



## A Pilot Study On A Mixed Method Study To Evaluate The Effectiveness Of Selected Childbirth Preparation Methods On Labor Outcomes Among Antenatal Women In Dr. Kamakshi Memorial Hospital & RKP Multispeciality Hospital At Chennai

Subasri S<sup>1\*</sup>, Dr. Susila.C<sup>2</sup>, Dr. Padmavathy<sup>3</sup>

<sup>1</sup>PhD Scholar, Dhanvanthri College of Nursing, Erode, India, sridin2007@hotmail.com

<sup>2</sup>Principal, Billroth college of Nursing, Chennai, India, susilachandrakaran@yahoo.com

<sup>3</sup>Principal, Dhanvanthri college of Nursing, Erode, India, padmasekar2009@gmail.com

**\*Corresponding Author:** Subasri S

\*PhD Scholar, Dhanvanthri College of Nursing, Erode, India, sridin2007@hotmail.com

### Abstract

**Background:** In recent years, India's population has shown a rise in interest in the practice of prepared childbirth as a viable option for giving birth to one's children. Some parents feel that they achieve a higher level of personal satisfaction and are afforded the opportunity to take an active role in the birth of their kid. It is unclear how much the various childbirth preparation methods might affect the final result of labor, despite the fact that childbirth preparation is an essential component for empowering and preparing women for the adventure of giving birth. The study's is to examine a variety of childbirth preparation programs in terms of the impact that these programs have on women's perceptions of pain during labor, as well as the experiences that women have during labor and the outcomes for their new-borns as a result of participating in these programs.

**Methods/Design:** There are two phases in this Mixed methods parallel-convergent study which carried out in the quantitative (Post-test only) and qualitative (content analysis) phases.

**The first phase** was a quantitative (Quasi experimental) post-test only design with 28 pregnant women by Non probability sampling at the gestational age of 34–37 weeks in antenatal clinic according to inclusion criteria, given a brief introduction, collected demographic variable along with phone number and expected date of delivery. Teaching and demonstration was given by using power point presentation for 30 minutes regarding Lamaze method of breathing technique. At 37 weeks of gestation during antenatal visit along with her husband, teaching were given about Bradley method of childbirth by using PowerPoint presentation for 30 minutes. Labor pain perception for (4) four observations during early, active, transition and pushing stage with different types of Lamaze breathing according to contractions and stage of labor along with Bradley method (Husband support) by using Visual Analogue Scale. Assessed the effectiveness of both interventions on maternal and new-born outcome by using observational rating scale. The quantitative data will be analysed using one-way Chi square test and multivariate linear regression.

**The second phase** was a qualitative study that explored the women's perceptions on the impact of selected childbirth preparation methods on their childbirth experience. The sampling in this phase was purposeful and the participants studied individually by using in-depth, semi-structured interviews. The qualitative data analysed through content analysis with thematic approach.

**Discussion:** Assessing the effect of selected childbirth preparation methods on labour outcome will lead to developing recommendations about the content and quality of the childbirth preparation methods that can improve women's and Husband preparation towards positive childbirth.

**Keywords:** Childbirth preparation methods, Labour outcome, Birth experience, Mixed method, Antenatal women

### INTRODUCTION

The act of giving birth is one of the most significant events in a person's life, and it is also a very personal experience. The experience of giving birth has a significant impact on a mother's ability to cultivate healthy levels of self-esteem, positive feelings toward her kid, and a more seamless transition into her position as a mother, as well as on future pregnancies and childbirths. The woman and her family experience unfavourable psychological impacts as a result of negative results associated with this occurrence. Due to fear of labor pain the majority of women do not accept natural vaginal delivery at present. Active participation of the mother in labor can lead to decreasing rate of caesarean and duration of labor without deleterious effects on both the mother and fetus. Importance of husband participation during labour increases women's acceptance of prenatal care, which reduces negative behaviour of women and improves outcome of labour associated

stress. Most expectant women and their support people needed childbirth preparation as they reclaimed their right to play an active role in the experience and requested a change in their care from their health care providers. A good childbirth preparation methods prepare both mother and father for the birth experiences and teach relaxation and breathing techniques and stress management techniques to deal with fear and pain to improve good maternal and new born outcome.

### **BACKGROUND OF THE STUDY**

Prepared childbirth has become an increasingly popular method of childbearing in the India during recent years. Some parents' find the enhancement of personal satisfaction and the opportunity for active participation in their child's birth most attractive. According to Baby Centre Medical Advisory Board (2008) the goal of Lamaze is to help expectant mothers feel more prepared for childbirth by teaching them techniques like deep breathing, gentle movement, and massage that can help them manage discomfort during labor. When it comes to non-pharmaceutical strategies for managing pain and coping with anxiety and stress in preparation for and during labor and delivery, breathing exercises are among the most helpful. All kinds of training classes related to delivery can help women or couples to face correctly with normal vaginal delivery.

Focused breathing might work by interrupting the transmission of pain signals to brain by giving something positive to focus on. The natural pain-relieving hormones endorphins may be released, and the mind-set toward labor can be reframed to be more optimistic, productive, and controllable. The theory by which this would work is called the Central Nervous System Control (CNSC) mechanism. Using breathing techniques and focusing attention on breath may activate mental processes in brain that make labor sensations seem less unpleasant. Now, breathing techniques are a body-mind training mechanism that are used by people around the world for stress relief.

The fundamental idea behind husband-coached labor is to have the husband stay in the delivery room and be an active participant in the birthing process. The thought of a spouse coaching his wife through labor is acceptable to both partners and prenatal women. Husband can be the most significant source of emotional support and comfort. One of the most potent tranquilizers and pain relievers in the Labour result is a loving spouse. The hormone oxytocin speeds up labor, and their comforting presence may boost its production.

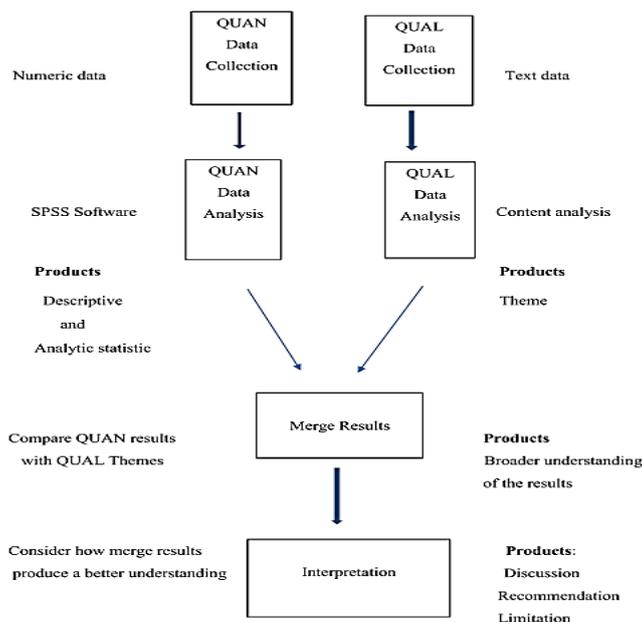
In spite of many studies across the world, there is very limited number of studies in India that focus on evaluation of childbirth preparation classes of both Lamaze and Bradley and its impact on women's childbirth experience, maternal depression and anxiety, women's satisfaction, maternal and new-born outcomes. To further understand the phenomenon of birthing preparation classes and its effect on women's readiness for and perspective on the childbirth experience, a parallel convergent mixed study using quantitative and qualitative methods was conducted. When quantitative and qualitative data are combined, a more complete picture of the situation can be painted, and policymakers and health planners may be given suggestions for improving the quality of childbirth preparation classes in a way that meets the needs and preferences of expectant mothers.

### **STUDY AIM**

The aim of the study is to determine the extent to which the selected childbirth preparation methods weighs significant difference in labour outcomes and childbirth experience which is measured by using statistical analysis and thematic analysis.

#### **The specific objectives of this study are to**

1. To assess the level of pain perception among antenatal women in experimental and control group after selected childbirth preparation methods'
2. To determine the effectiveness of selected childbirth preparation methods on labour outcomes among antenatal women in experimental & control group
3. To find out association between post-test scores of labour outcomes and selected demographic variables among antenatal women in experimental & control group
4. To explore the lived experience on selected childbirth methods among antenatal women in experimental & control group.



**METHOD/ DESIGN**

**Study design**

This mixed methods parallel-convergent study carried out in the quantitative (Post-test only) and qualitative (content analysis) phases. In this study, the quantitative and qualitative data collected and analysed simultaneously and independently. The priority is the same and both data had the same value in this study design. Data analysis performed separately and the results combined in the data interpretation stage.

**Quantitative phase of the study**

The quantitative phase of this study is a Quasi experimental – Post-test only design. The target population in this phase consist of both primiparous and multi pregnant women at the gestational age of 34–37 weeks.

**Sample size and sampling method**

The sample size in this study was calculated based on the Namuji et al study. 15% of Main study sample with attrition rate 10%. 28 primi and Multi pregnant women by Non probability sampling at the gestational age of 34–37 weeks. in antenatal clinic according to inclusion criteria, given a brief introduction, collected demographic variable along with phone number and expected date of delivery,

**Recruitment**

Potential participants 28 primi and Multi pregnant women were selected in antenatal clinic according to inclusion criteria. The research objectives and procedure fully explained to the selected women and, if they decide to take part in the study, written informed consent obtained from them. After consenting, collected demographic variable along with phone number and expected date of delivery.

Teaching and demonstration was given by using power point presentation for 30 minutes regarding Lamaze method of breathing technique. At 37 weeks of gestation during antenatal visit along with her husband, teaching were given about Bradley method of childbirth by using PowerPoint presentation for 30 minutes’.

**Inclusion criteria**

The inclusion criteria was both primi and multi, gestational age of 34–37 weeks, low risk pregnancy.

**Exclusion criteria**

The exclusion criteria were multiple pregnancy, High risk pregnancy, Assisted reproductive conception, Previous abdominal surgery, Husband not available during delivery.

**SCALES AND DATA COLLECTION**

Quantitative data collected using the Eligibility Checklist (Inclusion/ Exclusion Criteria), the demographic survey questionnaire, Teaching were given on 34 & 37 weeks and advised them to practice at home and during labour also. Labor pain perception for (4) four observations during early, active, transition and pushing stage with different types of Lamaze breathing according to contractions and stage of labor along with Bradley method (Husband support) by using Visual Analogue Scale. Assessed the effectiveness of both interventions on obstetric variable and newborn variable by using observational rating scale.

## DATA ANALYSIS

The collected quantitative data analysed in SPSS. The socio-demographic and Frequency and percentage distribution of post-test on early labor pain perception among antenatal women, 78.5% of them had mild pain, 21.43% of them had moderate pain. obstetric characteristics described employing descriptive statistics including frequency (percent) and average (standard deviation) for normal data. The obstetric variables of Duration of labour, cervical dilatation, uterine contractions, rupture of membrane, colour of amniotic fluid, fetal heart rate, fetal movements, presence of episiotomy, perineal tear, maternal fatigue, blood loss in labour, mode of delivery, separation of placenta, bladder and bowel pattern, involution of uterus and New-born variables APGAR score, temperature, birth weight, comfort, quality of breast attachment, frequency of feeding, and presence of meconium compared between the study groups and control group using a Chi-square test and multivariate linear regression, where socioeconomic status and obstetric and neonatal factors were controlled.

## QUALITATIVE STUDY

Women's perspectives on the effects of various birthing preparation strategies were investigated in this study's qualitative phase, which ran in parallel with but was not dependent on the quantitative analysis. Both phases were treated equally, and their data was considered equally important. Typically, various data analyses are carried out independently before being joined during the interpretation phase.

### Sampling method and data collection

In this study, 4 participants in the qualitative phase on day 2 postnatal. They studied individually through in depth, semi-structured interviews with open questions to collect the qualitative data, the methods of obtaining valid data and of focusing on research questions reviewed. The interviews started using the predefined questions and continue with more in-depth items, such as "How was your experience? How could you manage? How did you feel? Can you explain further? to explore the depth of their experience. During the interview, the researcher recorded nonverbal data of the participants, such as tone, in a specific sheet, along with the time and place of the interview. The sampling continued until data were saturated.

### Data analysis

The 10-item Childbirth Experience Questionnaire addresses four areas: personal capacity (control, personal perception of childbirth, and labor pain), professional support (information provision and midwifery care), perceived safety (feeling of safety and childbirth memories), and participation (the woman's capacity to alter her position and movements and relieve pain during labor and childbirth).

Using a thematic approach, qualitative data were analysed based on content analysis. In this method, reading the transcribed texts numerous times to have a thorough comprehension of them was the first step in the data analysis process. The texts were then read word by word to extract codes. Initially, objective words of the text that seem to embrace the main concepts were determined. The researcher continued digging the text by taking notes from the initial analysis until the major codes extracted. In this process, the code labels reflecting more than one key thought directly extracted and specified. Then, the codes categorized based on their difference and/or relationships. Ideally, 10–15 categories considered sufficient for categorization of a huge amount of data.

## DISCUSSION

Results revealed about pain perception 78.5% of them had mild pain in all stages of labour. Obstetric variables: Statistically there was a significant difference in Pain perception during labour, Duration of labour, uterine contraction and mode of delivery (70% of caesarean section). 85.71% had good maternal outcome score. International policies and strategies were employed to encourage women to give birth vaginally due to the rise in caesarean sections globally. With the husband present, the wife experienced less anxiety as she adjusted to labor and recognized the husband's role in labor, which suggested that paternal bonding strengthened with the new baby. For both mother and husband, this was a good experience. In Newborn variable: Statistically there was a significant difference in APGAR score and skin to skin contact. Therefore, the Lamaze breathing method and the Bradley technique seem to play an important role in women's self-efficacy and self-esteem, which fulfilled the cooperation and effort required during childbirth at the level of the individual, the family, the education system, and the healthcare system. This was accomplished by providing positive experience factors associated with childbirth. It is anticipated that the findings of the study will contribute to an improvement in the general health of pregnant women and the infants they give birth to.

## ETHIC'S APPROVAL AND CONSENT TO PARTICIPATE

Written informed consent obtained from each participant, this protocol has been approved by the Ethics committee of Dhanvantri college of Nursing, Erode.

## REFERENCE

1. Nilsson, L., Thorsell, T., Hertfelt Wahn, E., & Ekström, A. (2013). Factors influencing positive birth experiences of first-time mothers. *Nursing research and practice*, 2013.

2. Gibore, N. S., Bali, T. A., & Kibusi, S. M. (2019). Factors influencing men's involvement in antenatal care services: a cross-sectional study in a low resource setting, Central Tanzania. *Reproductive health*, 16, 1-10.
3. Green, J., & Hotelling, B. A. (2014). Healthy birth practice# 3: Bring a loved one, friend, or doula for continuous support. *The Journal of perinatal education*, 23(4), 194-197.
4. Malin Bergström, Helle Kieler & Ulla Waldenström (2010) Psychoprophylaxis during labor: associations with labor-related outcomes and experience of childbirth, *Acta Obstetrica et Gynecologica Scandinavica*, 89:6, 794-800, DOI: 10.3109/00016341003694978
5. Sharmila, J. R. (2012). Effect of Bradley Method on Labor Outcome among Pregnant Women at Selected Hospital, Coimbatore. *Asian Journal of Nursing Education and Research*, 2(3), 2.
6. Nilima R.Bhore (2016) A study to assess the effectiveness of selected aspects of lamaze method on pain among primigravida mothers during first stage of Labor in selected hospitals of sangli. Published online 28th October, 2016.
7. Jhala, A. (2017). A study to assess the effectiveness of lamaze breathing on labor pain and anxiety towards labor outcome among primigravida mothers during labor in community health center, Kolar Road, Bhopal (MP). *Indian J Obstet Gynecol*, 5(1), 19-22.
8. Angelin jenifer etal (2018) Lamaze method s. a study to assess the knowledge and attitude regarding lamaze method among antenatal mothers with a view to develop video assisting teaching on lamaze method in a selected phc's. *International Journal of Creative Research Thoughts*, Volume 6, Issue 1 February 2018 | ISSN: 2320-2882
9. Kuruvilla, S., & Municipality, G. (2019). Effect of Lamaze method on pain perception, anxiety, fatigue and Labor outcome among primi mothers during Labor process. *J Biomed Sci*, 2019, 9.
10. Taheri, M., Takian, A., Taghizadeh, Z., Jafari, N., & Sarafraz, N. (2018). Creating a positive perception of childbirth experience: systematic review and meta-analysis of prenatal and intrapartum interventions. *Reproductive health*, 15(1), 1-13.