PILOT STUDY:- "TO EVALUATE THE EFFECTIVENESS OF LAMAZE METHOD ON PAIN PERCEPTION, ANXIETY AND FATIGUE AMONG PRIMIGRAVIDA WOMEN DURING LABOUR PROCESS ADMITTED AT TERTIARY LEVEL TEACHING HOSPITAL, DHARWAD".

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ABSTRACT

Introduction:- The Lamaze childbirth technique emphasises labour and delivery as a normal occurance. The technique places an emphasis on specific breathing patterns and other all-natural pain–relieving techniques. In order to equip pregnant women with the knowledge essential to make wise decisions, it also teaches them about potential interventions.

Research Approach: Quantitative evaluative research approach was used to conduct the study.

Research Design: A Quasi- experimental pre-test post-test control group design was used for the study.

Setting: The study was conducted in labour room of Tertiary level teaching Hospital, Dharwad.

Samples: primigravida women who are in first stage of labour process.

Sampling procedure: Non-Probability Purposive Sampling Technique was used for the study.

Sample size: A total sample size in this study was 10 with 5 samples in experimental group and 5 samples in control group.

Result:- The mean post-test level of pain scores and standard deviation in the experimental group [3.4 ± 1.14] was significantly lower than in the control group [7.2 ± 01.33]. The mean post-test level of anxiety scores and standard deviation in the experimental group [1.6 ± 0.54] was significantly lower than in the control group [3.6 ± 2.19]. The mean post-test level of fatigue scores and standard deviation in the experimental group [3.6 ± 0.89] was significantly lower than in the control group [6.4 ± 1.14] 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 effective in threshold to pain perception, and reducing anxiety and fatigue among primigravida women who were in first stage of labour process.

Key Words: - Pain perception, Anxiety, Fatigue, Lamaze method, Labour process.

INTRODUCTION:-

Pregnancy is a unique, joyful and exciting time in a women's life; it is enormously powerful stage of development that brings a woman to motherhood. Women experience a wide range of physical and emotional changes in her body.

The Lamaze childbirth method teaches the expectant mothers various ways to work with the labor process to increase threshold to the pain, reduce anxiety and fatigue associated with childbirth and promote normal childbirth. The experience of birth greatly affects women and their families, women's wisdom guides them through birth, women's confidence and ability to give birth is either enhanced or diminished by the care provider and place of birth. Women can give birth to baby safely at Nursing home and birth centers by using this technique. Education related to childbirth empowers the women to be knowledgeable in health care, to accept responsibility for their health.

Lamaze method also helps women to be stronger, control anxiety, decrease fatigue so power and energy can be used to apply fundus pressure 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 the World Health Organization in the government sector hospitals in rural India where less than 15% women give birth through surgery and in the Urban sector is nearly double at 26%. But in private sector hospitals, a majority of births (54% in rural areas and 56% in Urban areas) are conducted through a caesarean section. According to the National Family Health Survey (NFHS-5) caesarean section deliveries in private hospitals have been huge jump from 40.3% to 52.5% in Karnataka.

The health specialist feels that such boom of caesarean section is unnecessary which can harm mother health. It is also responsible for respiratory problems in fetus. They also undergo caesarean section willing due to fear of labor pain. Hence, the researcher felt the need to conduct the study, by using Lamaze method to help women perceive pain, reduce anxiety, and fatigue and encourage for normal delivery.

REVIEW OF LITERATURE:-

1. A quasi-experimental design was conducted at Thiruvallur, 2019 regarding effectiveness of Lamaze method on labour pain and anxiety on primi mothers who are in first stage of labour. Total 120 samples were collected and divided into 60 experimental group and 60 control group. Sample was selected by using purposive sampling method. Data was collected by using numerical rating scale, demographic variable. The level of pain is assessed by using VAS and anxiety by using numerical rating scale. The result revels that the t value for the experimental group is $(t=27.4746)$ and control group is $(t=5.7930)$ which is found to be significant at $p>0.05$. It was concluded that Lamaze breathing exercise could be used in reduced pain and anxiety.

RESEARCH PROBLEM:-

A study to evaluate the effectiveness of Lamaze method on pain perception, anxiety and fatigue among primigravida women during labour process admitted at Tertiary level teaching Hospital, Dharwad.

OBJECTIVE OF THE STUDY:-

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 group and control group.

RESEARCH HYPOTHESES:-

H_1: 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.

H_2: 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.

METHODOLOGY:-

- **Research Approach:** Quantitative evaluative research approach was used to conduct the study.

- **Research Design:** A Quasi- experimental pre -test post-test control group design was used for the study.

GROUPS	PRE-TEST	INTERVENTION	POST-TEST
Experimental Group	0_1	X	O_2
Control Group	O_1	-	O_2

Keys:

O_1: **Pre-test**

X: Treatment/Intervention

O_2: **Post-test**

Duration of pilot study: The pilot study was conducted for 1 week from 07/07/2021 to 13/07/2021.

Research Study Setting: The study was conducted in labour room of Tertiary level teaching Hospital, Dharwad.

Samples: primigravida women who are in first stage of labour process.

Sampling procedure: Non-Probability Purposive Sampling Technique was used for the study.

Sample size: A total sample size in this study was 10 with 5 samples in experimental group and 5 samples in control group.

INCLUSION CRITERIA:-

Primigravida Women

1) who are in first stage of labour pain.
2) who are with gestational age of 37 to 40 wks.
3) Primigravida women having cervical dilatation of 3-7 cm.
4) Women who are able to understand Kannada, Hindi and English.
5) Primigravida women who are willing to participate in the study.

EXCLUSION CRITERIA:-

Primigravida Women

1. who are undergoing caesarean section.

2. at the level of sample selection with cervical dilatation more than 8 cm.

3. with high risk pregnancy.

STUDY INSTRUMENT:-

The tool is constructed and consists of following parts-

- **PART-I: Sociodemographic Variables -** It consists of selected demographic variables (age, education, lifestyle, type of family, religion, area of living, gestational age in weeks) related to the women participating in the study.

- **PART-II: Pain verbal descriptor scale –** Pain verbal descriptor scale was used to measure the level of pain perception during labour process. The verbal descriptor scale consists of 0-10 scores for self-assessment.

- **PART III: Spielberger's anxiety scale –** Spielberger's anxiety scale is assessed using 4 points scale (80 score) which consists of 20 items.

- **PART-IV: Modified Fatigue assessment tool –** A Fatigue assessment tool is assessed using 0-10 score which contains 5 levels of fatigue items which was used to measure the level of fatigue during labour process.

RELIABILITY OF THE TOOL:-

- The reliability of the tool was obtained by test-retest method by using Karl Pearson's coefficient correlation formula. The reliability for the pain verbal descriptor scale was r=0.90.

- The reliability of the tool is obtained by test-retest method by using Karl Pearson's coefficient correlation formula. The reliability for the Spielberger's anxiety scale was r=0.87.

- The reliability of the tool is obtained by test-retest method by using Karl Pearson's coefficient correlation formula. The reliability for the modified fatigue assessment tool was r=0.89.

- Hence the prepared tools are highly reliable.

DATA COLLECTION PROCEDURE:-

- The investigator had taken prior permission and ethical consent from the Institutional Ethical committee and the Obstetrics and Gynaecological Department of Shri Dharmasthala Manjunatheshwara College of medical sciences and Hospital, Dharwad.

- The participants were selected based on selection criteria and was assured confidentiality of the data.

- The purpose of the study was explained to the samples.

- The informed and written consent was taken from the participant who will participate in the study.

- Samples were selected by using purposive sampling technique.

- Based on this, the investigator had distributed the participants into experimental group (Group I) and control group (Group II).

- Demonstration of Lamaze method was provided on admission to the labour room for experimental group by the investigator.

- Pre- test for both experimental and control group was conducted, to assess for pain perception by using pain verbal descriptor scale, anxiety by using Spielberger's anxiety scale and fatigue by using modified fatigue assessment tool .

- Group I (Experimental group) primigravida women was given Lamaze method (breathing techniques and back massage) for 6 contractions (20 min) for each different procedure.

- Group II (control group) primigravida women were subjected to routine care as per hospital policy.

- The post-intervention of pain perception, anxiety and fatigue score was assessed after 1hr 35 min. in both the group.

DATA ORGANIZATION AND ANALYSIS:

The data was collected and analysed by using descriptive and inferential statistics.

DESCRIPTIVE STATISTICS

- Frequency and percentage distribution was used to analyse the sociodemographic variable of the primigravida women in experimental and control group.
- Frequency and percentage distribution was used to assess the pre and post test level of pain verbal descriptor scale, Spielberger's anxiety scale and modified fatigue assessment tool.
- Mean and Standard deviation was used to evaluate the effectiveness of Lamaze method (breathing exercises and back massage) on reduction of pain perception, anxiety and fatigue among primigravida women.

INFERENTIAL STATISTICS

- Paired t- test was used to compare the pre test and post test level of pain perception, anxiety and fatigue among primigravida women in experimental group.
- Unpaired t-test was used to compare pre test and post- test level of pain perception, anxiety and fatigue among primigravida women between experimental and control group.

RESULT:-

Table 1: Frequency and percentage distribution of Sociodemographic variables n=10

S.NO	DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP		TOTAL	
		f	%	f	%	f	%
1	Age						
	a. Below 20 years	0	0%	0	0%	0	0%
	b. 21-25 years	2	40%	2	40%	4	40%
	c. 26-30 years	3	60%	2	40%	5	50%
	c. Above 31 years	0	0%	1	20%	1	10%
2	Education						
	a. Non formal	0	0%	0	0%	0	0%
	b. Primary	1	20%	0	0%	1	10%
	c. Secondary	1	20%	2	40%	3	30%
	d. Graduate	3	60%	3	60%	6	60%
	e. Post- graduate	0	0%	0	0%	0	0%
3	Lifestyle						
	a. Physical activity	3	60%	0	0%	3	30%
	b. Emotional activity	0	0%	1	20%	1	10%
	d. Both (a) and (b)	2	40%	4	80%	6	60%
4	Type of family						
	a. Nuclear	3	60	2	40%	5	50%
	b. Joint	2	40	3	60%	5	50%
5	Religion						
	a. Hindu	5	100%	5	100%	10	100%
	b. Christian	0	0%	0	0%	0	0%
	c. Muslim	0	0%	0	0%	0	0%
6	Area of living						
	a. Urban	2	40%	0	0%	2	20%
	b. Rural	1	20%	3	60%	4	40%
	c. Semi-urban	2	40%	2	40%	4	40%
7	Gestational age in weeks						
	a. 28 wks to 32 wks	0	0%	3	60%	3	30%
	b. 33 wks to 36 wks	2	40%	1	20%	3	30%
	c. 37 wks to 40 wks	3	60%	1	20%	4	40%

II. Frequency and percentage distribution for pain verbal descriptor scale

OBJECTIVE 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.

Table 2: Frequency and percentage distribution of pain verbal descriptor scale
n=10

S.NO	LEVEL OF PAIN PERCEPTION	EXPERIMENTAL GROUP (5)		CONTROL GROUP (5)	
		PRE TEST		PRE TEST	
		f	%	f	%
1	Normal	0	0%	0	0%
2	Mild	0	0%	2	40%
3	Moderate	3	60%	3	60%
4	Severe	2	40%	0	0%
5	Worst Pain	0	0%	0	0%

Table 3: Frequency and percentage distribution of level of Spielberger's Anxiety scale
n=10

S.NO	LEVEL OF ANXIETY	EXPERIMENTAL GROUP (5)		CONTROL GROUP(5)	
		PRETEST		PRE TEST	
		f	%	f	%
1	No Anxiety	0	0%	0	0%
2	Mild Anxiety	0	0%	3	60%
3	Moderate Anxiety	2	40%	2	40%
4	Severe Anxiety	3	60%	0	0%
5	Worst pain	0	0	0	0

Table 4: Frequency and percentage distribution of level of Modified Fatigue Assessment tool

n=10

| S.NO | LEVEL OF FATIGUE | EXPERIMENTAL GROUP (5) | | CONTROL GROUP(5) | |
| | | PRETEST | | PRE TEST | |
		f	%	f	%
1	No fatigue	0	0%	0	0%
2	Mild fatigue	0	0%	2	40%
3	Moderate fatigue	3	60%	3	60%
4	Severe fatigue	2	40%	0	0%
5	Worst fatigue	0	0%	0	0

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

Table 5: comparison table for verbal pain descriptor scale n=5

Group	Mean	Standard deviation	Mean difference	Standard difference	Paired t value	Table value	Df
PRETEST	5	1.58	1.6	0.44	6.32 S P < 0.05	2.78	4
POSTTEST	3.4	1.14					

- The pre-test mean value was 5 with standard deviation of 1.58 and post-test mean value was 3.4 with standard deviation of 1.14. The mean difference was 1.6. The calculated paired t test value was 6.32 which was greater than the table 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 calculated Paired t value was greater than the table value at Degree of Freedom 4 for 0.05 level of significance. Therefore **Objective 2 is Achieved** and **Research Hypothesis 1 is Accepted.**

Table 6: comparison table for Spielberger's Anxiety Scale.

n=5

Group	Mean	Standard deviation	Mean difference	Standard difference	Paired t value	Table value	Df
PRETEST	3.6	1.6	2	2	6.32 S P < 0.05	2.78	4
POSTTEST	1.6	3.6					

- The pre-test mean value was 3.6 with standard deviation of 1.6 and post-test mean value was 1.6 with standard deviation of 3.6. The mean difference was 2. The calculated paired t test value was 6.32 which was greater than the table value. This shows that there was a significant difference between pre and post-test level of anxiety scale among primigravida women in experimental group at 0.05 level of significance. The calculated Paired t value was greater than the table value at Degree of Freedom 4 for 0.05 level of significance. Therefore **Objective 2 is Achieved** and **Research Hypothesis 1 is Accepted.**

Table 7: comparison table for Modified Fatigue assessment tool.

n=5

Group	Mean	Standard deviation	Mean difference	Standard difference	Paired t value	Table value	Df
PRETEST	5.6	1.51	1.6	0.62	4.72 S P < 0.05	2.78	4
POSTTEST	3.6	0.89					

- The pre-test mean value was 5.6 with standard deviation of 1.51 and post-test mean value was 3.6 with standard deviation of 0.89. The mean difference was 1.6. The calculated paired t test value was 4.72 which was greater than the table 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. The calculated Paired t value was greater than the table value at Degree of Freedom 4 for 0.05 level of significance. Therefore **Objective 2 is Achieved** and **Research Hypothesis 1 is Accepted.**

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

Table 8: Comparison table for Pain verbal descriptor scale

n=10

Group	Mean	Standard deviation	Mean difference	Standard difference	Unpaired t value	Table value	df
EXPERIMENTAL GROUP	3.4	1.14	3.8	0.19	5.5 S P < 0.05	2.31	8
CONTROL GROUP	7.2	1.33					

- The pre-test mean value was 3.4 with standard deviation of 1.14 and post-test mean value was 7.2 with standard deviation of 1.33. The mean difference was -3.8. The calculated paired t test value was 5.5 which was greater than the table 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 calculated Paired t value is greater than the table value at Degree of Freedom 4 for 0.05 level of significance. Therefore **Objective 3 is Achieved** and **Research Hypothesis 2 is Accepted.**

Table 9: Unpaired t table for Spielberger's anxiety scale

n=10

Group	Mean	Standard deviation	Mean difference	Standard difference	Unpaired t vale	Table value	df
EXPERIMENTAL GROUP	1.6	0.54	2	1.65	4.65 S P < 0.05	2.31	8
CONTROL GROUP	3.6	2.19					

- The pre-test mean value was 1.6 with standard deviation of 0.54 and post-test mean value was 3.6 with standard deviation of 2.19. The mean difference was 2. The calculated paired t test value was 4.65 which was greater than the table value. This shows that there was a significant difference between pre and post-test level of anxiety among postnatal caesarean mothers in experimental group at 0.05 level of significance. The calculated Paired t value is greater than the table value at Degree of

Freedom 4 for 0.05 level of significance. Therefore **Objective 3 is Achieved** and **Research Hypothesis 2 is Accepted.**

Table 10: Unpaired t table for Modified Fatigue assessment tool

n=10

Group	Mean	Standard deviation	Mean difference	Standard difference	Unpaired t vale	Table value	df
EXPERIMENTAL GROUP	3.6	0.89	2.8	0.25	4.82 S $P < 0.05$	2.31	8
CONTROL GROUP	6.4	1.14					

- The pre-test mean value was 3.6 with standard deviation of 0.89 and post-test mean value was 6.4 with standard deviation of 1.14. The mean difference was 2.8. The calculated unpaired t test value was 4.82 which was greater than the table value. This shows that there was a significant difference between post-test level of fatigue among parturient women in experimental and control group at 0.05 level of significance. The calculated Paired t value is greater than the table value at Degree of Freedom 4 for 0.05 level of significance. Therefore **Objective 3 is Achieved** and **Research Hypothesis 2 is Accepted.**

SUMMARY:-

- The data was collected according to the procedure and systematically arranged.

- The reliability of the tool was computed by test-retest method using Karl Pearson's correlation coefficient formula.

- The analysis and interpretation of data was done by using descriptive and inferential statistics.

- Descriptive statistics included frequency and percentage distribution table, mean and standard deviation and diagrams.

- Inferential statistics included paired and unpaired t test.

- Paired t test was used to evaluate the effectiveness of intervention within the group.

- Unpaired t test was used to evaluate the effectiveness of intervention between the groups.

CONCLUSION:-

This study shows the effectiveness of Lamaze method on pain perception, anxiety and fatigue among primigravida women during labour process.

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