

“A STUDY TO EVALUATE THE EFFECTIVENESS OF LAMAZE METHOD ON PAIN PERCEPTION, ANXIETY AND FATIGUE AMONG PRIMIGRAVIDA WOMEN DURING LABOUR PROCESS ADMITTED IN TERTIARY LEVEL TEACHING HOSPITAL, DHARWAD”

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ABSTRACT

Introduction:- Pain during labour is caused by contractions of uterus muscle and by pressure on the cervix. Lamaze method was used to increase the threshold to pain perception and reduction of anxiety and fatigue. The Lamaze philosophy teaches that birth is a normal, natural, and healthy process and those women should be empowered to approach it with confidence. The Lamaze technique incorporates breathing exercises and back massages which helps to reduce anxiety, fatigue and threshold to pain perception.

Methodology:- In order to examine the level of effectiveness of present interventions, quasi experimental pre-test post-test control group design was applied, also to guide the study in a proper direction systematically; the conceptual framework applied for the study was Modified Katharine Kolcaba's Comfort Theory. A total of 60 primigravida women who were in first stage of labour were selected for the study by applying Non probability Purposive sampling technique and were divided into Experimental and Control group. The tool comprised of Modified Pain Verbal Descriptor Scale, Modified Spielberger's Anxiety Scale, and Modified Fatigue Assessment Tool. The data was analyzed by using descriptive and inferential statistics to know and compare the progress made by the primigravida women during first stage of labour process.

Result:- The mean post-test level of pain scores and Standard Deviation in the experimental group [3.76 ± 0.93] was significantly lower than in the control group [6.33 ± 0.54]. The mean post-test level of anxiety scores and Standard Deviation in the experimental group [1.96 ± 0.17] was significantly lower than in the control group [3.1 ± 0.45]. The mean post-test level of fatigue scores and Standard Deviation in the experimental group [3.26 ± 0.74] was significantly lower than in the control group [5.9 ± 1.21] was significantly higher than in control group at 0.05 level of significance.

CONCLUSION:- There was a significant difference between the overall mean interventional scores among experimental and control group. The study revealed that Lamaze method was highly effective in threshold to pain perception, and reducing anxiety and fatigue among primigravida women who were in first stage of labour process.

Key Words:- Lamaze method; Pain perception; Anxiety; Fatigue; Primigravida women; Threshold.

INTRODUCTION

“Birth is not the greatest fear, but your greatest success”.

Childbirth is a stressful event, and maternal anxiety is known to be associated with a less positive experience and lower satisfaction with the birth. Anxiety was found to rise concomitantly with the level of pain experienced throughout labour in women of all personality types. It is not unusual to have the physical and emotional effects of pregnancy. As distress and worry intensify, muscle tightness grows, hindering the efficacy of contractions, rising aches and pain leads to further intensifying of fear and anxiety.¹

Currently wide ranges of non-pharmacological and pharmacological pain relief measures are available for women in labour to cope up with labor pain.

Through Lamaze method, women understand how to cope up and work with pain, anxiety and fatigue that normally occurs during labor. It also helps women to be stronger, control anxiety, decrease fatigue so power and energy can be used to push fetus and position her body in such a way that it will facilitate the natural labor process. It is natural technique and it doesn't require any pharmacological or medical supervision.

NEED FOR THE STUDY

According to WHO, Globally the rate of vaginal delivery in 2021 was 2,462,904 12 compare to caesarean section rates is 31.8%, and there is a fold on the current 10 years. The country with the highest cesarean rate is continuous by 2030, in East Asia (63%), Latin America and Caribbean (54%), Western Asia (50%), Northern Africa (48%), Southern Europe (47%) and Australia and New Zealand (45%) this concludes that women are not coping with pain and increases the rate of caesarean section. In accordance with the union Ministry of Health and Family Welfare in the Health Management Information System (HMIS) in 2018-19, more than 14% of the total birth is carried out and performed by the caesarean section.²

Therefore the researcher felt the need for better management of labor pain perception, anxiety and fatigue by introducing Lamaze method which is safe, cost effective and easily accessible. Lamaze method helps the women by increasing the threshold to pain perception and reducing anxiety and fatigue. It also encourages women for normal vaginal delivery which is a normal, natural and healthy process. Hence the researcher felt the need to conduct the study.

OBJECTIVES

The objectives of the study were:-

- 1) To assess the pre interventional level of pain perception, anxiety and fatigue among primigravida women during the labour process in experimental and control group.
- 2) To evaluate the effectiveness of Lamaze method on pain perception, anxiety and fatigue among primigravida women during labour process in experimental group.
- 3) To compare the effectiveness of Lamaze method on pain perception and anxiety and fatigue during labour process between experimental and control group.

HYPOTHESES

- H₁: Mean post interventional scores of pain perception, anxiety and fatigue will be significantly lower than pre-interventional scores among primigravida women of experimental group at 0.05 level of significance.
- H₂: Mean post interventional scores of pain perception, anxiety and fatigue among primigravida women in experimental group will be significantly lower than control group at 0.05 level of significance.

REVIEW OF LITERATURE

An experimental research design was conducted at Bhopal (M.P) to evaluate the effectiveness of Lamaze method on labour pain and anxiety on primigravida mothers during first stage of labour. A total of 40 samples were selected and allotted into experimental group (20) and control group (20). Samples were selected by using Non probability purposive sampling technique. The data was collected by using clinical visual analogue pain perception scale and observational rating scale. The level of pain perception was computed by using paired 't' test. The findings of the study revealed the mean of control group was 7.55 and of experimental group was 4.55 and SD of control group was 0.945 and of experimental group was 1.234. The study concluded that breathing exercises during labour pain helps in shortens the duration of labour, and prevents the complications during labour.³

A one group post-test only research design was conducted at Coimbatore regarding Lamaze method on primigravida women during first stage of labour. Samples were selected by using Non-probability purposive sampling technique. The data was collected by using Numeric Pain Intensity Scale, Partogram was used for assessing the progress of labor. The result was computed by using 't' test, Karl Pearson's Coefficient of correlation. The findings of the study revealed that the mean score was 5.125 at 5% level of significance. Since the calculated value 20.3373 was greater than the table value 1.701, the null hypothesis is rejected and research hypothesis is accepted. The study concluded that Lamaze method was found to be effective in decreasing perception of labour pain, negative behavioural responses related to labour pain, progress of labour was accelerated and facilitates the normal vaginal deliveries.⁴

METHODOLOGY

Research Process

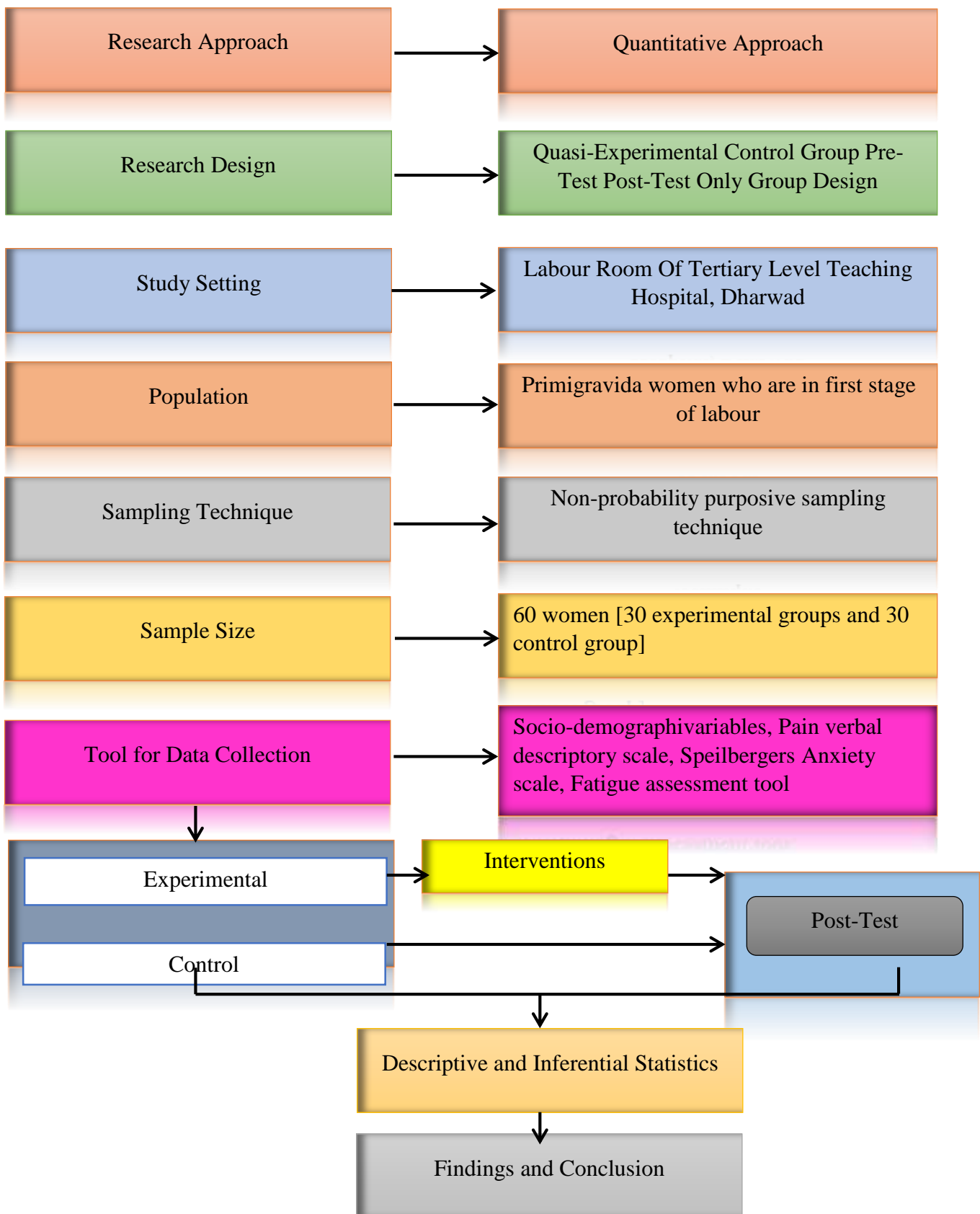


Figure 1: Schematic Representation of Study Design/Research Process

INCLUSION CRITERIA:

Primigravida women who-

- were in first stage of labour pain.
- were with gestational age of 37 to 40 wks.
- had cervical dilatation of 3-7 cm.
- were able to understand Kannada, Hindi and English language.
- were willing to participate in the study.

EXCLUSION CRITERIA:

Primigravida women:

- who were planned for caesarean section.
- with high risk pregnancy.

DESCRIPTION OF TOOL:-

PART I:- Sociodemographic Variables –

- It consists of selected socio-demographic variables (age, education, activities of daily living, type of family, religion and area of living) related to the primigravida women participating in the study.

PART II:- Modified Pain Verbal Descriptor Scale -

- Modified Pain Verbal Descriptor Scale was used to measure the level of pain perception during labour process. The Modified Pain Verbal Descriptor Scale consists of 1-10 scores ranging from no pain to severe pain [mild pain 1-3, moderate pain 4-7, severe pain 8-10].

PART III:- Modified Spielberger's Anxiety Scale –

- Modified Spielberger's Anxiety Scale and was assessed by using 4 points scale which consists of 20 items and the score interpretation was done as mild anxiety 1 score [below 40], moderate anxiety 2 score [41-60], and severe anxiety 3 score [61-80].

PART IV:- Modified Fatigue Assessment Tool –

- Modified Fatigue Assessment Tool consist of mild fatigue 1-3, moderate fatigue 4-6, and severe fatigue 7-10.

RESULTS

Section II: Assessment of the pre interventional level of pain perception, anxiety and fatigue among primigravida women during the labour process in experimental and control group.

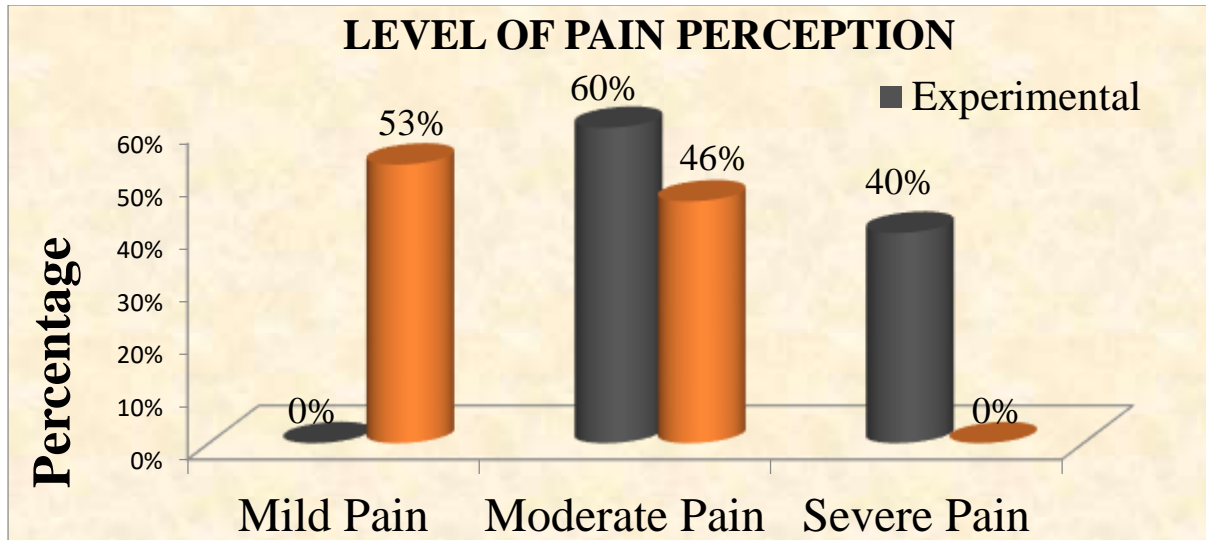


Figure 2: Cylinder diagram depicting percentage distribution of primigravida women according to the level of pain perception.

Figure 2:- demonstrated that the majority of the women in experimental group were having moderate pain 18 [60%] and 12 [40%] were having severe pain.

In control group, majority of the women 16 [53%] were having Mild pain and 14 [46%] having Moderate pain.

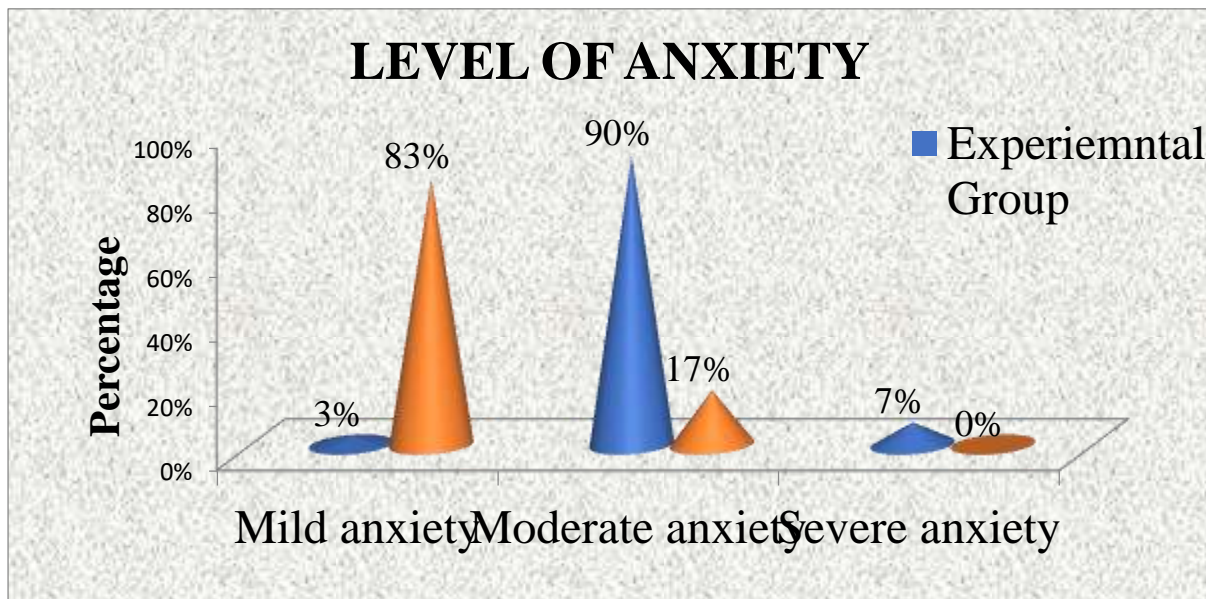


Figure 3: Cone diagram depicting percentage distribution of primigravida women according to the level of Anxiety.

Figure 3:- demonstrated that the majority of the women in experimental group were having Moderate Anxiety 27 [90%], 2 [7%] were having Severe Anxiety and 1 [3%] were having Mild Anxiety.

In control group, majority of the women 25 [83%] were having Mild Anxiety, 3 [10%] were having Moderate Anxiety and 2 [7%] was not having Anxiety.

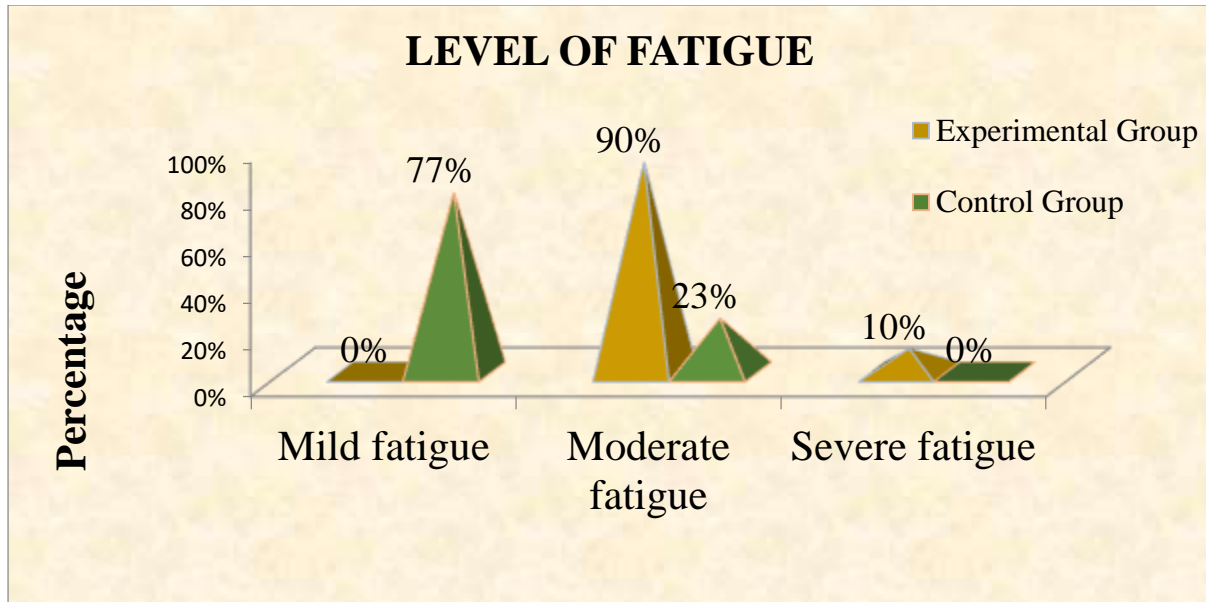


Figure 4: Pyramid diagram depicting percentage distribution of primigravida women according to the level of Fatigue.

Figure 4:- demonstrated that the majority of the women in experimental group were having Moderate fatigue 27 [90%] and 3 [10%] were having Severe fatigue.

In control group, majority of the women 23 [77%] were having Mild fatigue, and 7 [23%] were having Moderate fatigue.

DISCUSSION

Objective 2: To evaluate the effectiveness of Lamaze method on pain perception, anxiety and fatigue among primigravida women during labour process in experimental group.

○ The pre-test mean value of pain perception was [6.46] with standard deviation of [0.94] and the post-test mean value was [3.76] with standard deviation of [0.93]. The mean difference was [2.7]. The calculated paired ‘t’ test value was [32.4] which was greater than the table t value. This shows that there was a significant difference between pre and post-test level of pain perception among primigravida women in experimental group at 0.05 level of significance.

○ The pre-test mean value of anxiety was [3.03] with standard deviation of [0.31] and the post-test mean value was [1.96] with standard deviation of [0.17]. The mean difference was [1.07]. The calculated paired ‘t’ test value was [15.7] which was greater than the table t value. This shows that there was a significant difference between pre and post-test level of anxiety among primigravida women in experimental group at 0.05 level of significance.

○ The pre-test mean value of fatigue was [5.56] with standard deviation of [0.77] and the post-test mean value was [3.26] with standard deviation of [0.74]. The mean difference was [2.3]. The calculated paired ‘t’ test value was [21.3] which was greater than the table t value. This shows that there was a significant difference between pre and post-test level of fatigue among primigravida women in experimental group at 0.05 level of significance.

Objective 3: To compare the effectiveness of Lamaze method on pain perception and anxiety and fatigue during labour process between experimental and control group.

○ The post-test mean value of pain perception was [3.76] with standard deviation of [0.93] and the control group post-test mean value was [6.33] with standard deviation of [0.54]. The mean difference was [2.57]. The calculated unpaired t test value was [15.11] which was lower than the table t value. This shows that there was a significant difference between pre and post-test level of pain perception among primigravida women in experimental group at 0.05 level of significance.

○ The post-test mean value of anxiety was [1.96] with standard deviation of [0.17] and the control group post-test mean value was [3.1] with standard deviation of [0.45]. The mean difference was [1.14]. The calculated unpaired t test value was [14.25] which was lower than the table t value. This shows that there was a significant difference between pre and post-test level of anxiety among primigravida women in experimental group at 0.05 level of significance.

○ The post-test mean value of fatigue was [3.26] with standard deviation of [0.74] and the control group post-test mean value was [5.9] with standard deviation of [1.21]. The mean difference was [2.64]. The calculated unpaired t test value was [12] which was lower than the table t value. This shows that there was a significant difference between pre and post-test level of fatigue among primigravida women in experimental group at 0.05 level of significance.

These findings are consistent with the study conducted in Chennai to evaluate the effectiveness of Lamaze method in terms of pain perception, anxiety, fatigue and labour outcome during labour process among Primigravida mothers. The study findings revealed that the post-test mean score of experimental and control group was 38.30 and 43.67. The study concluded that Lamaze method was effective for threshold to pain perception, and reducing anxiety, fatigue and labour outcome.⁵

Thus, the research hypotheses was accepted and Objective was achieved.

CONCLUSION

IMPLICATIONS OF THE STUDY:

The implications of the study could be discussed under four broad areas, namely:-

NURSING RESEARCH:

- Nurses are involved in every issue due to changes in health care delivery system, advancement of technology, development of newer modalities in nursing care.
- Nursing research helps to know the effective utilization of research-based practice.
- To promote more research on Lamaze method for effective pain management, anxiety and fatigue during labour process.

LIMITATIONS:

The study is limited to:

- the primigravida women.
- the women with cervical dilatation of 3cm -7cm.
- primigravida women admitted in Shri Dharmasthala Manjunatheshwara College of Medical Sciences and Hospital, Dharwad.

RECOMMENDATIONS:

The highlight of the findings the following recommendations are put forth:

- A similar study can be conducted with large samples for better generalization.
- A comparative study can be conducted regarding effectiveness of Lamaze method on labor pain perception between primigravida women and multigravida mothers.
- Structured teaching programme can be conducted to assess the knowledge and attitude of midwives on Lamaze method therapies for labor pain management.
- The study can be conducted in different settings, public hospital and primary health centers.

SUMMARY

THE STUDY SUMMARIZES WITH THE FOLLOWING MAJOR FINDINGS:

- The findings of the study revealed that the overall mean post-test level of pain perception, anxiety and fatigue was significantly lower than the mean pre-test level of pain perception, anxiety and fatigue in experimental group. Thus, Hypothesis H₁ was accepted and Objective 2 was achieved.
- The mean post-test scores of pain perception, anxiety and fatigue among primigravida women in experimental group was significantly lower than the mean post-test scores of control group. Thus, Hypothesis H₂ was accepted and Objective 3 was achieved.

BIBLIOGRAPHY

- 1) Cheung Wing, Chan Dominic. Maternal anxiety and feelings of control during labour: A study of Chinese first-time pregnant women. *PMC*. 2020 Oct 01; 23(2): 123-130. Available from: URL <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7130936/>
- 2) Caesarean deliveries have become an ‘epidemic’ in India-record 300% jump in last decade 2019 Dec 13 [cited on 2021 Dec 09]. Available from: URL <https://theprint.in/health/ccaesarean-deliveries-have-become-an-epidemic-in-india-record-300-jump-in-last-decade/334291>
- 3) Akshaykumari Jhala. A study to assess the effectiveness of Lamaze breathing on labour pain and anxiety towards labour outcome among primigravida mothers during labor in community health centre, Kolar road, Bhopal (M.P). *Indian journal of Obstetrics and Gynecology*. 2017 March; 5(1) 13-18. Available from: URL <http://dx.doi.org/10.21088/ijog.2321.1636.5117.2>
- 4) V. Kavitha. Lamaze method on primigravida women during first stage of labour. *Asian Journal of Nursing Education and Research*. 2011 Jan-Mar; 1(1): 25-27. Available from: URL <http://www.anvpublication.org/ajner.htm>
- 5) Priya Parimala. The effectiveness of Lamaze method in terms of pain perception, Anxiety, Fatigue and labour outcome during labour process among primigravida mothers [M.Sc.Nursing thesis]. Adhiparashakti college of nursing: The Tamilnadu M.G.R. medical university; 2011 [cited on 2021 Dec 16]. Available from: URL <https://repository-tnmgrmu.ac.in>

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