Research Article

# Effectiveness of Lamaze Method on Mode of Labour among Primigravid Mothers

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**ABSTRACT**

The primary aim of the current study is "to determine the effectiveness of Lamaze method on mode of labour among primigravid women". The current study results reported that Lamaze method is effective in improving the child birth experience and helped the parturients to cope up with labour pains and experimental group mother exercised during their antenatal period had considerably shorter duration of labor and that they had more vaginal birth compare with control group mothers. So these study findings proved that statistical significant difference in mode of labour & outcome of labour. To enhance this Lamaze method of child birth preparedness can be included in routine antenatal care services.

**Keywords:** Lamaze, childbirth preparedness, primigravid labour pain, antenatal.

## INTRODUCTION

Women's perceived child birth as a natural process in their life. Those who attend delivery for the first time definitely would have some sort of fear about outcome of delivery. Pregnant women commonly worry about the pain they will experience during Labour and childbirth. Labour pain is one of the severest pain. Controlling labour pain is a major concern of maternity care. Nowadays, interest in non-pharmacological methods may be helpful for their Labour experience and also no side effects. In India, child birth preparation is still less of a formality. Pregnant women in general and first-time mothers in particular require a vast amount of information. The Lamaze is such a child birth education method that teaches that birth is a normal, natural, and healthy process and that woman should be empowered to approach it with confidence. It is also known as a method of" psycho prophylaxis"**.**

Lamaze method is a method of child birth in which the mother is prepared psychologically and physically to give birth without the use of pain relieving drugs. The aim of Lamaze classes encourage women to recognize their innate abilities to cope successfully with the challenges of labour and birth in any setting and to help women to have stress free, safe delivery. It is an effective non-invasive, non pharmacologic, supportive education for reducing the labour pain and to improve the behavioral responses of women in labour

### Need for the study

Childbirth is not a topic openly discussed in this region of India, most women stated that no one talks about what will happen during childbirth other than it will be painful. Many of the participants described feelings of fear and anxiety related to giving birth. Pregnant women are increasingly inactive. Mothers and grandmothers keep them away from cooking. They also caution them against exercise. The main aim of the study is to "to determine the effectiveness of Lamaze method on mode of labour among primi gravid women".

### Objectives

1. To assess the mothers knowledge on Lamaze method of childbirth, normal physiological changes of pregnancy and importance of nutrition among primi gravid mothers of control and experimental group.
2. To compare the fear level among prim gravid mothers of control and experimental group
3. To determine the effectiveness of Lamaze method on duration of labour, mode of labour.
4. To determine the effectiveness of Lamaze method on outcome of labour

## MATERIALS AND METHODS

A quantitative evaluative approach was used in this study and Quasi experimental with pre- post-test& control group design was adopted for this study. Research setting permission obtained from corporation of Chennai and study conducted at Ayanavaram urban health Post-I,II and kolathur health post-I,II Primi mothers those attended antenatal outpatient department in Ayanavaram urban health post –I&II were chosen as experimental group. Mothers those attended antenatal outpatient department in Kolathur health post –I &II were chosen as control group.

This study included primi gravida mothers whose given informed consent to participated in this study in the age group of 21-30 years, I[st] trimester mothers & mother who

had height less than 140 cm, weight less than 40 kg, mothers with physical illness such as old TB case, Asthma, epilepsy, cardiac disease, Aneamia & Twin pregnancy, Precious pregnancy were excluded from this study. The calculated sample size is 118, considering attrition 2%, So the estimated sample size was rounded as 120 in control group and 120 in experimental group and convenient sampling technique was adopted for this study.

**Data collection procedure**

Mothers knowledge on Lamaze method of child birth was assessed by structured questionare (12 wks of gestation). The same procedure was followed for all the subjects in the control group., & structured questionnaire were administered to assess the knowledge on Normal physiological changes during pregnancy and Importance of Nutrition (16weeks of gestation) & planned teaching programme on normal physiological changes during pregnancy and importance of nutrition was taught for 35-45 minutes, reinforcement given, 7$^{th}$ day post test was conducted for the same group. For control group knowledge assessment done, but no teaching given & 7$^{th}$ day post test was conducted. During the next visit Pre exercise checklist (PARmed-X for PREGNANCY is a guideline for health screening prior to participation in a prenatal exercise) was administered for the experimental group mothers (20$^{th}$ week of gestation)to assess the suitability of mothers for prenatal exercise, breathing techniques and Mothers who scored '0' were selected for this exercise program, On the same visit, demonstration of abdominal and vaginal strengthening exercises such as, Tailor sitting, Pelvic rocking, abdominal muscle contractions, kegal exercise, squatting exercise) and breathing techniques by the researcher, after that mothers were instructed to re demonstrate these exercises. Mothers were instructed to do these exercises at home 10-15 minutes weekly once till term, exercise pamphlets and work sheet given to all the experimental group mothers participated in this study, during an next antenatal visit it was assessed. The exercise worksheet consists of table columns which includes whether exercise continued, discontinued, difficulties during exercise, mothers were instructed to mark tick, it was prepared and given in their own language. All participants continued exercise program till term .Finally the efficacy of exercise program was compared with mode of labour.

During 24$^{th}$ week of gestation ,fear of child birth was assessed for both control and experimental group mothers by using an Wijma delivery expectancy questionnaire followed by videos on normal child birth process was showed to only experimental group mothers in order to minimize the fear of labour. After 7 days post test was conducted for both groups. For the control group mothers routine antenatal care services was provided. During their 36 wks of gestation ,final assessment done in the form of Presentation, Position of foetus was monitored by Ultrasonogram (36 weeks of gestation) & all 120 experimental group mothers had cephalic presentation & Left occipito posterior position (LOA). Same procedure was carried out for the control group mothers...Finally mode of labour was assessed (Natural or Natural with episiotomy, Caesarian section).

The data were analysed by means of descriptive and inferential statistics. The data were analyzed by both parametric& non parametric test. The analysis and plotting of graphs were carried out by using SigmaPlot 13 (Systat Software Inc., USA)

## RESULTS

Effectiveness of planned teaching programme on knowledge on Lamaze method among Experimental and Control group primi gravid mothers was assessed. The results revealed that in pre test both group mothers had poor knowledge on Lamaze method of childbirth. Wilcoxon signed rank test showed significant difference between experimental pre-test and post test mean values. The 'W' and 'P' values of control group were 1250 and <0.001, respectively. The 'W' and 'P' values of experimental group were 7140 and <0.001, respectively. It shows that compare to control group the experimental group mothers gained knowledge on Lamaze method of child birth after planned teaching programme. So findings showed significance between experimental pre-test and posttest& it is highly significant at the level of p<0.001. (Figure 1)

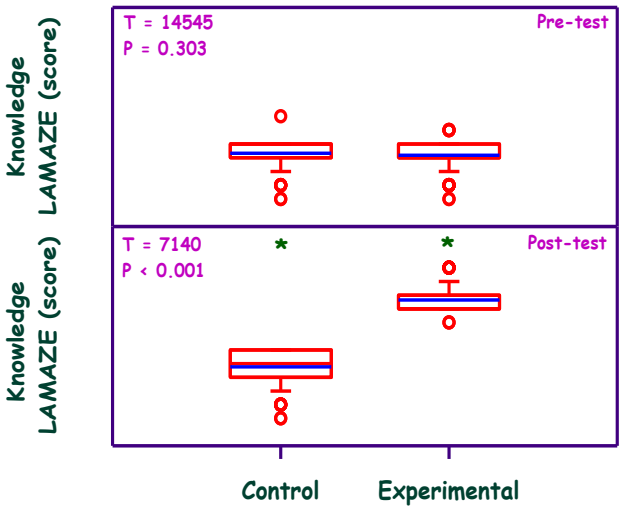


**Figure 1:** Effectiveness of planned teaching programme on knowledge on Lamaze method among primi gravid mothers. (n = 120 each).

The middle blue line is the median and the red line is the mean.

The control and experimental groups are evaluated by Mann-Whitney rank sum test (T and P values are given).

The pre-test and post-test of control and experimental groups are compared by Wilcoxon signed rank test. The 'W' and 'P' values for control are 1250 and < 0.001, respectively. The 'W' and 'P' values for experimental are

7140 and < 0.001, respectively. *Significantly different from the respective pre-test.

The effectiveness of planned teaching programme on physiological changes of pregnancy, importance of Nutrition was assessed .The data was analysed by Non parametric test (Mann-Whitney Rank sum Test.).The Experimental group Pre-Post value on Knowledge on importance of Nutrition, physiological changes of pregnancy is (W=7140 P<0.001.) Control group Pre-Post value (W=1672 P<0.001)In this study improvement in knowledge level was observed in experimental mothers in post test compare to pre test .The results revealed that experimental group mothers gained knowledge. So the Planned teaching programme on knowledge on physiological changes of pregnancy and importance of Nutrition was effective. (statistically significant at the level p<0.001) (Figure 2 ).

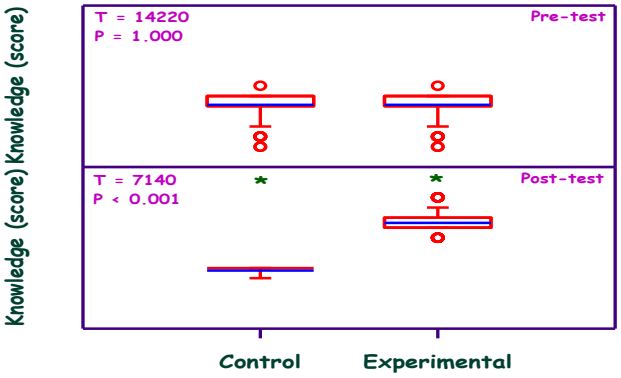


**Figure 2**: Effectiveness of planned teaching programme on knowledge in physiological changes of pregnancy and importance of nutrition in primi gravid mothers. (n = 120 each).

The middle blue line is the median and the red line is the mean.

The control and experimental groups are evaluated by Mann-Whitney rank sum test (T and P values are given).

The pre-test and post-test of control and experimental groups are compared by Wilcoxon signed rank test.The 'W' and 'P' values for control are 1672 and < 0.001, respectively. The 'W' and 'P' values for experimental are 7140 and < 0.001, respectively.

*Significantly different from the respective pre-test.

The demographic description shows that majority 80(67%) of primigravid mothers in experimental group belong to the age group 21-23 years and in control group also majority 78 (65%) belong to 21-23 years. With regard to the religion majority 98(82%) of primi gravid mothers in experimental group belong to the Hindu religion and in control group also majority 92(77%) belong to hindu religion. The chisquare value showed significance with the height of mother at P<0.001.

Comparison of fear level of Child birth among Experimental and Control group primi gravid mothers was assessed. The data was analyzed by chi-square (table 8.2), it revealed that in pre test 88% mothers in both group had high level of fear ($x^2$= 4.298,P=0.038), but in post test experimental mothers had low level of child birth fear compare to control group mothers. It showed highly significant ($x^2$=216.977, P<0.001). The study findings revealed that showing videos on normal child birth process helped in significant reduction of fear in study group

The effectiveness of planned teaching programme on importance of breastfeeding**.** The data was analyzed by Non parameteric test (Mann-whitney Rank sum test) results showed that in pre test both group had average knowledge on importance of breast feeding (T=11936,P=<0.001) but in post test experimental group gained knowledge on importance of breast feeding, compare to control group, it shows significant difference (T=7021P<0.001). The data was analyzed by Wilcoxn test, the results showed that experimental group mothers had shown improvement in knowledge (experimental Pre& Post value W=7021,P<0.001) comparing to control group mothers in pre &post test (W=852.00,P<0.001). It shows that planned teaching programme was effective.

The effectiveness of Lamaze method on mode of labour among Experimental and Control group primi gravid mothers, the mode of labour was assessed at end of pregnancy in both groups, out of 119 mothers in experimental group (attended birth preparedness class includes performing antenatal exercise) 92 (86%) had normal delivery and 27 mother (13%) had caesarean section.One experimental group mother dropped out from the study she had Intra uterine growth retardation. In control group out of 119 mothers 24 (25%) had normal delivery and 95 (75%) had caesarean section &one mother had preterm labour (Figure 3).

Effectiveness of Lamaze method on outcome of labour labour among Experimental and Control group primi gravid mothers. The findings revealed that all 119 experimental & 120 control group mothers had alive term neonates, no one had still born, dead born. The study findings found that there is no association between apgar score of neonates of control &experimental group mothers. Results revealed that this Lamaze method of child birth was well accepted by experimental group, as data on neonatal outcome (P=1.0 & apgar score P= 0.254) shows that experimental group did not show any undesirable effects on neonates compare to control group.

The indications of caesarean section in experimental group mothers found that out of 119 primi gravid mothers in experimental group 87% mother had normal vaginal delivery only 13% mothers had Caesarean delivery, the indication were assessed. Which are foetal distress, prolonged labour, Premature rupture of membrane with unfavourable cervix. Placenta abruption.

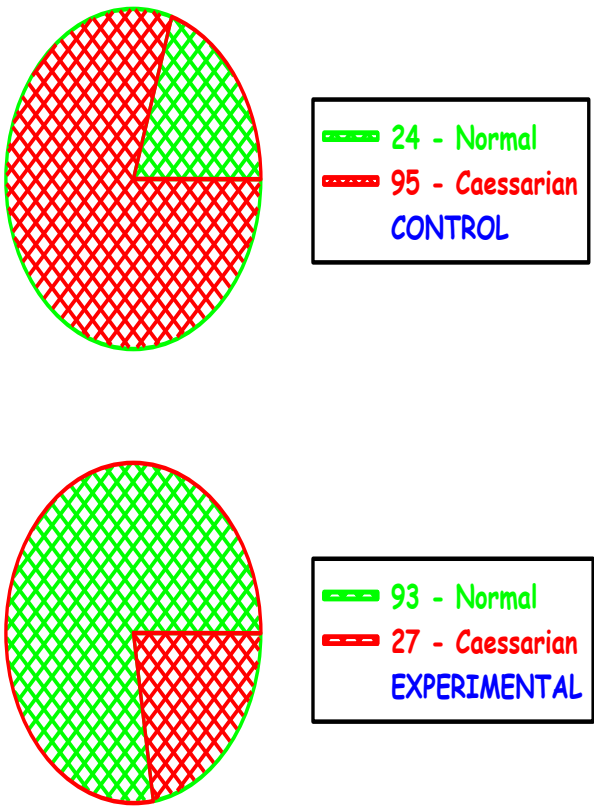


**Figure 3**: Effectiveness of Lamaze method on mode of labour among control group and experimental groups primigravid mothers. The numbers shown are primigravid mothers. In the control group, 1 preterm (normal delivery) is not shown (n-control=119; Experimental =119)( $x^2$=76.314=120)

Comparison of duration of normal labour among experimental & control group mothers. After delivery total duration of labour hours were compared between experimental & control group mothers. The findings showed that out of 92 experimental group mothers, 80.6%mothers had 10-12 hrs of duration of labour, in control group out of 24 mothers 70.8% mothers had 10-12 hrs duration of labour, 16.7 % of control group mothers had more than 14 hrs of duration of labour, where as only 2.2 % of experimental group mothers had more than 14 hrs of duration of labour. The chisquare value is $X^2$ =5.018, (p=0.081). So the study proved that Lamaze method helped in shortens the duration of labour among experimental mothers. Effectiveness of Lamaze method on childbirth experience among Experimental and Control group primi gravid mothers were assessed after. The responses of the mother were taken verbally from both control & experimental group primi gravid mothers after delivery. The childbirth experience responses towards labour were categorized as managing well, having difficult, managing poorly .The results revealed that 87.1% of experimental mothers responded childbirth experience, as 'managing well', where as only 58.3% of control group responded childbirth experience as managing well & 25.0% of control group responded childbirth experience as having difficult', where as only 10.7% mothers responded childbirth experience, as 'managing poorly' by experimental group. (The chisquare value is x2=12.614 df=2 (p=002) it indicates that marginally significant. So the study concluded that mothers identified their own performance during the stages of labour.

## DISCUSSION

Scientific advancements, especially in medicine, have minimized pregnancy discomforts and delivery risks. However, pregnant women are always concerned with delivery and associated discomforts. This may be one of the reasons for the large number of Caesarean section in India. One of the Lamaze method for making delivery easier is to prepare the mother through exercise

## CONCLUSION

Current study concluded that Lamaze method is effective in improving overall well being of the pregnant mothers, helped to overcome their fear and anxieties about labour and childbirth, helps them more confident about their child birth. This lamaze method helped in facilitation of Normal Childbirth**.** The findings of this study revealed that Lamaze method is very effective for the primigravid to improve their behaviours in positive way during labour and to have a pleasurable child birth experience.

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## REFERENCES

1. Adams S, Eberhard-Gran M, Eskild A. Fear of childbirth and duration of labour: a study of 2206 women with intended vaginal delivery. BJOG; 119, 2012, 1238–1246
2. Afari F, Khodakarami N, Guidelines of preparness classes for deliveryl Ministry of Health and medical education, 2004.
3. Alehagen Iw, Barbro Wijma And Klaas Wijma Acta Obstetricia Gynecologica Scandinavica, Volume 85, Issue 1, 2010.
4. Angel Rajakumari G., Journal of Science; Vol 5 Issue 8, 2015, 716-719.
5. Anitha Moncy, Effectiveness of Lamaze Technique on Pain and Anxiety of Primi Gravida Mothers During 1st Stage of Labour, Indian Journal of Nursing Studies Vol. 5, 2014, No.1.
6. Badakhsh MH, Seifoddin M, Khodakarami N, Gholami R, Moghimi S, Rise in cesarean section rate over a 30-year period in a public hospital in Tehran, Iran. *Arch Iran Med.* 15(1), 2012, 4-7.

7. Cheung W, D.Chan, Maternal anxiety and feeling of control during Labour.Journal of Obstetric and Gynecological Department; 23(23), 2007, 123-30.
8. *Fahami, S. Masoudfar, Sh. Davazdahemami,* The Effect of Lamaze Practices on the Outcome of Pregnancy and Labor in Primpara Women, IJNMR; 12(3), 2007, 111-114.
9. Gayle L, Reidmann, Education for childbirth: Nurse- midwife, female health association. West Suburban Hospital Medical Center, Oak Park, Illinoi: Vol 2, Chap 18, 2008.
10. Ghosh-Jerath S, Devasenapathy N, Singh A, Shankar A, Zodpey S. Ante natal care (ANC) utilization, dietary practices and nutritional outcomes in pregnant and recently delivered women in urban slums of Delhi, India: An exploratory cross-sectional study. Reprod Health, 12, 2015, 20.
11. Thampawiboon K, Effects of childbirth preparation on fear, labour pain, coping behaviors and childbirth satisfaction on primiparas, Thailand. 2005.
12. "Women's Heath &Exercise for Pregnant Women" (2013) available at http://cityexercise.com.au/exercise_pregnancy_and_antenatal.

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