reveals that labour pain was found to be more severe in younger age. More number of adolescent parturients described the labour pain to be severe as compared to those above 20, this may be due to a higher pain threshold with increased age. This study concluded that the labour pain was moderate to severe for majority of the parturients adolescent girls, nulliparous parturients, patients with higher education and those in advanced labour were more likely to perceive labour pain of higher intensity.

2.2. LITERATURE RELATED TO COMPLIMENTARY THERAPY ON LABOUR PAIN

Complimentary therapies imply the local traditions which are practiced in rural and tribal communities. Complimentary therapies are based on the locally available herbs, flora, fauna and minerals. There are various types of complimentary therapies such as acupressure, acupuncture, homeopathy, hydrotherapy, meditation, yoga, relaxation, physiotherapy and self care education.

Gedde et.al (1993) conducted a study of self-administered relaxation and guided imagery techniques during third trimester and birth. The aim of the study was to assess self-administered practice of relaxation techniques, positive affirmation and guided imagery on child birth. The guided imagery and relaxation techniques containing CD and booklet were given to the mother. Outcome measures were

monitored both during and after delivery. During delivery, pain and anxiety were measured at different stages of birth. Post-delivery Wellbeing was assessed by using Edmonton scale. Pain, Anxiety, APGAR score, duration of birth, complications and anesthesia or analgesic were recorded. Those in the CD-intervention group also reported how many times they had practiced the techniques. The study results showed that the CD-intervention group had a significantly better score on total Wellbeing.

Kalaimathi (2007) conducted a study on effect of slow paced breathing on pain perception during first stage of labour among 40 primipara women at KMCH. She reported that slow paced breathing was an effective method for reduction of pain perception among mother also introverts personality perceived more pain than extravert personality.

Pierce (1998) conducted a study on practice of toning in pregnancy and labour. Women from the childbirth education classes were taught the practice of toning i.e. voicing the exhalation of breath on a single pitch, using a vowel sound. Women used breathing as a resource for labour. Twenty two women described their experience with tone, pointing to a variety of effects such as increased ability to cope with pain and diminished anxiety and great sense of power.

Brown et.al (2001) conducted a study to assess the effectiveness of non pharmacological techniques on pain relief among labour women. The majority of sample, 89.1% attended child birth classes and 69.6% attended prenatal visits. A list of ten non pharmacological strategies was administered to parturient mothers. All of the listed techniques were used by at least one parturient mother in the sample with breathing and relaxation being the predominant techniques employed; the least used

strategies were hydrotherapy, music and aromatherapy. Parturient mothers reported breathing techniques as the most effective pain relieving technique used during labour.

Yildirim et.al (2004) conducted an experimental study to assess the effect of breathing and skin stimulation techniques on labour pain perception among forty mothers. The mothers were assigned to experimental and control group. Pregnant women were admitted to the maternity unit after cervical dilatation reached 2 cm. Perception of pain was assessed by using visual analogue scale. In the latent phase, the severity of pain was lower in the experimental group (VAS Score=1.75) than in the control group (VAS Score=3.00). The pain severity expressed at 4 cm of dilatation (control group VAS Score=6.35, experimental group VAS Score=3.75), 6 cm of dilatation (control group VAS Score=8.35, experimental group VAS Score=5.800), 8 cm of dilatation (control group VAS Score=9.55, experimental group VAS Score=7.85) were all significantly lower in the experimental group than in the control group.

Almeida et.al (2005) conducted a study on ACTH levels of mothers submitted to non pharmacologic anxiety and pain relief method during labour. 17 mothers received routine nursing care (control group) and 19 mothers (experimental group) were stimulated and guided to perform respiration and relaxation techniques. There was no difference between the groups with the intensity of active phase, and transition phase. Lower ACTH levels and partial stress relief in the experimental group suggest the interference of breathing and relaxation techniques.

Chuntharapat et.al (2008) conducted a study on effects of yoga on maternal comfort and labour pain among sixty six mothers. The mothers were randomly assigned to experimental and control groups. The experimental group underwent the yoga classes where as the control group did not. Instructions were given regarding postures, chanting, breathing, and meditation to the experimental group. The study showed that the experimental group exhibited significantly lower pain scores compared to control group.

Ellis et.al (2008) states that breathing awareness and breathing patterns enable a woman to better control her response to labour. When the woman becomes aware of her breathing rhythm and depth as she inhales and exhales, she is better able to adjust her breathing levels as labour progresses. As labour becomes more difficult, a woman may state that she feels overwhelmed by the contractions. When the labouring woman is unable to maintain her concentration, the intrapartum nurse can suggest switching to the next breathing level, one that has a faster pace and requires more concentration. The use of physical support, emotional, instructional (breathing pattern, relaxation) techniques can increase a labouring woman's confidence and ability to cope with contractions and reduce discomfort.

Bharathi (2010) conducted an experimental study among primi mothers on effective nursing interventions on pain during labour. Aim of the study was to compare the pain perception of mother before and after intervention during first stage of labour. Nursing interventions used were massage, breathing and position to primi mothers in experimental and routine care to the control group. Samples involved were (n=60) and assigned randomly in both experimental (n=30) and control group (n=30). A structured questionnaire was used for assessing demographic variables and visual

analogue scale as combined numerical pain assessment scale. Study found that selected nursing interventions (massage, breathing exercise and positions) to the primi mothers were effective in reducing their labour pain perception.

Emi john et.al (2011) conducted a study to determine the effect of breathing exercises and labour outcomes on primigravida women. The intensity of pain was determined by the Behavioural reactions which were recorded using an observational check list. The mode of delivery was assessed in terms of spontaneous vaginal delivery, assisted vaginal delivery, caesarean and duration of labour was assessed as 12-24 hours in primigravidae women and 6-8 hours in multi gravida mother. Out of ten primigravidae mothers, eight mothers performed the breathing techniques during labour and showed positive Behavioural responses during first and second stage of labour and the duration of labour was within normal period.

2.3. LITERATURE RELATED TO EFFECT OF ACUPRESSURE ON PAIN PERCEPTION DURING LABOUR

Lee mk, chang sb, kang dh (2004) An experimental study was done to evaluate the effects of GB-21 acupressure on labour pain and delivery time in women in labour. Randomised control trial involved 75 women in labour and randomly assigned to both experimental and control group. Labour pain was measured by using visual analogue scale. The result shows, there were significant differences between the groups in subjective labour pain scores at all time points following the intervention: immediately after the intervention ($p=0.012$); 30 minutes after the intervention ($p=0.021$); and 60 minutes after the intervention ($p=0.012$). The total labour time (3 cm dilatation to delivery) was significantly shorter in the GB-21

acupressure intervention group than in the control group ($p=0.006$). The study concluded that GB-21 acupressure was effective for decreasing labour pain and shortening the length of delivery time. GB-21 acupressure can be an effective nursing management for women in labour.

Chung ul j (2003) An experimental study was conducted to determine the effect of LI4 and BL67 acupressure on labour pain and uterine contractions during the first stage of labour findings indicated that there was a significant difference in decreased labour pain during the active phase of the first stage of labour among these groups.. Results of the study confirmed the effect of LI4 and BL67 acupressure in lessening labour pain during the active phase of the first stage of labour. There were no verified effects on uterine contractions.

Akbarzadeh et.al (2012) Comparing the effect of acupressure at two GB-21 and SP-6 points on the pain severity of active phase of delivery among primiparous women. In this quasi-experimental study, 150 primiparous women were randomly divided into three groups 1-Acupressure at GB-21point, 2-acupressure at sp-6 point and 3-control group (contact at two points). The interventions carried out for 20 minutes at 3-4cm dilatation of cervix. The pain severity prior to immediately and 30 and 60 minutes intervention were measured by visual analogue scale. The results show the pain severity before intervention among three groups was not statistically significant. Nevertheless, the pain severity was reduced immediately, 30 and 60 minutes after intervention in two intervention groups at 3-4 cm dilatation compared with the control group ($p<0.001$). No significant statistical difference was observed between two case groups ($p=0.93$). The study showed that application of acupressure at two GB-21 and SP-6 point was effective on the reduction of labour pain. Hence it

recommended conducting further studies regarding the application of acupressure along with non medical methods.

Smith, Collin, Cyna & Crowther (2006) conducted a study to assess the effect of alternative and complimentary therapies in labour pain management. 1537 parturient women were selected randomly for the study. Meta analysis was performed to analyse maternal satisfaction, use of pharmacological pain relief, maternal and neonatal adverse outcomes. Trial involved acupuncture (n=496), audio analgesia (n=24), acupressure (n=172), aromatherapy (n=22), hypnosis (n=729), massage (n=60), relaxation (n=34). Result found that acupressure and hypnosis are more beneficial for management of pain during labour compared to other measures.

Kashanian, Maryam, Shahali, Shadab (2010) conducted a study to assess the effect of acupressure at SP6 acupoint on the duration and pain of the active phase of labour in nulliparous women. 120 eligible nulliparous women who were at the beginning of active phase of labour (3-4 cm dilatation of cervix with proper uterine contractions). The women were randomly assigned into two groups. The experimental group (n=60), received acupressure at SP6 acupoint for 30 minutes during contractions. In the control group (n=60) a touch at this point without massage was performed. Two hours later a second pelvic examination was performed in the absence of good forceful contractions and oxytocin in the classical form was infused. Finally duration of active phase, severity of pain, the amount of necessary oxytocin, necessity to administer oxytocin and the route of delivery were compared between the two groups and statistical analyses were performed. The study reveals that acupressure at SP6 acupoint reduced the duration and severity of pain of the active phase of labour, caesarean section rates and necessity and amount of oxytocin.

Shenoy et.al (2010) conducted a study to evaluate the effect of acupressure administered during the active phase of labour on nulliparous women's ratings of labour pain. Seventy-one women randomized to receive acupressure at acupuncture point spleen 6 (SP6) on both legs during contractions over a 30-minute period (acupressure group), 71 women to receive light touch at SP6 on both legs during the same period of time (touch group) and 70 women to receive standard care (standard care group). Finally, they found that acupressure seems to reduce pain during the active phase of labour in nulliparous women giving birth in a context in which social support and epidural analgesia are not available. However, the treatment effect is small which suggests that acupressure may be most effective during the initial phase of labour

METHODOLOGY

The methodology of the present study includes research approach, research design, research setting, study population, criteria for sample selection, sampling techniques, variables of the study, description of tool and technique of data analysis and interpretation.

3.1. RESEARCH APPROACH

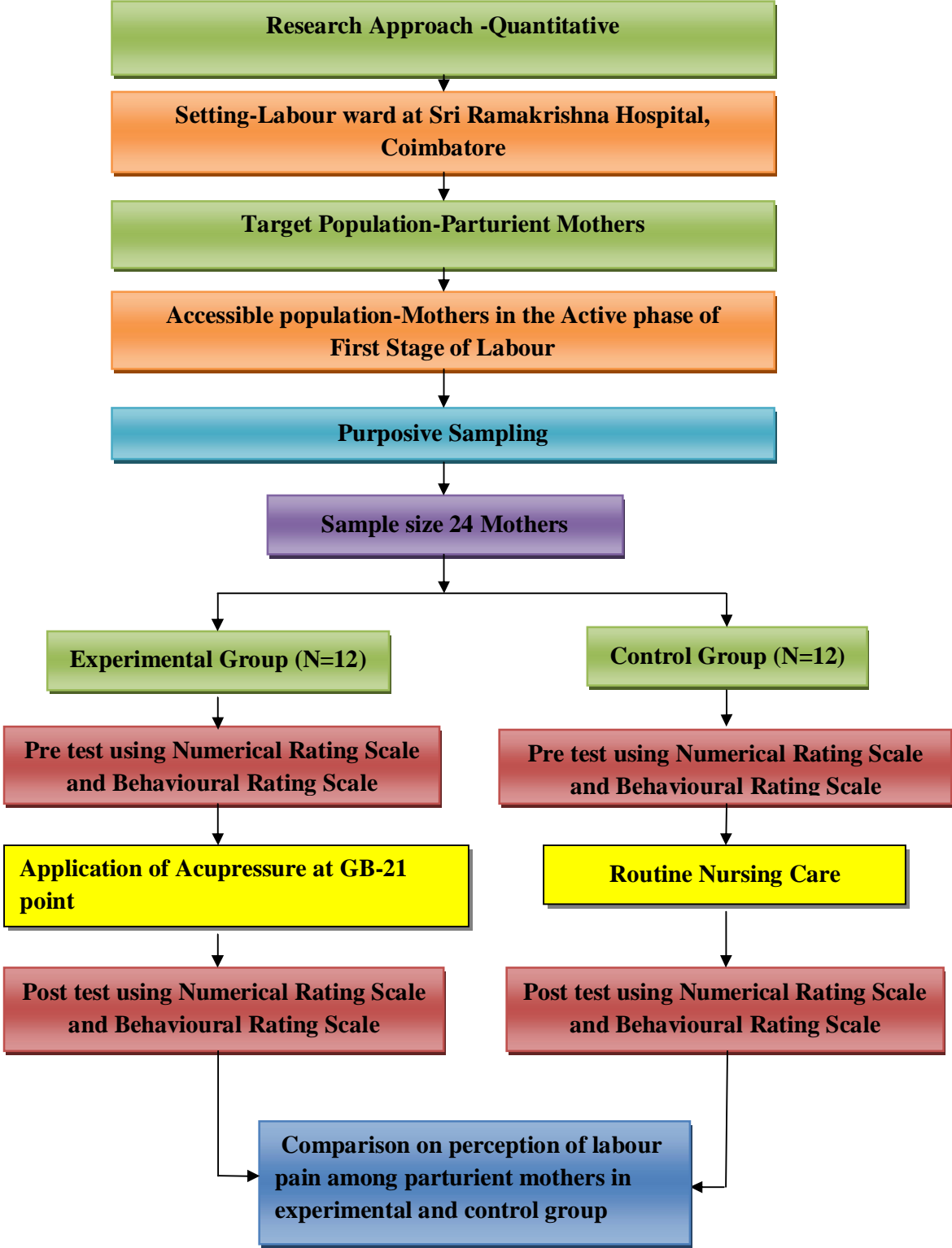
The present study aimed to assess the effect of GB-21 acupressure on perception of labour pain during active phase of first stage of labour among parturient mothers. Hence a quantitative research approach was adopted to determine the effect of GB-21 acupressure.

3.2. RESEARCH DESIGN

Quasi experimental pre and post test with control group design was adopted. Design was found to be appropriate to meet the objectives of the study.

Fig 3.1

The Diagrammatic Representation of Research Design



3.3. RESEARCH SETTING

The study was conducted in the labour ward at Sri Ramakrishna hospital, Coimbatore. It is a multi specialty hospital with the capacity of 740 beds. The bed strength of the obstetric and gynaecological ward is 40 and the labour ward is 10. Total normal deliveries in the hospital from June 2012 to May 2013 were 357.

3.4. POPULATION

The parturient mothers in the age group 18-35 years on active phase of first stage labour admitted for safe confinement preferably for normal vaginal delivery and those who were willing to participate in the study at Sri Ramakrishna Hospital, Coimbatore.

3.5. CRITERIA FOR SAMPLE SELECTION

Inclusion criteria

1. Mothers in active phase of first stage of labour.
2. Labour mothers who were alert, willing, conscious, and able to interpret the Numerical Rating Scale.

Exclusion criteria

1. High risk pregnancy.

3.6. SAMPLING

Purposive sample of 24 parturient mothers in active phase of first stage of labour with 4cm and 6cm cervical dilatation were included in the study. The mother was equally allocated to experimental (N=12) and control group (N=12).

3.7. VARIABLES OF THE STUDY

Independent variable

Application of GB-21 acupressure is the independent variable.

Dependent variable

Perception of labour pain is taken as the dependent variable.

3.8. MATERIALS

3.8.1. PART A

Demographic Data

The base line data on sample number, age, obstetrical score, last menstrual period, expected day of delivery and prenatal classes attended.

3.8.2. PART-B

Numerical Rating Scale

Numerical Rating Scale is a standard instrument which consists of ten points. In this study it is used to assess the perception of labour pain among parturient

mothers during the active phase of first stage of labour at 4cm and 6cm dilatation. Here the mothers are instructed to choose a point on the line indicating the level of pain perception. Numerical Rating Scale was used before and after the application of acupressure. It is widely preferred by national and international investigators for its applicability and clarity in determining the pain intensity of the parturient mothers. The validity and reliability of Numerical Rating Scale were tested by Duncan, Bushnell and Lavigne (1989). The subject is instructed to indicate the number given in the Numerical Rating Scale based on their level of perception of pain.

Score interpretation

No pain	=	0
Mild	=	1 – 3
Moderate	=	4 – 6
Severe	=	7- 10

Behavioural Rating Scale

Behavioural Rating Scale is a standardised tool to measure objective manifestation of pain, it is a nurse rating scale. The Behavioural Rating Scale is used to record and observe verbal and non verbal cues of labouring women who were in their active phase of labour. It is a five category scale used to assess present behavioural manifestations of pain; face, restlessness, muscle tone, vocalization and consolability. The checklist will be marked by the investigators according to observed

reactions made by the mothers on labour pain before and after the administration of GB-21 acupressure.

Score interpretation:

No pain	=	0
Mild	=	1 – 3
Moderate	=	4 – 6
Severe	=	7- 10

3.8.3. PART C

Acupressure

Acupressure is a therapy for the relief of pain symptoms that places physical pressure on different points on the surface of the body through greater balance and circulation of energies in the body. Acupressure is a form of touch therapy that utilizes the principles of Chinese medicine. Acupressure technique is non invasive, safe and effective. Acupressure can be used as a part of physician's prescription, as a session of massage therapy, or as a self treatment for common aches and illness.

Procedure

A purposive sample of parturient mothers with labour pain will be taken into the study. The progress of the labour pain will be assessed by the partograph. The mothers will be equally allocated into experimental group and control group. The

GB-21 acupressure will be applied to the experimental group during the active phase of first stage of labour when the cervix is 4 cm 6cm dilated and routine nursing care will be given to the mothers in control group.

Step-1

The researcher first introduces herself to the mother and explains about the intervention and gets verbal consent from the mother.

Step-2

When the cervix is 4cm dilated, the perception of labour pain among parturient mother was assessed by using Numerical Rating Scale and Behavioural Rating scale before the intervention.

Step-3

Acupressure applied on GB-21 point for 20 minutes.

Step-4

Perception of labour pain was assessed immediately after the intervention using Numerical Rating Scale and Behavioural Rating Scale. The GB-21 acupressure will be repeated when the cervix is 6cm dilated.

3.9. HYPOTHESES

H1: There is a significant difference in the perception of labour pain among parturient mothers in experimental group before and after the application of acupressure.

H2: There is a significant difference in perception of labour pain among parturient mothers between experimental and control group after application of acupressure.

3.10. PILOT STUDY

Prior to main study, pilot study was conducted to check the feasibility, practicability, validity and reliability of the tool. The study was conducted at Sri Ramakrishna Hospital, Coimbatore. Data collection was done for a period of 10 days. Purposive sampling of 6 subjects were selected and equally assigned to both experimental and control groups. Assessment of the uterine contraction and cervical dilatation were done with the help of partograph. A pre-test to assess the perception of labour pain for the experimental and control group was done using the Numerical Rating Scale and Behavioural Rating Scale. The experimental group received acupressure on GB-21 point for 20 minutes and the routine nursing care during active phase of first stage of labour at 4cm and 6cm cervical dilatation. The control group received routine nursing care. Post test was done using the same tools. Each time the intervention was given pre test and post test were conducted. Data collected were tabulated and analysed using descriptive statistical methods and result shows that there is a significant reduction in the perception of labour pain after GB-21 acupressure among parturient mothers during first stage of labour. Hence, the study was feasible and practicable.

3.11. MAIN STUDY

Main study was conducted to meet the objectives of the present study. The data was collected for a period of 30 days at Sri Ramakrishna Hospital from 22nd June to 21st July 2013. A purposive sampling of 24 mothers were selected and equally

assigned to both experimental and control groups. Mothers who were admitted for safe confinement in the hospital were chosen and verbal consent was obtained before the procedure. Uterine contraction and cervical dilation were assessed with the help of partograph. A pre-test to assess the perception of labour pain for the experimental and control group was done using the Numerical Rating Scale and Behavioural Rating Scale. The experimental group received the acupressure on GB-21 point for 20 minutes and the routine nursing care during active phase of first stage of labour. The control group received routine nursing care. Post test was done using the same tools. Results of the main study revealed that GB-21 acupressure has positive effect on perception of labour pain.

3.12. TECHNIQUES OF DATA ANALYSIS AND INTERPRETATION

Frequency table was formulated for all significant demographic data. The data was analyzed using descriptive and inferential statistics. The collected data was analyzed by using 't' test to find out the effectiveness of GB-21 acupressure on perception of labour pain among parturient mothers during active phase of first stage of labour.

DATA ANALYSIS AND INTERPRETATION

The effect of acupressure at GB-21 point on perception of labour pain among parturient mothers during active phase of first stage of labour was assessed and analyzed using the collected data. The study was conducted at Sri Ramakrishna Hospital, Coimbatore. The data was collected from 12 mothers in experimental group and 12 mothers in control group. The perception of labour pain was assessed during active phase of first stage of labour. The collected data were grouped and analyzed using descriptive and inferential statistical methods.

SECTION- I

4.1. BASELINE DATA PRESENTATION

The socio demographic characteristics of respondents are described in terms of age, obstetrical score and exposure to prenatal classes among experimental and control group. The data are presented in the form of tables and graphs.

Table 4.1
Demographic Data Distribution of Parturient Mothers

Demographic Variables	(N=24)			
	Experimental group		Control group	
	No. of Mothers	Percentage (%)	No. of Mothers	Percentage (%)
Age (in years)				
20-24	04	33	02	17
25-29	06	50	07	58
30-35	02	17	03	25
Obstetrical score				
Primi gravida	06	50	06	50
Multi gravida	06	50	06	50
Prenatal classes attended				
Yes	06	50	06	50
No	06	50	06	50

The above table shows the distribution of demographic variables under experimental and control group. Age distribution of mothers reveals that 50% in experimental group and 58% in control group were between 25-29 years of age. The obstetrical score shows that primi gravida mothers were 50% in experimental and control group respectively. The data also reveals that 50% of mothers in experimental group and control group had exposure to prenatal classes and 50% of mothers in experimental group and control group had not attended the prenatal classes before.

SECTION- II

4.2. ASSESSMENT ON PERCEPTION OF LABOUR PAIN AMONG PARTURIENT MOTHERS

Perception of labour pain of parturient mothers was assessed using Numerical Rating Scale and Behavioural Rating Scale in both experimental and control groups. The assessment using both scale was done for experimental group before and after acupressure and for control group before and after routine care. The level of perception of labour pain was categorised as No pain, Mild Pain, Moderate Pain and Severe Pain in both the scales.

Table 4.2
Assessment on Perception of Labour Pain among Parturient Mothers in
Experimental group Before and After Acupressure

Level of perception of pain	Tool	4cm dilatation				6cm dilatation			
		Pre test		Post test		Pre test		Post test	
		n	%	n	%	n	%	n	%
No pain		-	-	-	-	-	-	-	-
Mild pain	NRS	01	08	10	83	-	-	01	08
Moderate pain		09	75	02	17	01	08	11	92
Severe pain		02	17	-	-	11	92	-	-
No pain		-	-	01	08	-	-	-	-
Mild pain	BRS	03	25	10	84	-	-	03	25
Moderate pain		08	67	01	08	04	33	09	75
Severe pain		01	08	-	-	08	67	-	-

The above table depicts the perception of labour pain among parturient mothers in experimental group before and after acupressure at 4cm and 6cm cervical dilatation. Assessment based on Numerical Rating Scale reveals that, at 4cm cervical dilatation 75% of mothers had moderate pain, 17% had severe pain and 8% had mild pain before acupressure. After the application of acupressure it was evident that 83% of mother pain perception came down to mild level and 17% had moderate level of pain. At 6cm cervical dilatation, 92% of parturient mothers had severe pain and 8% had moderate pain before acupressure. After intervention 92% of parturient mothers had moderate pain and 8% had mild pain.

Assessment based on the Behavioural Rating Scale reveals that, at 4cm cervical dilatation 67% of mother had moderate pain, 25% had mild pain and 8% had severe pain acupressure. After the application of acupressure it was evident that 84% of mother pain perception come down to mild level, 8% experienced no pain and 8% had severe pain. At 6cm cervical dilatation, 67% of parturient mothers had severe pain and 33% had moderate pain before acupressure. After intervention 75% moderate pain and 25% had mild pain.

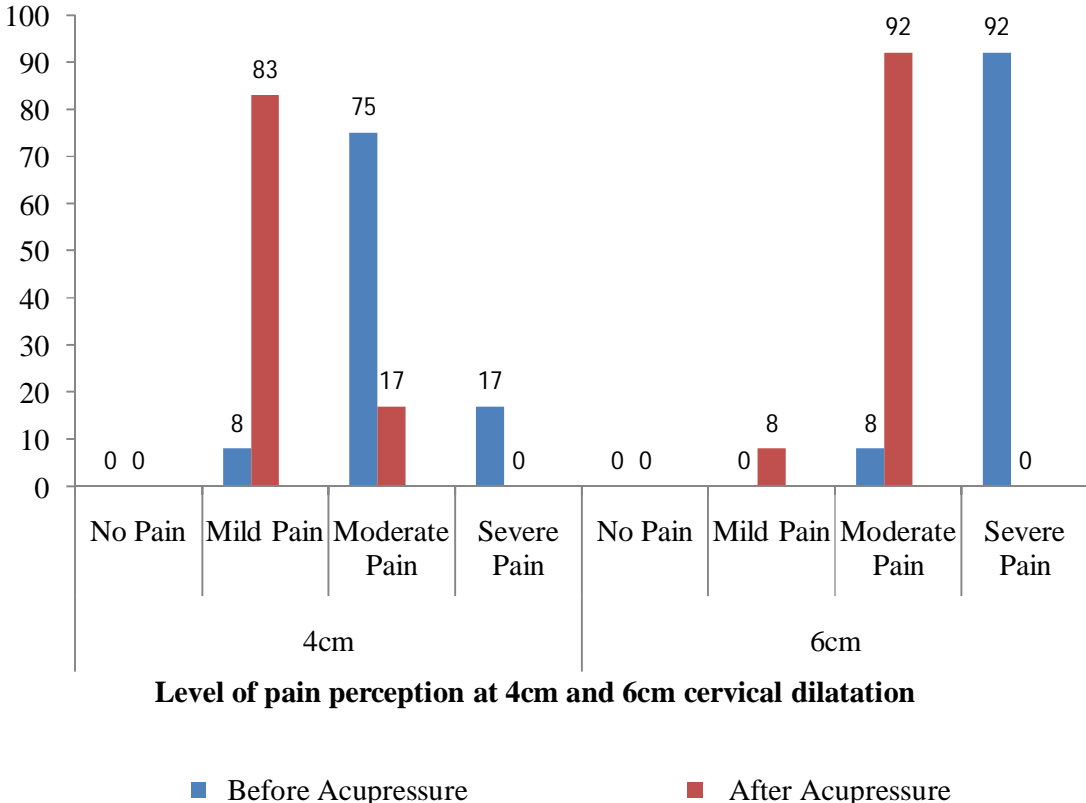


Fig 4.1
Assessment on Perception of Labour Pain among Parturient Mothers in Experimental group before and after Acupressure using Numerical Rating Scale

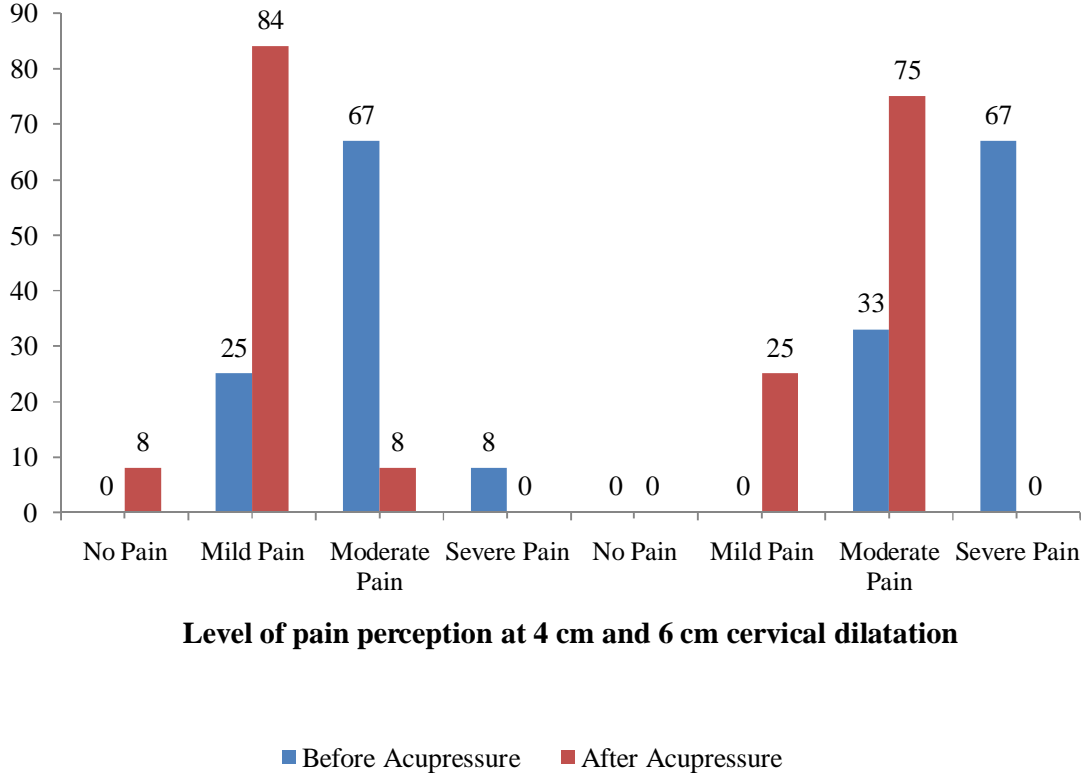


Fig 4.2
Assessment on Perception of Labour Pain among Parturient Mothers in Experimental group before and after Acupressure using Behavioural Rating Scale

Table 4.3

Assessment on Perception of Labour Pain among Parturient Mothers in Control group Before and After routine care

(N=24)

Level of perception of pain	Tool	4 cm dilatation				6 cm dilatation			
		Pre test		Post test		Pre test		Post test	
		n	%	n	%	n	%	n	%
No pain		-	-	-	-	-	-	-	-
Mild pain	NRS	-	-	-	-	-	-	-	-
Moderate pain		12	100	12	100	01	08	-	-
Severe pain		-	-	-	-	11	92	12	100
No pain		-	-	-	-	-	-	-	-
Mild pain	BRS	05	42	05	42	-	-	-	-
Moderate pain		07	58	07	58	07	58	05	42
Severe pain		-	-	-	-	05	42	07	58

The above table depicts the perception of labour pain among parturient mothers in control group before and after routine care at 4cm and 6cm cervical dilatation. Assessment based on Numerical Rating Scale reveals that, at 4cm cervical dilatation all parturient mothers had moderate pain before and after routine care. At 6cm cervical dilatation 92% had severe pain and 8% of parturient mothers had moderate pain before routine care. After routine care all parturient mothers had severe pain.

Assessment based on Behavioural Rating Scale reveals that, at 4cm cervical dilatation before and after routine care 58% of mothers had moderate pain and 42%

had mild pain which shows that there is no change in the pain perception in control group before and after routine care. At 6cm cervical dilatation 58% of parturient mothers had moderate pain and 42% had severe pain. After the routine care 42% parturient mothers had moderate pain and 58% mothers had severe pain.

SECTION III

4.3. ANALYSIS ON EFFECT OF ACUPRESSURE AT GB-21 POINT ON PERCEPTION OF LABOUR PAIN AMONG PARTURIENT MOTHERS USING NUMERICAL RATING SCALE AND BEHAVIOURAL RATING SCALE

't' test is a statistical hypotheses test, used in the present study to find out the significance in effect of acupressure on perception of labour pain among parturient mothers during the cervical dilatation at active phase of first stage labour. Tables representing mean, standard deviation, mean % and 't' values of experimental group and control group, indicates the significance of acupressure on perception of labour pain during the active phase of first stage of labour.

Table 4.4
Analysis on the Perception of Labour Pain among Parturient Mothers Before Intervention

(N=24)

Tool	Dilatation of cervix (in cm)	Experimental			Control			't' value
		Mean	SD	Mean Percentage (%)	Mean	SD	Mean percentage (%)	
NRS	4	5.25	1.14	52.5	4.8	.83	48.3	1.11
	6	7.5	1.31	75	7.3	.78	73	0.046
BRS	4	4.35	1.48	43	3.58	1.3	35.8	1.38
	6	6.8	1.27	68	6.17	1.0	61.7	2.007

The mean scores on pain perception of parturient mothers among the experimental and control group before intervention were analysed for homogeneity.

The calculated 't' value for the dilatation of the cervix at 4cm ($t = 1.11$ at NRS and $t=1.38$ at BRS) and 6cm ($t = 0.46$ at NRS and $t = 2.007$ at BRS) and were less than the table value at 0.05 level of significance. This proves that there exists no significant difference in the level of perception of labour pain among parturient mothers in experimental group and control group before the application of intervention. This justifies that the parturient mothers of both experimental and control group were drawn from a population with normal distribution i.e., a homogenous group with respect to the level of perception of labour pain.

Table 4.5
Analysis on Effect of Acupressure on Perception of Labour Pain among
Parturient Mothers in Experimental Group

(N=12)

Tool	Cervical dilatation (in cm)	Before			After			Mean difference	't' Value
		Mean	SD	Mean percentage (%)	Mean	SD	Mean percentage (%)		
NRS	4	5.25	1.14	52.5	2.83	0.835	28.3	2.42	12.51*
	6	7.5	1.31	75	5	1.20	50	2	12.94*
BRS	4	4.25	1.48	42.5	2.17	1.11	21.7	2.08	10.77*
	6	6.83	1.27	68.3	4.5	1	45	2.33	16.40*

* Significant at 0.05 level

On assessment, the pain scores obtained before and after the application of acupressure to parturient mothers of experimental group during active phase of first stage of labour indicate that there exists a difference in mean score. 't' test is used to test the significance in mean difference.

The calculated 't' value for dilatation of cervix at 4 cm (t =12.51 at NRS and t =10.77 at BRS) and at 6 cm (t =12.94 at NRS and t =16.40 at BRS) were higher than the table value at 0.05 level of significance. Hence, the hypotheses, **H₁: "There is a significant difference in perception of labour pain among parturient mothers in experimental group before and after the application of acupressure"** is accepted. The result proves that application of GB-21 acupressure was effective in reduction of perception of labour pain among parturient mothers during the active phase of first stage of labour.

Table 4.6
Analysis on Perception of Labour Pain among Parturient Mothers in Control Group

Tool	Cervical dilatation (in cm)	Before			After			Mean difference	't' Value
		Mean	SD	Mean percentage (%)	Mean	SD	Mean percentage (%)		
NRS	4	4.8	0.83	48.3	4.92	0.90	49.2	0.09	0.038
	6	7.33	0.78	73.3	7.58	0.65	75.8	0.25	0.385
BRS	4	3.58	1.31	35.8	3.83	1.40	38.3	0.25	0.38
	6	6.17	1.02	61.7	7.58	1.00	64.2	0.25	0.389

On assessment, the pain scores obtained before and after the routine care to parturient mothers of control group during the active phase of first stage of labour indicates that there exists a difference in mean score. 't' test is used to test the significance in mean difference.

The calculated 't' value for dilatation of cervix at 4 cm ($t = 0.038$ at NRS, $t = 0.38$ at BRS) and 6 cm ($t = 0.385$ at NRS, $t = 0.389$ at BRS) were compared with table value at 0.05 level of significance. The calculated 't' values were lesser than the table value. This shows that there is no significant difference in perception of labour pain among parturient mothers in control group. This proves that routine care has no significant influence on perception of labour pain among parturient mothers during the active phase of first stage of labour.

Table 4.7
Comparison on Effect of GB-21 Acupressure on Perception of Labour Pain
among Parturient Mothers in Experimental and Control group After
Intervention

(N=24)

Tool	Dilatation of cervix (in cm)	Experimental			Control			't' value
		Mean	SD	Mean Percentage (%)	Mean	SD	Mean percentage (%)	
NRS	4	2.83	0.83	28.3	4.92	0.90	49.2	8.19*
	6	5	1.20	50	7.58	0.65	75.8	6.82*
BRS	4	2.17	1.11	21.7	3.83	1.40	38.3	2.93*
	6	4.5	1	45	6.42	1	64.2	6.14*

***Significant at 0.05 level**

The pain perception scores on comparison with experimental and control group shows difference in its level. The calculated 't' value for the dilatation of the cervix at 4cm (t = 8.19 at NRS and t =2.93 at BRS) and 6cm (t = 6.82 at NRS and t = 6.14 at BRS) were higher than the table value at 0.05 level of significance. Hence, the hypotheses **H₂: "There is a significant difference in perception of labour pain among parturient mothers between experimental and control group after application of acupressure"** is accepted. Thus acupressure has a significant effect in reducing perception of labour pain among parturient mother during active phase of first stage of labour.

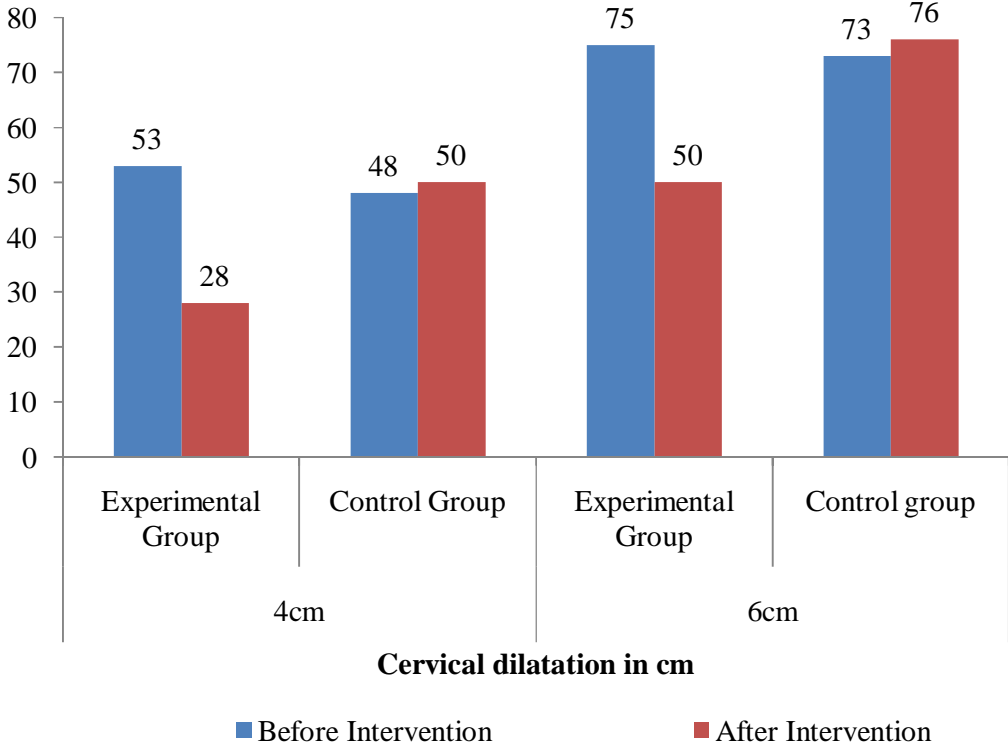


Fig 4.3

Comparison on Level of Pain Perception among Parturient Mothers in Experimental and Control group Before and After intervention using Numerical Rating Scale

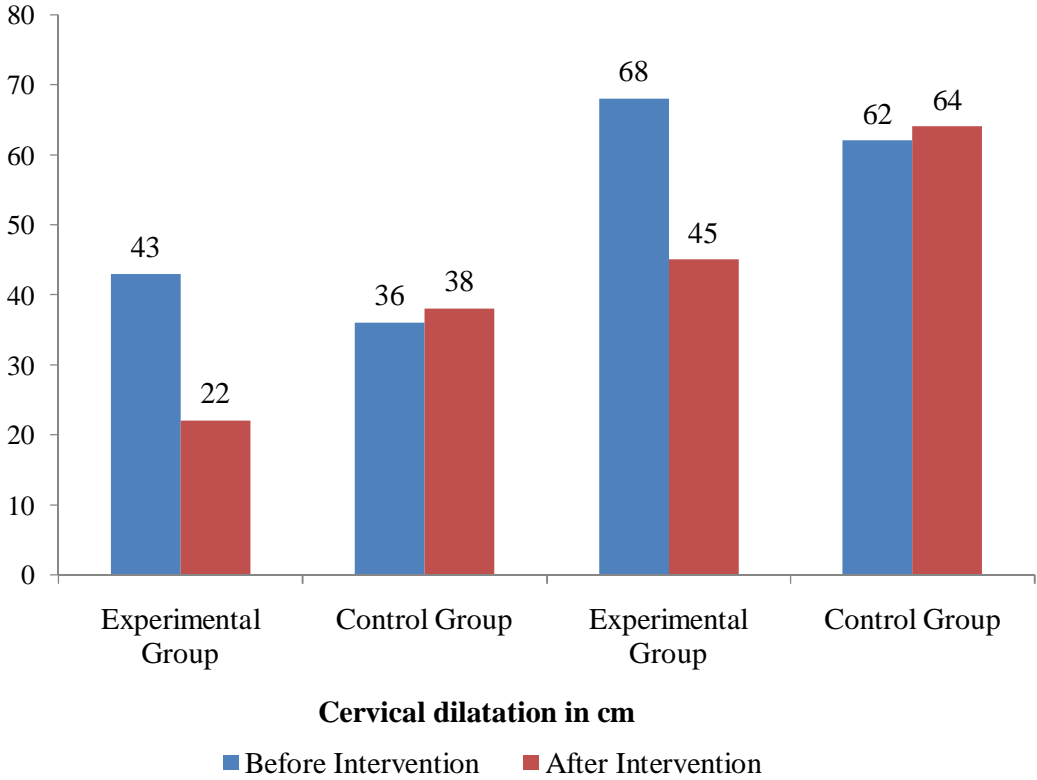


Fig 4.4
Comparison on Level of Pain Perception among Parturient Mothers in Experimental and Control group Before and After intervention using Behavioural Rating Scale

SECTION – IV

4.4. ASSOCIATION BETWEEN AGE AND THE PERCEPTION OF LABOUR PAIN AMONG PARTURIENT MOTHERS

Correlation is the measure of relationship between two or more variables. Karl Pearson's co-efficient of correlation was used in the present study to identify the influence of age on the perception of labour pain among parturient mothers.

Table 4.8
Influence of Age on the Perception of Labour Pain among Parturient Mothers

(N=24)			
Demographic Variable	Tool	Cervical dilatation	“r” value
Age	NRS	4 cm	-0.69
		6 cm	-0.51
	BRS	4 cm	-0.43
		6 cm	-0.53

The above result represents that in both scales there exists a negative correlation between age on the perception of labour pain among parturient mothers.

RESULTS AND DISCUSSION

The study was conducted at Sri Ramakrishna Hospital, Coimbatore, with the focus on determining the effect of acupressure on perception of labour pain among parturient mothers. Purposive sample of 24 mothers were included for the study. Selected samples were equally assigned to experimental and control group. Acupressure was applied to GB-21 point for 20 minutes during active phase of first stage of labour. To assess the perception of labour pain the researcher used Numerical Rating Scale and Behavioural Rating scale. The mothers were asked to rate the pain level ranging from 0 (no pain) to 10(severe pain) before and after intervention in Numerical Rating Scale and the researcher observed the mother and rate the pain level in Behavioural Rating Scale . The pre test score and post test score was interpreted as no pain, mild pain, moderate pain and severe pain.

Labour pain is a subjective multi dimensional experience. Pharmacological measures for labour generally have been found to be more effective than non pharmacological methods in lowering pain levels; however they are more costly and have potential adverse effect (CNM data group, 1998; dickers in 1989). Non pharmacological methods are effective in relaxing mothers during labour. Few controlled studies have demonstrated that these methods actually reduce pain perception of the mother. (MCcaffery, paseco 1999). In the present study the researcher used one of the non pharmacological method i.e. acupressure to reduce perception of labour pain. Currently in present setting normal vaginal delivery rate was 20-30 per month. The samples in the present study were 24 mothers who underwent normal vaginal delivery.

Acupressure is an ancient healing art developed in Asia over 5000 years using the fingers, hand, elbow or other devices to apply pressure to specific points on the surface of the skin to stimulate the body's natural self curative abilities. Acupressure reduce muscle pain and tension, improve blood circulation and release endorphins. It is thought that when an acupressure point is pressed, muscle fiber's elongate and relax, allowing blood to more freely and toxins to be released and eliminated. Acupressure can help relieve pregnancy-related discomfort because it is low impact and the body's heightened sensitivity during pregnancy responds well to this kind of treatment. GB-21 is located at the midpoint between the bony prominence of the neck (C7) and top of the shoulder point. Application of deep pressure at GB-21 point can stimulate contractions and has a downward promoting action, which it makes it a great point to help encourage the baby to descend into the birth canal and relieving pain during active stage of labour.

5.1. FINDINGS RELATED TO OBSTETRICAL DATA

5.1.1. Age Distribution

In the present study 50% mothers were between the age 25-29 years, and 33% mothers were between 20-24 years and 17 % mothers were between 30-35years in experimental group. In control group 17% of mothers were in the age group of 20-24 years, 58% of mothers were between 25-29 years and 25% were between 30-35 years.

5.1.2. Obstetrical Score

The obstetrical score reveals that both experimental group and control group contain 50% primi gravida and 50 % multi gravid mothers.

5.1.3. Prenatal Class Attended

In the present study, 50% of mothers in both experimental group and control group had attended the prenatal class before.

5.2. FINDINGS RELATED TO EFFECT OF ACUPRESSURE AT GB-21 POINT ON PERCEPTION OF LABOUR PAIN AMONG PARTURIENT MOTHERS

In this study the pain scores obtained before and after the application of acupressure to parturient mothers of experimental group during active phase of first stage of labour indicate that there exists a difference in mean score. 't' test is used to test the significance in mean difference. The calculated 't' value for dilatation of cervix at 4 cm ($t = 12.51$ at NRS and $t = 10.77$ at BRS) and at 6 cm ($t = 12.94$ at NRS and $t = 16.40$ at BRS) were higher than the table value at 0.05 level of significance. Hence the hypotheses, **“There is a significant difference in perception of labour pain among parturient mothers in experimental group before and after the application of acupressure”** is accepted.

In the present study the mothers described pain perception during active phase of first stage of labour. In active phase at 4cm and 6cm of cervical dilatation, the pain perception was significantly reduced in experimental group than the control group. Its significance was assessed using 't' test. By comparing the experimental and control group, the calculated 't' value for active phase at 4cm ($t = 8.19$ at NRS and $t = 2.93$ at BRS) and 6cm ($t = 6.82$ at NRS and $t = 6.14$ at BRS) were compared with table value at 23 degree of freedom with 0.05 level of significance.

The calculated 't' value was higher than the table value. Hence the hypotheses **“There is a significant difference in perception of labour pain among parturient mothers between experimental and control group after application of acupressure”** is accepted.

The result reveals that the pain perceived by the mothers in experimental group during the 4 cm cervical dilatation all the mothers had moderate pain before and after the intervention, but there existed difference in the score in Numerical Rating Scale and Behavioural Rating Scale. At 6cm cervical dilatation all mothers had severe pain before and 8% mothers had moderate pain after intervention. This proves that acupressure has a significant effect in reducing perception of labour pain during active phase of first stage of labour.

5.3. FINDINGS RELATED TO ASSOCIATION BETWEEN AGE AND PERCEPTION OF LABOUR PAIN AMONG PARTURIENT MOTHERS

In the present study the calculated 'r' value for active phase at 4 cm($r = -0.69$ at NRS and $r = -0.43$ at BRS) and 6 cm ($r = -0.51$ at NRS and $r = -0.55$ at BRS). So the result reveals that there exists a negative correlation between age and perception of labour pain in both Numerical Rating Scale and Behavioural Rating Scale.

SUMMARY AND CONCLUSION

The focus of the study was to assess the effect of GB-21 acupressure on perception of labour pain among parturient mothers in active phase of first stage of labour. Pain is unpleasant, complex, highly individualized phenomenon with both sensory and emotional components. Pregnant women commonly worry about the pain they experience during labour and child birth and about how they will react to and deal with that pain (Lowe, 2002). Many physiological, psychosocial factors influence the nature and degree of pain. Alternative and complementary therapy has become popular in the field of medicine and nursing for effective and satisfactory pain management. Giving acupressure during the active phase of first stage of labour will allow the midwives to be with the mother to accompany the complete process of labour and mothers feel comfort and will gain continuous emotional support.

Conceptual framework of the study was based on modified Widen Bach's helping art of clinical nursing theory (1994). A quantitative research approach was used for the study. Literatures were reviewed on perception of labour pain among parturient mothers, complimentary therapy on labour pain and literature related to acupressure on pain perception during labour.

The present study was conducted at Sri Ramakrishna Hospital, Coimbatore. Quasi experimental pre and post test with control group design was adopted and purposive sample of 24 mothers in active phase of first stage of labour who were not under analgesia were included in the study. Oral consent was obtained from the selected mothers after brief explanation of the study and intervention. Perception of labour pain was assessed using Numerical Rating Scale and Behavioural Rating Scale

before and after application of acupressure. Acupressure was given at GB-21 point for 20 minutes during active phase of first stage of labour. The findings of the study proved that application of GB-21 acupressure was effective in reducing pain perception during the active phase of first stage of labour.

6.1. MAJOR FINDINGS OF THE STUDY

1. After application of acupressure, the perception of labour pain was significantly reduced at active phase of first stage of labour among parturient mothers in experimental group.
2. There is a negative correlation exist between age and perception of labour pain

6.2. RECOMMENDATIONS

1. A structured teaching programme can be conducted to the staff nurses working in obstetric department to practice it in their routine care.
2. Being a cost effective method with no special requirements for implementation non professionals like trained dais, health assistants and even family members can be trained to provide the intervention.
3. A study can be conducted to assess the effect of GB-21 acupressure on length of second stage of labour.
4. A comparative study can be done to determine the effect of BL-32 and GB-21 acupressure on labour pain intensity in the first stage of labour.
5. Both Numerical Rating Scale and Behavioural Rating Scale can used to assess labour pain. There is no significant difference between two tools.

6.3. NURSING IMPLICATIONS

Study has identified major implications in all the aspects of nursing namely clinical practice, administration, education and research.

6.3.1. Nursing Education

To deliver nursing care effectively according to the needs of the society, nursing education must focus on alternative and complimentary therapies along with routine care procedure. Available literature and studies related to non pharmacological measures for pain relief during labour can be used to educate the students about various complementary and alternative therapies for pain management in labour. Since the use of acupressure is found to be positively significant on perception of labour pain, it can be introduced in the curriculum. Findings of the study encourage the students for effective utilization of research based practice.

6.3.2. Nursing Practice

The midwives have a vital role in providing safe and effective nursing care to enhance reduction in the perception of labour pain. Nurse midwives with their previous knowledge and experience usually suggest the mothers to adopt measures like acupressure and changing position. Non Pharmacological Strategies require a minimal amount of training for nurse midwives in order to be successfully integrated into practice.

6.3.3. Nursing Administration

Non Pharmacological Strategies can be translated or integrated into the existing labour room protocol thus reinforcing the implementation of interventions. Efforts should also be made to allocate necessary human resources for continuous support of professionals. This will bridge the need for complementary therapies in hospital settings which are known for pharmacological remedies. Nurses who choose to utilise complimentary therapies must ensure they are trained to a standard recognised as by regulatory body for each therapy.

6.3.4. Nursing Research

Though the aspects of labour pain management is a well researched aspect in obstetrics still it remains the most challenging one. The findings of the present study can be utilized by the nurse researcher to accumulate new knowledge regarding pain management. More researcher carried out in this area would be much beneficial. The effect of acupressure can be further experimented with clinical trials for more concrete findings.

6.4. CONCLUSION

Application of acupressure reduces perception of labour pain among parturient mothers in active phase of first stage of labour. The findings reveal that, GB-21 acupressure is effective in reducing perception of labour pain during active phase of first stage of labour. The therapy is also cost effective. Hence, the researcher suggests that, the nurse midwives should adopt this intervention in their clinical practice to

reduce perception of labour pain among parturient mothers during active phase of first stage of labour and thus promote their comfort and well being.

REFERENCES

- Almeida, N. D. (2005). A Study on Effect of Breathing and Relaxation Techniques on Pain and Anxiety during Labour. *Rev Lat Am Enfermagam*, 13(1), 52-58. Retrieved May, 4, 2013, from <http://www.ncbi.nlm.nih.gov/pubmed/15761580> on 26.7. 2012.
- M Akbarzadeh et.al(2012). Conducted a study on Comparing the Effect of Acupressure at two GB-21 and SP-6 points on the Pain Severity of Active Phase of Delivery among Primiparous Women. Retrieved December, 9, 2012 from http://www.sid.ir/en/view_paper_print.asp?ID=249507&varstr=1;
- Boback, Lowdermilk., & Jenson.(1995). *Maternity Nursing*. (4th edition). San Francisco, Mosby publications.
- Chuntharapat, S., Petpichetchian, w., & Hatthakef, U. (2008). Effect of Yoga on Maternal Comfort Labour Pain and Birth Outcome. *Complimentary Therapy in Clinical Practice*, 14,105-115. Retrieved December, 16, 2012, from <http://www.ncbi.nlm.nih.gov/pubmed/18396254.com/breathing>.
- Catherin, A., Nivean & Tricia Murphy-black. (2000). The Study to Assess the Recall on Memory of Labour Pain. Department of Psychology, Glasgow Caledonian University, 387-391. Retrieved November, 13, 2012, from <http://www.researchgate.net/publication/14461146>.
- Chung U.L, Hung L.C, Kuo S.C, Huang C.L (2003). Effects of L14 and BL67 Acupressure on Labour Pain and Uterine Contraction in the first stage of Labour. Retrieved April,12,2012 from <http://www.ncbi.nlm.nih.gov/pubmed/1468593/>
- Dutta, D. C. (2004). *Text Book of Obstetrics*. (6th Ed.), India, Central Publications.

Gupta, S. P. (2007). *Statistical Methods*. (11th Ed.,). New Delhi. Sultan Chand and sons publications. .

Kalaimathi (2007). Effectiveness of slow paced breathing on pain perception during first stage of labour. Retrieved December, 14, 2012, from <http://www.ncbi.nlm.nih.gov/pubmed/25678832>

Kozier, B. & Erb's. (2001). *Fundamentals of Nursing*, (8th Ed.,) Boston; Pearson.

Kothari, C. R. (2007). *Research Methodology*. (6th Ed.,), New Delhi. Wiley Eastern Ltd.

Lee ,M.K., Chang, S.B.,& Kang,D.H.(2004). Effect of SP6 accupressure on labour pain and length of delivery time in women during labour. *Journal of Alternative and Complimentary Medicine*, 10, 6,959-965. Retrieved December, 18, 2012, from <http://www.ncbi.nlm.nih.gov/pubmed/15673989> on 26.5.2013.

Lena Martens son et.al (2011).Effect of treatment for labour pain, verbal report versus visual analogue scale score. Retrived December, 18, 2012, from <http://www.ncbi.nlm.nih.gov/pubmed/20862052>.

Manizhen Pirdel. & Leira Pirdel (2007). A Study on Perceived Environmental Stressors and Pain Perception during Labour. *Journal of Reproduction and Fertility*, 10(3), 217-223. Retrieved November, 14, 2012, from <http://www.doaj.org/article/22285741> Pages/ rec. No: 220-228

M Kaviani et.al (2012) conducted a study Comparing the Effect of Two Methods of Acupressure and Ice Massage on the Pain, Anxiety Levels and Labour Length in the Point LI-4. *Journal of Shahid Sadoughi University of Medical Sciences* Retrieved from January, 14, 2012, <http://www.jir.ir/mjri/in> on 24.6.2013.

- Neelam kumari, Sivani Sharma., Preeti. & Gupta. (2010). Midwifery and Gynecology Nursing (1st Ed.,). Chandigarh, Pee Vee Publication.
- Pilliteri, A. (2010). Maternal and Child Health Nursing, Care Of Child bearing and Childrearing Family. (6th Ed.,). China, Lippincott Williams and Wilkins.
- Potter & Perry. (2006). Fundamentals of Nursing, Mosby Publication Pvt.Ltd.
- Polit, F. D., & Hungler, P.B. (2008). Nursing Research Principles and Methods.(6th Ed), Philadelphia: Lippincott Publications.
- Smith ,C.A., Collins, C.T., Cyna ,A.M., & Crouther,C.A.(2006) Complimentary and alternative therapies for pain management in labour. Cochrane Data Base systematic review, 18, 4, CD 003521. Retrieved December, 14, 2012, from <http://www.ncbi.nlm.nih.gov/pubmed/Weber/18796875>

APPENDIX I

From,

Sowmy.S.Ann,
Msc (nursing) 1year,
College of nursing,
Sri Ramakrishna institute of paramedical science,
Coimbatore.

To,

The Dean,
Sri Ramakrishna hospital,
Coimbatore.

Through

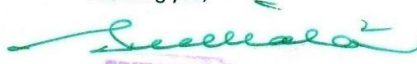
The principal,
College of nursing,
Sri Ramakrishna institute of paramedical science,
Coimbatore.

Respected Sir,


Sub: Requesting permission to conduct study in SRI RAMAKRISHNA HOSPITAL-Reg

I am **Sowmy.S.Ann** doing my 1st year M.Sc nursing in Sri Ramakrishna Institute of paramedical science and as a part of my M.Sc Nursing programme I have undertaken the following study for my research "EFFECT OF ACCUPRESSURE ON PAIN PERCEPTION AMONG PARTURIENT MOTHERS". I would like to do the above said study in our esteemed institution. I humbly request you to grant me permission to conduct the study in our institution. Herewith I have attached a brief copy of the research proposal.

Thanking you,


PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Science
Coimbatore - 641 044

Yours sincerely,


(SOWMY.S.ANN)

Permitted
G. D. Kulkarni
14/3/13

From,

Sowmy.S.Ann,
Msc Nursing 1year,
College of nursing,
Sri Ramakrishna institute of paramedical science,
Coimbatore.

To,

Dr. Lalitha MBBS,DGO,
Consultant obstetrician and gynaecologist,
Sri Ramakrishna hospital,
Coimbatore.

Through

The principal,
College of nursing,
Sri Ramakrishna institute of paramedical science,
Coimbatore.

Respected Madam,

Sub: Requesting permission to conduct study in SRI RAMAKRISHNA HOSPITAL-Reg

I am **Sowmy.S.Ann** doing my 1st year M.Sc Nursing in Sri Ramakrishna Institute of paramedical science and as a part of my M.Sc Nursing programme I have undertaken the following study for my research "**EFFECT OF ACUPRESSURE ON PAIN PERCEPTION AMONG PARTURIENT MOTHERS**". I would like to do the above said study in obstetrics and gynaecology ward of our esteemed institution. I humbly request you to grant me the permission to conduct the study in our institution. Herewith I am attaching a brief copy of the research proposal.

Permitted

Dr. Lalitha

Thanking you,


PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Science
Coimbatore - 641 044

Your's sincerely,


(Sowmy.s.ann)

Dr. R.LALITHA, M.B.B.S DGO.
Obstetrician & Gynaecologist
Sri Ramakrishna Hospital,
COIMBATORE.

From,

Sowmy.S. Ann,
Msc Nursing 1year,
College of nursing,
Sri Ramakrishna institute of paramedical science,
Coimbatore.

To,

Dr. Bhanumathy. MBBS,DGO,
Consultant obstetrician and gynaecologist,
Sri Ramakrishna hospital,
Coimbatore.

Through

The principal,
College of nursing,
Sri Ramakrishna institute of paramedical science,
Coimbatore.

Respected Madam,

Sub: Requesting permission to conduct study in SRI RAMAKRISHNA HOSPITAL-Reg

I am **Sowmy.S. Ann** doing my 1st year M.Sc Nursing in Sri Ramakrishna Institute of paramedical science and as a part of my M.Sc Nursing programme I have undertaken the following study for my research "EFFECT OF ACUPRESSURE ON PAIN PERCEPTION AMONG PARTURIENT MOTHERS". I would like to do the above said study in obstetrics and gynaecology ward of our esteemed institution. I humbly request you to grant me the permission to conduct the study in our institution. Herewith I am attaching a brief copy of the research proposal.

Thanking you,

Yours sincerely,

Permit
Sowmy

Sowmy
PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Science
Coimbatore - 641 044

Sowmy
(Sowmy.s.ann)

DR. M. BANUMATHY. MBBS, DGO, DNB
REG. NO. 22266
OBSTETRICIAN & GYNAECOLOGIST

APPENDIX II

Dr V.KRISHNASAMY M.D (Acu)
Divine Healing & Yoga Centre
Touch Therapy(Reg No 77/2012)

No 7, SRI KRISHNA NIVAS
PRASANTHI NAGAR, KR
PURAM
COIMBATORE 641006
PHONE :- 0422 2560414/2565901
MOBILE :- 98652 56041
Email:-divinehealing25@gmail.com
Web:- www.divinehealingindia.org

RefNo: - 005/2013

Date :- 6th March 2013

CERTIFICATE

This is to certify that **Ms SOWMY S ANN**, I Year M.Sc Nursing, studying at college of Nursing, Sri Ramakrishna Institute of Paramedical Sciences, Coimbatore has undergone one month training program on "**ACUPRESSURE THERAPY COURSE**" and successfully completed the theory and practical examination under my supervision at Divine Healing & Yoga Centre, Coimbatore on February 2013.

During the course her conduct was found good.



Dr. V. Krishnasamy

DIVINE HEALING & YOGA CENTRE
V. Krishnasamy
7 "KRISHNA NIVAS" Prasanthi Nagar,
K.R. Puram, Coimbatore 641 006.
Near S.N.R. Arts College & School.
0422 2560414, 2565901, Cell . 98652 - 56041
E-mail divinehealing25@hotmail.com

APPENDIX III

REQUISITION LETTER TO VALIDATE THE RESEARCH TOOL AND CONTENT

From,

Sowmy.S.Ann,
M.Sc (Nursing) I year,
College Of Nursing, SRIPMS,
Coimbatore.

To,

PROF. LATHA
PRINCIPAL
RVS COLLEGE OF NURSING,
KANNANPALAYAM.

Through,

The Principal,
College Of Nursing,
SRIPMS,
Coimbatore.

Respected Sir/Madam,

Subject: Requisition for tool and content validation:-Reg

I am Sowmy.S.Ann doing my 1st year M.Sc Nursing in Sri Ramakrishna Institute of Paramedical Sciences and as a part of my M.Sc Nursing Program, I have undertaken the following study for my research "EFFECT OF ACUPRESSURE ON PAIN PERCEPTION AMONG PARTURIENT MOTHERS". The following tool is tend to be used, hence I request you to kindly give me a valuable suggestion and necessary modification for the same.

Thanking you,

Coimbatore.
8.5.2013


PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences
Coimbatore - 641 044.

Yours Sincerely,


(Sowmy.S.Ann.)

CONTENT VALIDITY FORMAT

Name of the Expert : PROF (Mrs) S.P. LATHA

Address : PRINCIPAL, RVS COLLEGE OF NURSING,
KUMARAN KOTTAM CAMPUS, TRICHY ROAD,
KANNAMPALAYAM, COIMBATORE - 641402

Kindly validate each section in the tool and mark wherever applicable.

S.NO	SECTIONS OF THE TOOL	STRONGLY AGREE	AGREE	NEED NOTIFICATION	REMARKS
1.	SECTION-A		✓		
2.	SECTION-B		✓		
3.	SECTION-C		✓		

Total content of the tool : Adequate/Inadequate ✓

Date: 14.05.2013

Signature of the Expert
PRINCIPAL
R V S. COLLEGE OF NURSING
KANNAMPALAYAM
TRICHY ROAD, SULUR
COIMBATORE - 641 402

**REQUISITION LETTER TO VALIDATE THE RESEARCH TOOL AND
CONTENT**

From,

Sowmy.S.Ann,
M.Sc (Nursing) I year,
College Of Nursing, SRIPMS,
Coimbatore.

To,

PROF. SHEEBA
HOD
OBSTETRIC & GYN^ACOLOGY
KG COLLEGE OF NURSING
COIMBATORE

Through,

The Principal,
College Of Nursing,
SRIPMS,
Coimbatore.

Respected Sir/Madam,

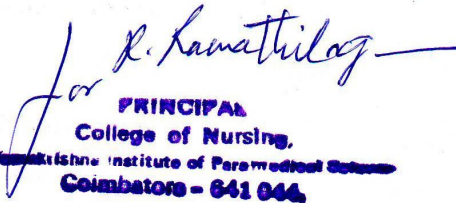
Subject: Requisition for tool and content validation:-Reg

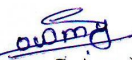
I am Sowmy.S.Ann doing my 1st year M.Sc Nursing in Sri Ramakrishna Institute of Paramedical Sciences and as a part of my M.Sc Nursing Program, I have undertaken the following study for my research "**EFFECT OF ACUPRESSURE ON PAIN PERCEPTION AMONG PARTURIENT MOTHERS**". The following tool is tend to be used, hence I request you to kindly give me a valuable suggestion and necessary modification for the same.

Thanking you,

Coimbatore.

Yours Sincerely,


PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences
Coimbatore - 641 044.


(Sowmy.S.Ann.)

CONTENT VALIDITY FORMAT

Name of the Expert : Mrs. Sheeba. R. Professor
Address : K. G. CON
Coimbatore

Kindly validate each section in the tool and mark wherever applicable.

S.NO	SECTIONS OF THE TOOL	STRONGLY AGREE	AGREE	NEED NOTIFICATION	REMARKS
1.	SECTION-A		✓		
2.	SECTION-B	✓			
3.	SECTION-C		✓		good.

Total content of the tool : Adequate/Inadequate ✓

Date:




Signature of the Expert

**REQUISITION LETTER TO VALIDATE THE RESEARCH TOOL AND
CONTENT**

From,

Sowmy.S.Ann,
M.Sc (Nursing) I year,
College Of Nursing, SRIPMS,
Coimbatore.

To,

PROF. BABY,
HOD - DEP OF OBG NURSING,
PSG COLLEGE OF NURSING,
COIMBATORE.

Through,

The Principal,
College Of Nursing,
SRIPMS,
Coimbatore.

Respected Sir/Madam,


Subject: Requisition for tool and content validation:-Reg


I am Sowmy.S.Ann doing my 1st year M.Sc Nursing in Sri Ramakrishna Institute of Paramedical Sciences and as a part of my M.Sc Nursing Program, I have undertaken the following study for my research "EFFECT OF ACUPRESSURE ON PAIN PERCEPTION AMONG PARTURIENT MOTHERS". The following tool is tend to be used, hence I request you to kindly give me a valuable suggestion and necessary modification for the same.

Thanking you,

Coimbatore.

Yours Sincerely,


for **PRINCIPAL**
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences
Coimbatore - 641 044


(Sowmy.S.Ann.)

CONTENT VALIDITY FORMAT


Name of the Expert : S. BABY, PROF. & HOD, OBG NSG. DEPT.
Address : PSG COLLEGE OF NSG.
PEELAMEDU, COIMBATORE.

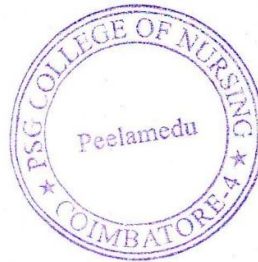
Kindly validate each section in the tool and mark wherever applicable.

S.NO	SECTIONS OF THE TOOL	STRONGLY AGREE	AGREE	NEED NOTIFICATION	REMARKS
1.	SECTION-A		✓		
2.	SECTION-B		✓		
3.	SECTION-C		✓		

Total content of the tool : [✓] Adequate/Inadequate

Date: 10.5.13.


Signature of the Expert



**REQUISITION LETTER TO VALIDATE THE RESEARCH TOOL AND
CONTENT**

From,

Sowmy.S.Ann,
M.Sc (Nursing) I year,
College Of Nursing, SRIPMS,
Coimbatore.

To,

DR. LALITHA MBBS, DGO
CONSULTANT OBSTETRICIAN & GYNAECOLOGIST
SRI RAMAKRISHNA HOSPITAL
COIMBATORE

Through,

The Principal,
College Of Nursing,
SRIPMS,
Coimbatore.

Respected Sir/Madam,

Subject: Requisition for tool and content validation:-Reg

I am Sowmy.S.Ann doing my 1st year M.Sc Nursing in Sri Ramakrishna Institute of Paramedical Sciences and as a part of my M.Sc Nursing Program, I have undertaken the following study for my research "EFFECT OF ACUPRESSURE ON PAIN PERCEPTION AMONG PARTURIENT MOTHERS". The following tool is tend to be used, hence I request you to kindly give me a valuable suggestion and necessary modification for the same.

Thanking you,

Coimbatore.
9.5.13

Yours Sincerely,


PRINCIPAL
College of Nursing,
Sri Ramakrishna Institute of Paramedical Sciences
Coimbatore - 641 044.


(Sowmy.S.Ann.)

CONTENT VALIDITY FORMAT

Name of the Expert : DR. LALITHA . MBBS . DGO


Address : CONSULTANT OBSTETRICIAN & GYNAECOLOGIST
SRI RAMAKRISHNA HOSPITAL
COIMBATORE

Kindly validate each section in the tool and mark wherever applicable.

S.NO	SECTIONS OF THE TOOL	STRONGLY AGREE	AGREE	NEED NOTIFICATION	REMARKS
1.	SECTION-A		✓		
2.	SECTION-B		✓		
3.	SECTION-C		✓		

Total content of the tool : [✓] Adequate/Inadequate

Date: 13-5-2013


Signature of the Expert

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Obstetrician & Gynaecologist
Sri Ramakrishna Hospital,
COIMBATORE

APPENDIX – IV

TOOL

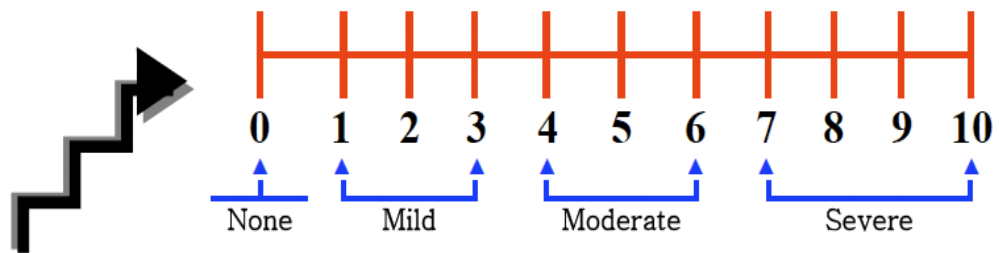
SECTION - A

Demographic Profile

Sample no :
Age :
Obstetrical score :
LMP :
EDD :
Prenatal class attended : Yes / No

SECTION B

NUMERICAL RATING SCALE



INTERPRETATION

The interpretation of the scale depends on the marking of the patient on the line

- 0 - No pain
- 1-3 - Mild pain
- 4-6 - Moderate pain
- 7-10 - Severe pain

BEHAVIOURAL RATING SCALE

FACE	0 Face muscles relaxed	1 Facial muscle tension, frown, grimace	2 Frequent to constant frown, clenched jaw
RESTLESSNESS	0 Quiet, relaxed appearance, normal movement	1 Occasional restless movement, shifting position	2 Frequent restless movement may include extremities or head
MUSCLE TONE	0 Normal muscle tone	1 Increased tone, flexion of fingers and toes	2 Rigid tone
VOCALISATION	0 No abnormal sounds	1 Occasional moans, cries, whimpers and grunts	2 Frequent or continuous moans, cries, whimpers or grunts
CONSOLABILITY	0 Content, relaxed	1 Reassure by touch, distractible	2 Difficult to comfort by touch or talk
Behavioural pain assessment scale total (0–10)			
INTERPRETATION			
0	-	No pain	
1-3	-	Mild pain	
4-6	-	Moderate pain	
7-10	-	Severe pain	

பகுதி - அ விவர வடிவம்

பகுதி - ஆ வலியின் அளவினை அளவிடும் அளவுகோல்

பகுதி - அ

சுயவிவரம்

மாதிரி எண் :

வயது :

மகப்பேறு மதிப்பீடு :

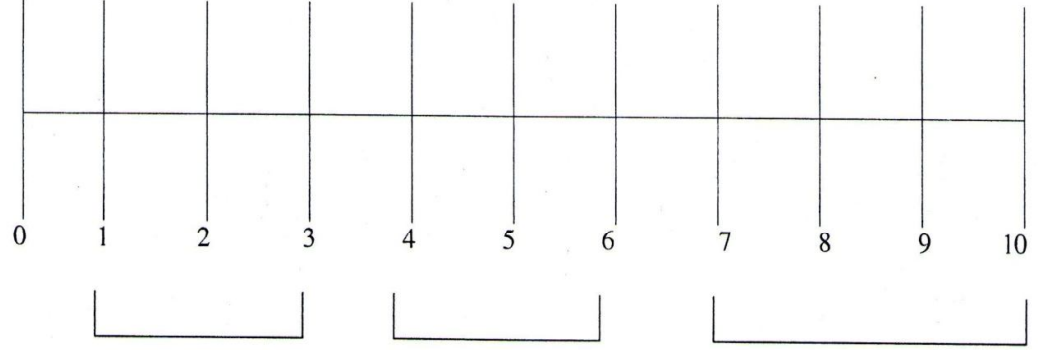
கடைசி மாதவிடாய் நாள் :

பிரசவத்திற்கு எதிர்பார்க்கும் தேதி :

கர்ப்ப காலத்தில் வகுப்புகளின் பங்கேற்றல் : ஆம் / இல்லை

பகுதி - ஆ

வலியின் அளவினை அளவிடும் அளவுகோல்



இல்லை

லேசாக

மிதமாக

அதிகமாக

வழிமுறை:

தற்போது உங்களுடைய வலியின் அளவு என்ன?

அளவுகோலின் விளக்கம்

0 - இல்லை

1-3 லேசான வலி




4-6 மிதமான வலி

7-10 அதிகமான வலி




PARTOGRAPH

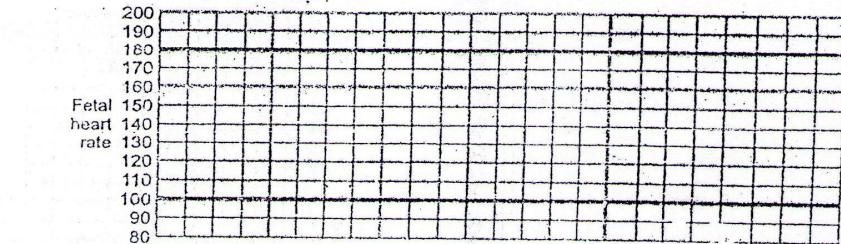
Name _____ Gravida _____ Para _____ Hospital number _____
 Date of admission _____ Time of Admission _____ Ruptured membranes _____ hours

Duration

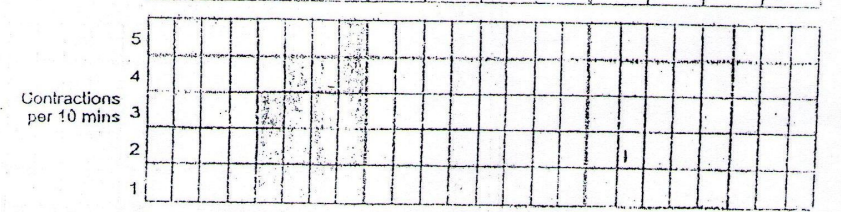
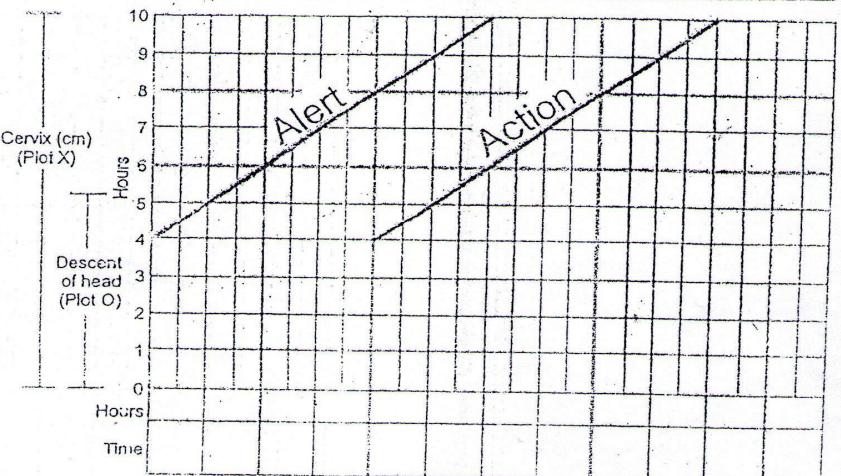
-  < 20 sec
-  20-40 sec
-  > 40 sec

Intensity

-  Mild
-  Moderate
-  Strong

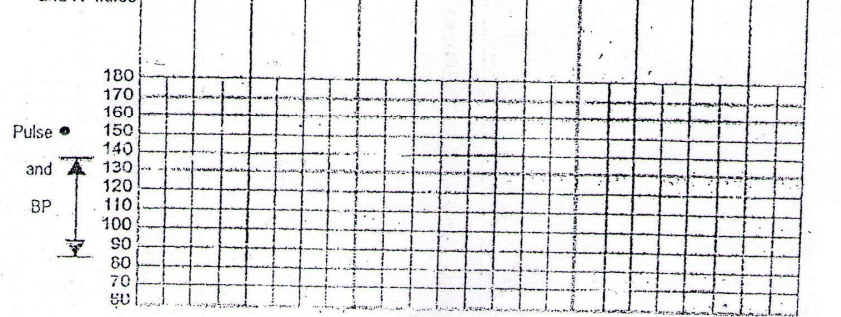


Amniotic fluid Moulding



Oxytocin U/L drops/min

Drugs given and IV fluids



Temp °C

Urine { Protein
acetone
volume

SECTION C

PROCEDURE

A purposive sample of parturient mothers with labour pain will be taken into the study. The progress of the labour pain will be assessed by the partograph. The mothers will be equally allocated into experimental group and control group. The acupressure will be applied to the experimental group during the active phase when the cervix is 4 cm dilated and routine nursing care will be given to the mothers in control group.

STEP-1

The researcher first introduces herself to the mother and explains about the intervention and gets verbal consent from the mother.

STEP-2

When the cervix is 4cm dilated acupressure is applied on GB-21 for 20 minutes.

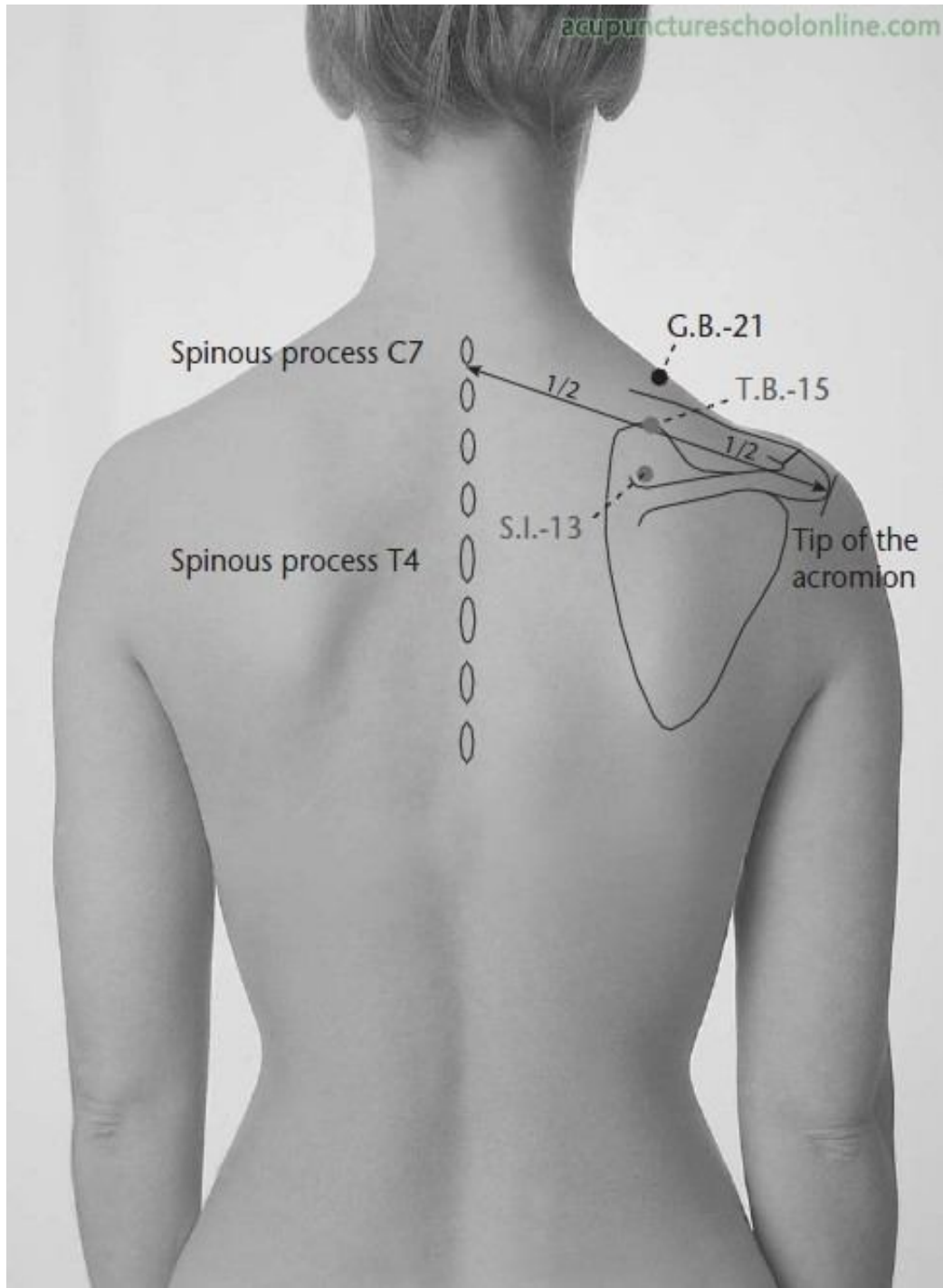
STEP-3

The level of pain will be assessed immediately after the intervention.

STEP-4

The acupressure will be repeated when the cervix is 6cm dilatation. Numerical Rating Scale and Behavioural Rating Scale used to assess the level of pain after every intervention.

GB-21 Acupressure Point



Application of Acupressure Point GB-21



The point is located on the shoulder half way between the rotator cuff and the vertebrae column.



This point is located by pinching the shoulder muscle with your thumb and middle finger.




Apply downward pressure with your index finger or thumb. Massage or hold for 20 minutes.

APPENDIX V

CERTIFICATE OF ENGLISH EDITING TO WHOMEVER IT MAY CONCERN

This is to certify that the dissertation **"EFFECT OF GB-21 ACUPRESSURE ON PERCEPTION OF LABOUR PAIN AMONG PARTURIENT MOTHERS AT SRI RAMAKRISHNA HOSPITAL, COIMBATORE"** done by **SOWMY.S.ANN**, II year M.SC nursing , College of Nursing, Sri Ramakrishna Institute of Paramedical Sciences, Coimbatore has been edited for English language appropriateness.

Name : JESSY.C.P
Designation : HSST ENGLISH
Name of the Institution GMBHSS CHALAKUDY.
Signature : 
31/12/13

JESSY C.P.
HSST English
GMBHSS Chalaky
Thrissur - 680 307


APPENDIX VI

CERTIFICARE OF TAMIL EDITING

TO WHOMEVER IT MAY CONCERN

This is to certify that the NUMERICAL PAIN RATING SCALE was translated to Tamil, for the dissertation "EFFECT OF ACUPRESSURE ON PAIN PERCEPTION AMONG PARTURIENT MOTHERS AT SRI RAMAKRISHNA HOSPITAL, COIMBATORE" done by SOWMY.S.ANN, has been edited for Tamil language for appropriateness.

Name : Dr. K. Bagyam
Designation : HOD, Associate Professor in Tamil
Name of the institution : Sri Ramakrishna College of Arts and Science for Women
Signature :


துறைத்தலைவர்
தமிழ்த்துறை
ஸ்ரீ இராமகிருஷ்ணா
மகளிர் கலை அறிவியல் கல்லூரி
கோயம்புத்தூர் - 641 044.

ANNEXURE – I

Paired ‘t’ test

Paired ‘t’ test was done to test the hypotheses when scores of the same group, either experimental and control group were used to identify the effect of ice massage.

$$t = \frac{\bar{d}}{\frac{SD}{\sqrt{n}}}$$

$$SD = \sqrt{\frac{\sum (d - \bar{d})^2}{n}}$$

\bar{d} = Mean difference between pre-test and post test score

SD = Standard deviation of the pre-test and post test score

n = Total number of samples

ANNEXURE – II

Unpaired ‘t’ test

Unpaired ‘t’ test was applied to test the hypotheses when the significant difference between the scores among the experimental and control group were obtained to identify the effect of ice massage.

Unpaired ‘t’ test

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S.D} \sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

$$SD = \sqrt{\frac{\sum (X_1 - \bar{X}_1)^2 + \sum (X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}}$$

Where, \bar{X}_1 = mean of the experimental group post test

\bar{X}_2 = mean of the control group post test

n_1 = number of samples in experimental group

n_2 = number of samples in control group

SD = Combined standard deviation

ANNEXURE – III

Karl Pearson's Coefficient Of Correlation

This was calculated to find out the influence of independent variable on dependent variable. Influence of age on perception on labour pain among parturient mothers as assessed through Karl Pearson's Co-efficient of correlation in order to find the significance of relationship between the two variables.

$$r = \frac{\frac{\sum xy}{n} - \bar{x}\bar{y}}{SD_x \cdot SD_y}$$

\bar{x} = Mean of independent variable score

\bar{y} = Mean of dependent variable score

$\frac{\sum xy}{n}$ = Average of independent variable and dependent variable score

SD_x = Standard deviation of independent score

SD_y = Standard deviation of dependent score

ANNEXURE – IV

Numerical Rating Scale versus Behavioural Rating Scale

Analysis on perception of labours pain among parturient mothers in experimental group before and after intervention.

Cervical Dilatation	scale	Pre test				Posttest			
		Mean	SD	Mean %	't'	Mean	SD	Mean %	't'
4 cm	NRS	5.25	1.13	52.5	0.07846	2.83	0.83	28.33	0.112562
	BRS	4.25	1.48	42.5		2.16	1.11	21.66	
6 cm	NRS	7.5	1.31	75	0.219156	5	1.20	50	0.281273
	BRS	6.83	1.26	68.33		4.5	1	45	

The above table shows that there exists no difference in the mean scores obtained from Numerical Rating Scale and Behavioural Rating Scale. In detailed, it reveals that on comparison with the pretest scores of NRS and BRS at 4cm cervical dilatation $t = 0.07846$ and at 6cm cervical dilatation $t=0.219156$. The post test scores of NRS and BRS at 4cm cervical dilatation $t=0.112562$ and at 6 cm cervical dilatation $t=0.281273$. Thus the calculated 't' values reveals that there exists no significant mean difference in the pain scores evaluated from Numerical Rating Scale and Behavioural Rating Scale at 0.05 level of significance. This proves that both the scales are equal in assessing the perception of labour pain.

Correlation between the Scales At 4 cm And 6 cm Cervical Dilatation

Cervical dilatation	Scale	Pretest	Post Test
4 cm	NRS	0.713**	0.716**
	BRS		
6 cm	NRS	0.764**	0.786**
	BRS		

** Correlation is significant at the 0.01 level (2-tailed)

Thus the table above shows that Numerical Rating Scale and Behavioural Rating Scale are highly correlated at 0.01 level of Significance. The relationship was obtained at 4cm and 6cm cervical dilation individually for pretest and posttest scores.