Original Research Article

A Study to assess the effectiveness of back massage with Olive oil for pain relief among antenatal women during first stage of labor at Sangareddy Hospital, Ts

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Abstract

The present study aimed at A study to assess the effectiveness of back massage with Olive oil for pain relief among antenatal women during first stage of labor at Sangareddy, hospital, Ts. A quantitative evaluative research approach was used for this study. The conceptual framework used for this study was Modified Ludwig and Bertalanffy, general system theory. Random sampling technique was used to select the antenatal mother. Structured questionnaire was used to collect demographic data and Pretest and posttest pain assessment was done by using numeric pain rating scale. The discussion of the present study is based on the findings obtained from descriptive and inferential statistical analysis of collected data."

Keywords: Pain relief olive oil, first stage of labor, pregnancy, antenatal mother.

INTRODUCTION

Mother is the greatest gift to the world. Pregnancy is a special event and childbirth is one of the marvelous memorable segments in woman's life. The foundation for the whole humankind is the art of motherhood. The labor and birth process is an exciting situation to the woman and her family. Childbirth is a complex, multidimensional experience for the parturient.

Most women experience pain during labor and after childbirth. The World Health Organization (WHO) includes pain management as a standard of quality of care, highlighting that all aspects of health care should be given timely, appropriately, and should respect a woman's choice, culture, and needs. The time of labor and birth is short in comparison with the length of pregnancy, is the most dramatic and significant period of pregnancy for the expectant women.

Pain and its relief for women in labor has been subject of interest since the dawn of Mankind. Pain in labor is universal experience for childbearing women. A variety of factors affect the intensity and amount of pain experienced by women; is based on, perception of pain, tolerance of pain, communication of pain, cultural characteristics, and environment of pain — whether in hospital or at home etc.

Normal labor can be defined as a series of events that take place in the genital organs to expel the viable products of conception out of the womb through the vagina into the outer world. Normal labor occurs between 37 and 42 weeks of gestation.

There are four stages of labor. The first stage of labor is first from the onset of regular uterine contractions to full dilatation of cervix. The second stage of labor last of from full dilation of cervix birth of fetus. The third stage of labor lasts from birth of fetus, until the placenta is delivered. The fourth stage starts from expulsion of placenta to six weeks of post — natal period. Labor usually starts within two weeks of the estimated date of delivery. On average, labor starts 12-18 hours in a woman's first pregnancy and tends to be shorter, averaging 6-8 hours in subsequent pregnancies.

The first stage of labor has been divided into three main phases. The latent phase, active and transition phases. The first stage of labor begins with regular uterine contractions and ends with complete cervical dilatation at 10 cm. Friedman says that the latent phase begins with mild, irregular uterine contractions that softens the cervix.

Although each labor is different, by far the greater part of labor is taken up by the first stage of labor.

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Labor pain represents the most generic form of acute severe pain and lack of its treatment results in severe psychological effects lasting in late stage of life. Pregnant women are mostly worried about pain. A woman's experience of labor pain is influenced by many factors including her past experiences of pain, her coping abilities and the birth environment and psychological factors. Childbirth, while primarily a joyful event.

Need for the study

As labor pain is acute and increases quickly because considerable emotions are involved, pain relief poses a major problem. Labor pain is caused by uterine contractions and dilatation of the cervix in late first stage and second stages by the stretching of the vagina and pubic floor to accommodate the presenting part. These painful stimuli are said to be transmitted by thoracic, lumbar, and sacral nerves.

During the first stage of the intra partum period massaging women's abdomen, back and sacral area are often performed. Sometimes the abdominal skin and back is rubbed with warm water or with oil. Reassurance, massage, and emotional support are the methods of Indigenous midwife used to relieve labor pain. The women who is suffering from backache or pain during her labor may find appropriate massage which is very soothing. In rural India alternative modalities were used in some or other forms by the dais who conducted deliveries in villages. Measures like aromatherapy, massages, hot and cold applications are used in traditional settings.

The midwife or partner may perform circular massage over the lumbosacral area, reducing friction with the use of talcum powder or massage oil. The prime goal of providing back massage with oil or any forms of labor support to assess the women to relax physically, to relieve her pain and thus to provide an emotional companionship, attention to physical and psychological needs through active helping.

A study was done to assess the effectiveness of massage with olive oil on active phase pain intensity and satisfaction of labor in nulliparous women. Ninety pregnant women with 38-42 weeks of gestation, referred for vaginal delivery and admitted to labor room, were taken for the study, and divided into three groups, first group took only massage, second group took massage with almond oil and third group took massage with olive oil. The results of massage were that by olive oil the active phase pain intensity significantly decreased and increased patient's satisfaction from delivery. The results of massage effectiveness, particularly massage by olive oil, indicated that use of massage can decrease active phase pain intensity and increase satisfaction in patients. This study finding is like the findings of the present study which revealed that olive oil back massage is effective in reducing labor pain during first stage of labor. It was observed that there was less pain score in experimental group after the olive oil back massage compared to mothers who had not received olive oil back massage in control group. The study concluded that olive oil back massage is an effective method of reducing labor pain during first stage of labor.

Statement of problem:

A study to assess the effectiveness of back massage with Olive oil for pain relief among antenatal women during first stage of labor at Sangareddy Hospital, Ts.

Objectives:
1. To assess the level of back pain among antenatal women during first stage of labor before interventions in experimental group and control group.
2. To apply olive oil massage on antenatal women during first stage of labor in experimental group.
3. To assess the effectiveness of olive oil massage among antenatal women during first stage of labor in experimental group
4. To find the association between the pre-test and post level of back pain among antenatal women's during first stage of labor with their selected demographic variable in the experimental group.

Hypotheses:
H 1: There will be a significant reduction in posttest level of pain among antenatal women during first stage of labor in experimental group.
H 2: There will be a significant difference in the posttest level of pain among antenatal women during first stage of labor in experimental and control group.
H 3: There will be a significant association between pretest and posttest level of pain among antenatal women during first stage of labor with their selected demographic variable in experimental group.

Assumptions:
1. Pain perception differs from individual to individual.
2. Pain level in first stage of labor influences the maternal outcome.
3. Back massage with olive oil relieves pain in first stage of labor.

Delimitations
1. Antenatal mothers in first stage of labor with latent phase were taken for study.
2. The study was conducted in labor ward in Sangareddy Hospitals.
3. Sample size is sixty.

Operational definitions:
1. **Effectiveness:** It is the desired changes in pain level brought about by the olive oil massage on

back pain during first stage of labor and measured in terms of numerical rating scale.

2. **Olive Oil Massage:** It refers to lower back massage of antenatal mothers on left lateral position during first stage of labor pain with 2ml of olive oil in circular motion for 5 min.

3. **Pain:** It is a subjective experience involving a complex interaction of physiological, psychosocial, cultural, and environmental influence.

4. **Antenatal Women:** Pregnant women in first stage of labor admitted for delivery who are having no complication.

5. **First stage of Labor:** It refers to the period from the onset of true labor pain to four cm dilatation of cervix (latent phase of labor).

6. **Olive Oil:** Olive oil is a liquid fat obtained from olive fruit, a traditional tree crop of the Mediterranean basin. The oil is produced by pressing whole olives. Olive oil contains a compound called Oleocanthal that acts in the same way ibuprofen does to relieve pain and acts as anti-inflammatory drug.

Conceptual framework

A group of concepts are broadly defined and systematically organized to provide focus, rationale, and a tool for the integration and interpretation of information. Conceptual framework serves as a springboard for theory development. The conceptual framework for research study presents the measure on which the purpose of the proposed study is based. Theoretical framework provides ways and methods to conduct the study and guides the interpretation, evaluation, and integration of significant findings.
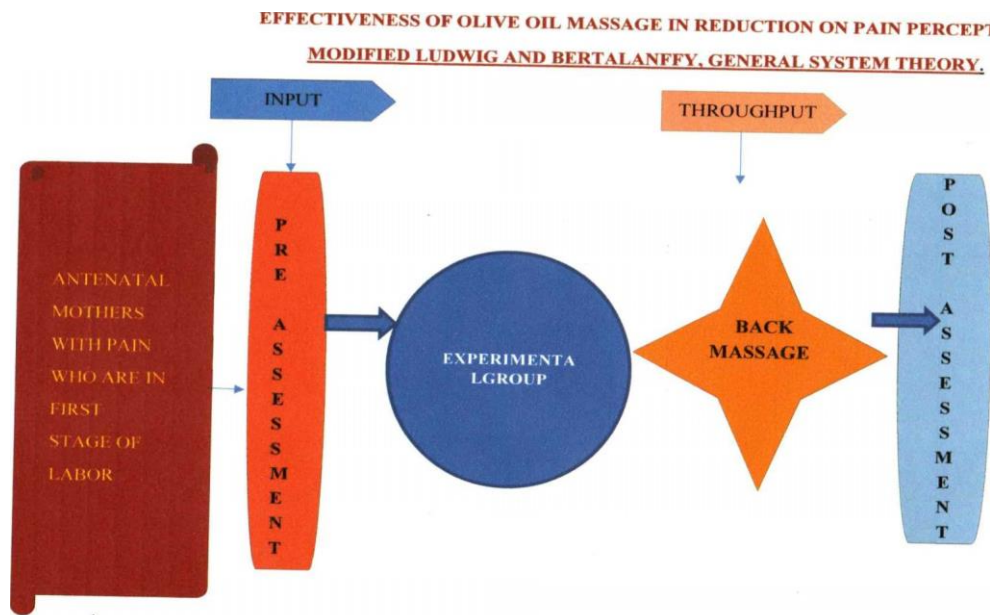
As a biologist Von Bertalanffy knew that such an assumption is simply impossible for most practical phenomena. Organisms are open systems they cannot survive with continuously exchanging matter and energy with the environment. The peculiarity of the open systems is that interact with other systems outside of themselves. This interaction has two components:

Input: what enters the system from outside.

Output: that what leaves the system for the environment.

Input Refers to any form of information, energy or material that enters a system or expended in its operation to achieve output or a result. In this study input refers to the selected demographic variable (Age, religion, educational qualification, family income, residential status, type of family).

Through put Is a process that converts the input into a final product or outcome. This study plans for intervention of providing the back massage with olive oil on reduction on pain perception. Output: An output is final product provided by a system and adaptive responses in promotion of comfort and reduction on pain perception.

EFFECTIVENESS OF OLIVE OIL MASSAGE IN REDUCTION ON PAIN PERCEPT
MODIFIED LUDWIG AND BERTALANFFY, GENERAL SYSTEM THEORY.

REVIEW OF LITERATURE

The literature directs the researcher in designing the study and interpreting the outcomes. The purpose of review of literature is the identification, selection, critical analysis and reporting of existing information on the problem chosen for the study.

Review of literature helps to know what is already known and helps in developing a broad conceptual content into which the research problem will fit in. Main goal is to develop a sound study that will contribute to further knowledge in development of nursing theory, education, practice, and research.

Literature review related to the study:
1. Labor pain and its perception
2. Factors influencing labor pain.
3. Massage in labor pain
4. Effectiveness of Back massage on Labor pain with olive oil.

RESEARCH METHODOLOGY

Research methodology includes the research design, variables of the study, setting, population, sample, criteria for sample selection, sampling technique, sample size, development, and description of the tool, scoring procedures, content validity, pilot study, reliability and procedure for data collection and plan for statistical data analysis.

Research approach

A quantitative evaluative research approach using pre-assessment and post assessment was adopted for this study to accomplish the objectives.

Research Design

	GROUP	PRE-TEST	INTERVENTION	POST TEST
R	**EXPERIMENTAL GROUP**	01	X	02
R	**CONTROL GROUP**	03		04

1. R-Randomization in selecting samples.
2. Ol- Assessment of pre-test level of labor pain of antenatal mothers in experimental group
3. 02-Assessment of post-test level of labor pain of antenatal mothers in experimental group
4. X- Administration of olive oil to experimental group
5. 03- Assessment of pre-test level of labor pain of antenatal mothers in control group
6. 04-Assessment of post-test level of labor pain of antenatal mothers in control group

Study Settings

The study was conducted at the labor ward at Maternity Wing Sangareddy Hospital, and the target population for the study was antenatal mother during latent phase of first stage in labor. The study sample comprises of all the antenatal mothers who are in the latent phase of first stage of labor at the labor ward maternity wings of sangareddy hospital, who fulfill the inclusive criteria. The sample size for the study is 60, Out of which 30 samples were assigned experimental group and 30 samples were assigned as control group.

Experimental group

All antenatal mothers who are in the latent phase of first stage of labor are selected. Back massage is provided for 5 minutes with 2ml olive oil to antenatal mothers inside lying position.

Inclusion criteria:
I. AII the antenatal mothers.
1. All antenatal women who are having back pain in latent phase, first stage of labor.
2. All antenatal women's available during the period of data collection period.
3. Antenatal Women who are willing to participate in the study.
4. Antenatal Women who are alert conscious and cooperative.

Exclusion criteria:
1. Antenatal women who are on epidural injections.

2. All antenatal women with complicated pregnancy like obstructed labor, multiple pregnancy and pre- Tenn labor, eclampsia.
3. Antenatal women with anatomical deformities of the spine.

Research variables
**Independent Variable:** Back massage with olive oil

Dependent Variable: pain level of antenatal women.

Description of tool consists of following sections:

Section A: A structured questionnaire was used to gather demographic data of antenatal mother consists of Age, religion, education, occupation, total income, type of family, place of living, number of pregnancies, previous knowledge regarding olive oil massage.

Section B: it consists of numeric pain assessment scale used by the antenatal mothers who are in first stage of labor to denote the level of pain experienced during the labor.

The scale is arranged in numbers from zero (0) to ten (10) and according to the level of pain experienced by the antenatal mothers.

0-10 NUMERIC PAIN RATING SCALE
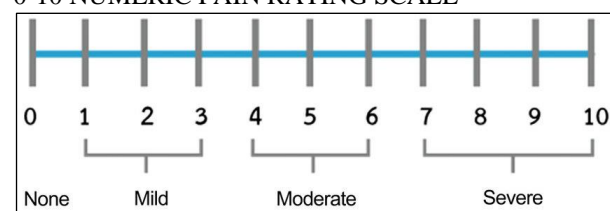
Scoring interpretation:

Level of pain	score
No pain	**0**
Mild	**1-3**
Moderate	**4-6**
Severe	**7-10**

Reliability of the tool

After pilot study reliability of the tool was assessed and its correlation coefficient r — value is (0.9). There is a positive correlation coefficient is extremely high and it is adequate tool for assessing effectiveness of back massage during first stage of labor among antenatal mothers admitted in labor ward, Sangareddy Hospital.

Phase I: Pre assessment

The investigator established a good rapport by explaining the purpose of the study to the antenatal mothers who were in the first stage of labor. The investigator assessed the pain perception among antenatal mothers with numeric pain rating scale during the first stage of labor.

Phase II: After assessing the pretest, the investigator took olive oil and gave back massage to the antenatal mothers in experimental group who are in first stage of labor. Mothers were in lateral position and whole back massage and sacral massage was done for reduction on pain perception.

Phase III: Pain perception was assessed with numeric pain rating scale immediately, and the effectiveness of intervention was assessed in experimental group and was compared with the control group.

Intervention protocol

	Experimental group	**Control group**
Place	Labor ward	Labor ward
Dose	2 ml of olive oil	
Duration	5 minutes	
Administered by	The investigator	
Recipients	Antenatal mothers who are in latent phase first in stage of labor	Antenatal mothers who are in latent Phase first in stage of labor

Olive oil back massage was done in following steps:
1. Put the mother in left lateral position.
2. Make sure that hands are warm and flexible.
3. Take 2 ml of olive oil.
4. Place palmer aspect of hand on the mother hip with fingertips face upward.
5. Move both hands (palmer aspect) simultaneously toward the lateral aspect and move in the upward direction till TIO level and slowly come down.
6. Repeat these strokes.
7. Work with thumb on the sacral area by using the ball of thumb and short rapid strokes from sacral region to TIO level of back.
8. Finish the back massage by giving simple lateral stroke by using fingertips.
9. The investigator conducted the pilot study in labor ward hospital Sangareddy. The sample size for the pilot study was 6 in the olive oil group and 6 in the control group. The study was found to be feasible and practical, data analyzed were done using descriptive and inferential statistics.

Data Analysis

The data were analyzed using descriptive statistics such as Mean, Standard deviation, Frequency, Percentage, and inferential statistics such as Paired 't' test, unpaired 't't'test and Chi square test.

METHOD OF DATA ANALYSIS

The proposed plan to analyze the data is with the help of descriptive and inferential statistics. Mean standard deviation, standard error and paired t test will be computed from raw scores obtained in the pretest and posttest.

Sl. N0	STATISTICAL METHOD	OBJECTIVES
1.	**Descriptive statistics:** **Frequency & percentage**	**Assess the socio demographic.** **variables of antenatal mother**
2.	**Descriptive statistics:** **Mean, standard deviation,** **frequencies, percentage**	**To assess the pre & posttest level of pain during first stage of labor among ante natal mother**
3.	**Inferential statistics:** **Paired 't' test,** **chi square test**	**To determine the effectiveness of olive oil massage on reduction of pain among ante natal mother in experimental group** **To find the association between the pretest and post level of pain during first stage of labor among ante natal** **mother with their selected demographic variable in experimental group.**

ANALYSIS AND INTERPRETATION OF DATA

Data analysis and interpretation of data obtained from 60 antenatal mothers those who are admitted in sangareddy hospital, Analysis of data can be defined as the systematic organization and synthesis of research and the testing of the research hypothesis using those data. To summarize and organize the collected data in an intelligible form, the data was analyzed based on

the objectives of the study by using descriptive and inferential statistics.

Objectives of the study
1. To assess the level of back pain among antenatal women during first stage of labor before interventions in experimental group and control group.
2. To apply olive oil massage on antenatal women during first stage of labor in experimental group.
3. To assess the effectiveness of olive oil massage among antenatal women during first stage of labor in experimental group
4. To find the association between the pre-test and posttest level of back pain among antenatal women's during first stage of labor with their selected demographic variable in the experimental group.

Hypotheses
HI: There will be a significant reduction in posttest level of pain among antenatal women during first stage of labor in experimental group.

H2: There will be a significant difference in the post test level of pain among antenatal women during first stage of labor in experimental and control group.

H3: There will be a significant association between pretest and post level of pain among antenatal women during first stage of labor with their selected demographic variable in experimental group. The data was analyzed and presented under the following sections.

Section A: assess the demographic variable among antenatal mothers in experimental and control group.

Section B: Assess the pretest and post level of labor pain among antenatal mothers in both experimental and control group.

Section C: comparison of pretest and post lest level of pain among antenatal mothers in both experimental and control group.

Section D: Association of pre-test and post pain score among antenatal mothers those who are admitted in labor room with selected demographic variables in experimental group.

Section-A:

Table 1: Frequency and percentage distribution of Antenatal mother according to their Age n=60

Age in years	Experimental Group(n=30)		Control group(n=30)	
	Frequency	Percentage	Frequency	Percentage
18-22years	17	56.7	18	60.0
23-27years	12	40.0	11	36.7
28-32 years	1	3.3	1	3.3
Above 33 years	0	0	0	0
Total	30	100	30	100

The above table shows that out of 30 samples in experimental group majority of the sample 7(56.7%) are in age group 18-22 years and only 01 (3.3%) were in in age. group of 28-32 years. In control group, most of them 18(60.0%) were in age group 18-22 years and only 1(3.3%) were in age group of 28-32 years and no sample was found in above 33 years of age in both control and experimental group.
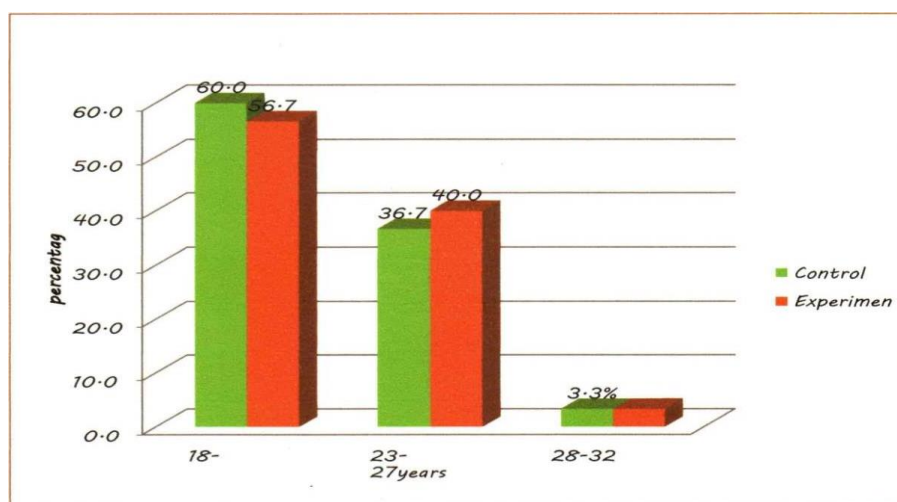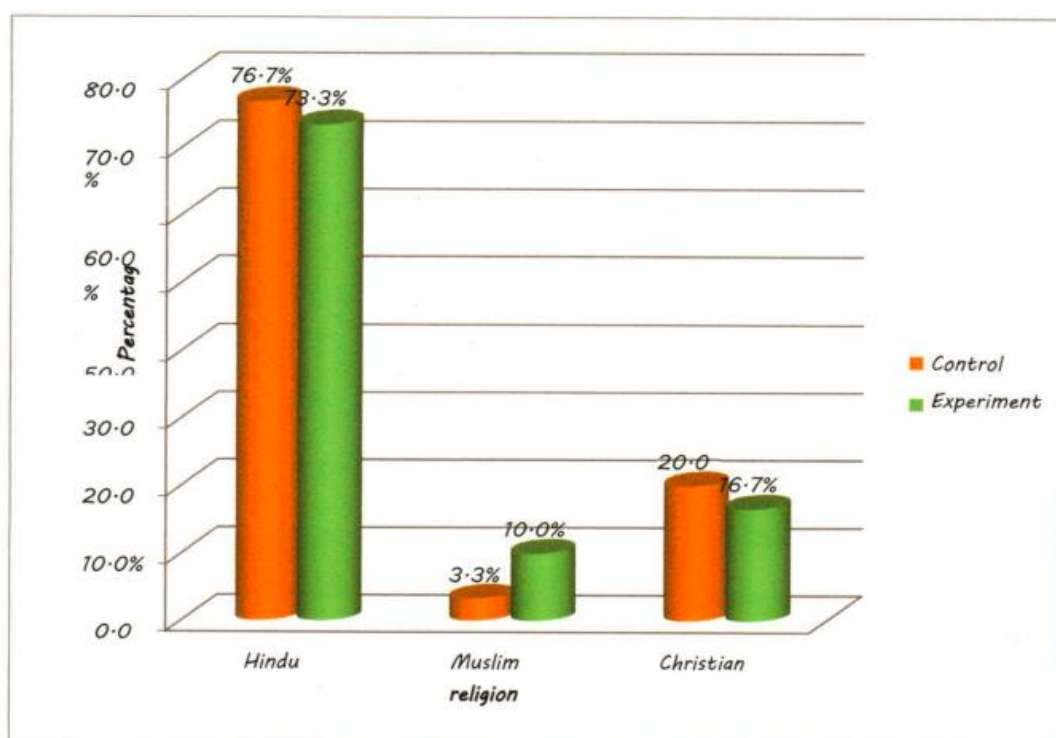

Chart 1: Frequency and percentage distribution of Antenatal Mothers according to Age, n=30+30

Table 2: Frequency and percentage distribution Atnernatal mothers according to their Religion, N=60

Religion	Experimental Group (n=30)		Control group (n=30)	
	Frequency	Percentage	Frequency	Percentage
Hindu	22	73.3	23	76.7
Muslim	3	10.0	1	3.3
Christian	5	16.7	6	20.0
Others	0	0		
Total	30	100	30	100

The above table shows that out of 30 sample in experimental group majority of the sample 22(73.3%) are Hindu and only 3 (10.0%) are Muslim similarly in control group majority of them 23 (76.7%) are Hindu and only 01 (3.3%) are Muslim and no sample was found from other religion in both control and experimental group.

Chart 2: Frequency and Percentage distribution Antenatal mother according to their Religion, n=30+30

Table 3: **Frequency and percentage distribution Atnernatal mothers according to their Eduction, n=60**

Education	Experimental group (n=30)		Control Group (n=30)	
	Frequency	Percentage	Frequency	Percentage
Nonformal education	0		0	
Primary Education	6	20.0	3	10.0
Secondary Education	9	30.0	13	43.3
Intermediate	11	36.7	11	36.7
Postgraduate & above	4	13.3	3	10.0
Total	30	100	30	100

The above table shows that out of 30 sample in experimental group majority of the sample I (36.7%) are having intermediate education and only 04(13.3%) are having post-graduation or above education similarly in control group majority of them (36.7%) are having intermediate education and only 03(10.0%) are having post-graduation or above education and no sample was found under non formal education in both control and experimental group.
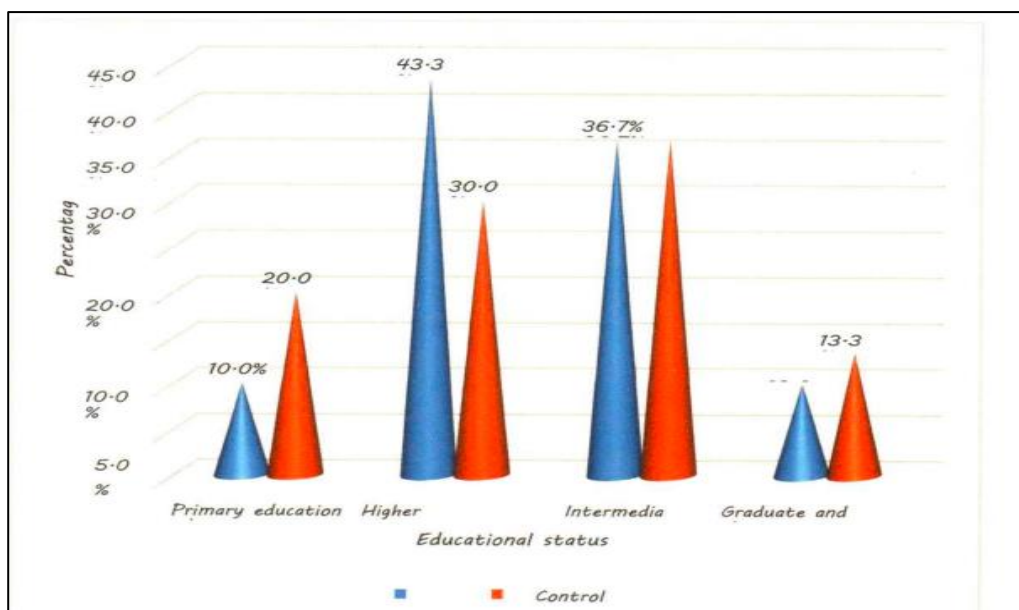
Chart 3: Frequency and Percentage distribution Antenatal mother according to their Education, n=30+30

Table 4: Frequency and percentage distribution Atnernatal mothers according to their Occupation, n=60

Occupation	Experimental Group (n=30)		Control Group (n=30)	
	Frequency	Percentage	Frequency	Percentage
Home Maker	18	60.0	18	60.0
Daily wages	2	6.7	2	6.7
Self-Employee	2	6.7	5	16.7
Govt Employee	2	6.7	0	0
Private Employee	6	20.0	5	16.7
Total	30	100	30	100

The above table shows that out of 30 sample in experimental group majority of the sample 18(60.0%) are home maker and only 02(6.7 %) are daily wage, self-employed, Govt Employee similarly in control group majority of them 18(60.0%) are home maker and only 02(6.7%) are daily wages.
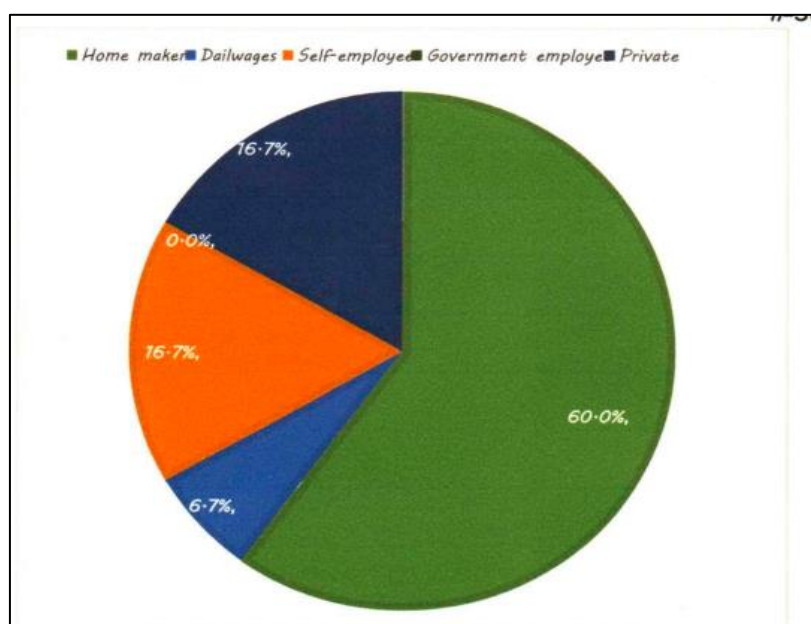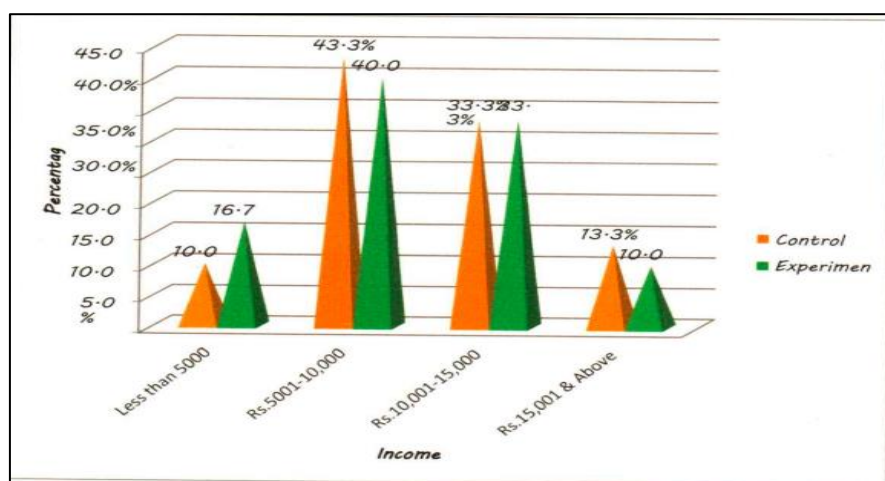

Chart 4: Frequency and Percentage distribution Antenatal mother according to their Occupation, n=30+30

Table 5: Frequency and percentage distribution Atnernatal mothers according to their Income, n=60

Income	Experimental group n=30		Control Group (n=30)	
	Frequency	Percentage	Frequency	Percentage
Less than Rs5000	5	16.7	3	10.0
Rs 5001- 10000	12	40.0	13	43.3
Rs 10001- 15000	10	33.3	10	33.3
More than Rs15000	3	10.0	4	13.3
Total	30	100	30	100

The above table shows that out of 30 sample in experimental group majority of the sample 12(40.0%) are having monthly income in between 5001-1000 and only 3(10.0%) having monthly income more than Rs 15000 whereas in control group majority of them 13(43.3%) are having monthly income in between 5001-1000 and only 3(10.0%) having monthly income less than Rs 5000 Income.

Chart 5: Frequency and Percentage distribution Antenatal mother according to their Income

Table 6: Frequency and percentage distribution Atnernatal mothers according to their Type of Family, n=60

Type of family	Experimental Group (n=30)		Control Group (n=30)	
	Frequency	Percentage	Frequency	Percentage
Joint family	9	30.0	11	36.7
Nuclear family	12	40.0	12	40.0
Extended family	9	30.0	7	23.3
TOTAL	30	100	30	100

The above table shows that out of 30 sample in experimental group majority of the sample 12(40.0%) are from nuclear family and only 09(30.0%) are from joint family and extended family whereas in control group majority of them 12 (40.0%) are from nuclear family and only 07(23.3%) are extended family.
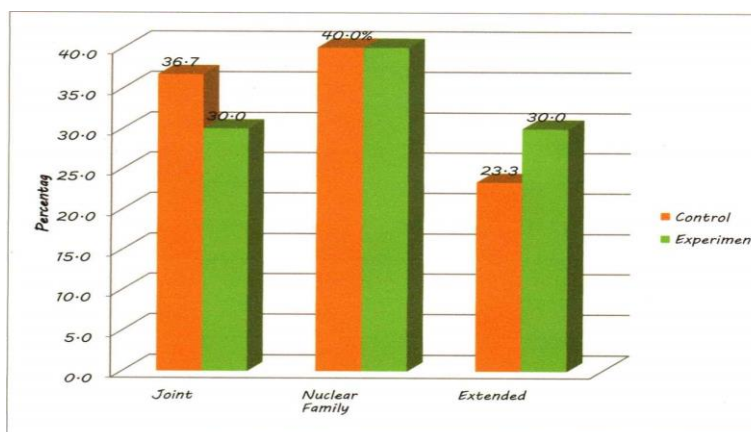

Chart 6: Frequency & Percentage distribution Antenatal mother according to their Type Family

Table 7: Frequency and percentage distribution Atnernatal mothers according to their Type of Family, 60

Place of living	Experimental Group (n=30)		Control Group (n=30)	
	Frequency	Percentage	Frequency	Percentage
Rural area	20	66.7	20	66.7
Urban area	10	33.3	10	33.3
TOTAL	30	100	30	100

The above table shows that out of 30 sample in experimental group majority of the sample 20(66.7%) are from rural area and only 10(33.3%) are from urban

area similarly in control group majority of them 20(66.7%) are from rural area and only 10(33.3%) are from urban area.
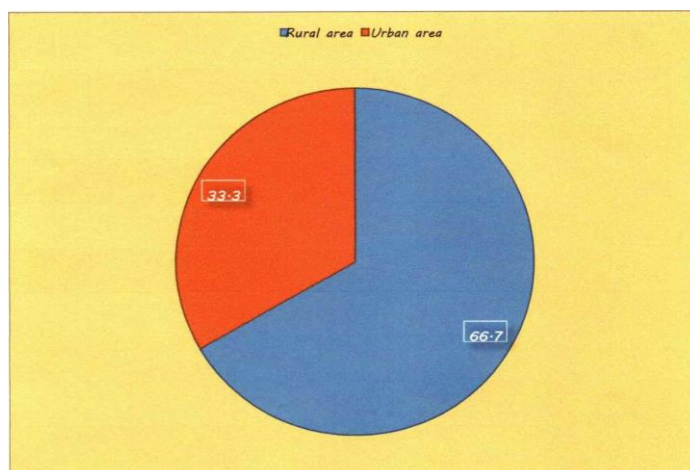
Chart 7: Frequency & Percentage distribution Antenatal mother according to their Place of Living, N=30+30

Table 8: Frequency and percentage distribution Atnernatal mothers according to their No of Pregnancies, n=60

Number of pregnancies	Experimental Group (n=30)		Control Group (n=30)	
	Frequency	Percentage	Frequency	Percentage
First	25	83.3%	27	900%
Second	5	16-7%	3	70-0%
Third	0	0	0	0
Four or more	0	0	0	0
TOTAL	30	100	30	100

The above table shows that out of 30 sample in experimental group majority of the sample 25(83.3%) were primi gravida and only 5(16.7%) are second gravid

whereas in control group majority of them 27(90%) are primi gravida and only 3(10.0%) are second gravida.

Chart 8: Frequency & Percentage distribution Antenatal mother according to their No of Pregnancies, n= 30+30

Table 9: Frequency and percentage distribution Atnernatal mothers according to their awareness about message, n=60

Have you ever had a massage before	Experimental group(n=30)		Control group(n=30)	
	Frequency	Percentage	Frequency	Percentage
Yes	14	46.7	20	66.7
No	16	53.3	10	33.3
TOTAL	30	100	30	100

The above table shows that out of 30 sample in experimental group majority of the sample 16(53.3%) are aware about massage and only 14(46.7%) are not experienced massage whereas in control group majority of them 20(66.7%) are aware about massage and only 10(33.3%) are not experienced massage.
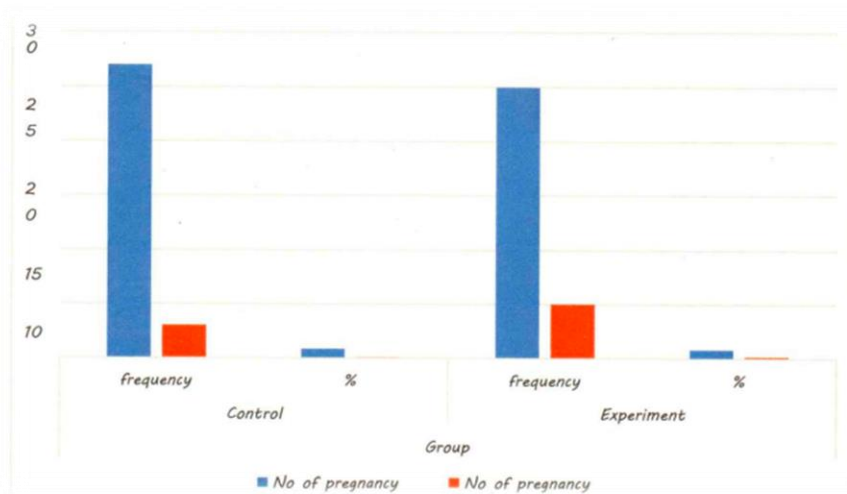

Chart 9: Frequency & Percentage distribution Antenatal mother according to their awareness about message, n= 30+30

Table 10: Frequency and percentage distribution Atnernatal mothers according to their awareness about Olive Oil Message, n=30

Knowledge on Olive oil Massage?	Experimental group(n=30)		Control Group (n=30)	
	Frequency	Percentage	Frequency	Percentage
Yes	6	20.0	4	13.3
No	24	80.0	26	86.7
TOTAL	30	100	30	100

The above table shows that out of 30 sample in experimental group majority of the sample 24(80.0%) are not aware about Olive oil massage and only 6(20.0%) are aware of olive oil massage whereas in control group majority of them 26(86.7%) are not aware about Olive oil massage and only 4(13.3%) are aware of olive oil massage.

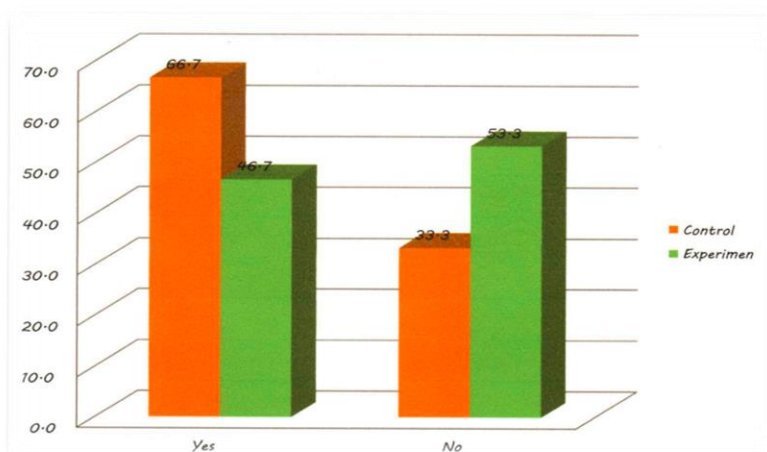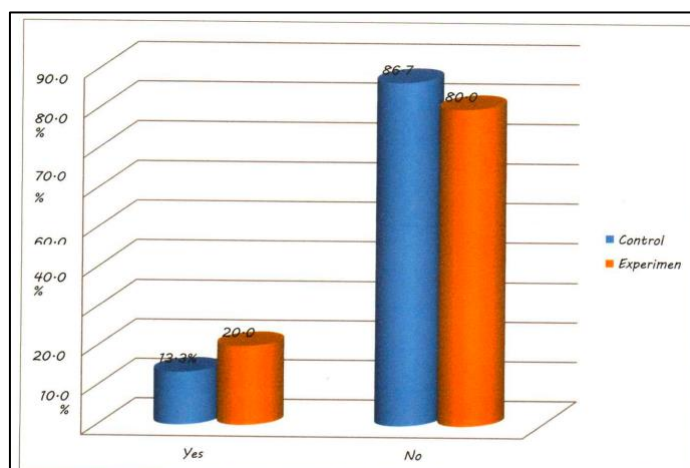**Chart 10: Frequency & Percentage distribution Antenatal mother according to their awareness about message, n= 30+30**

SECTION – B

Comparison of Pretest and posttest pain perception level among antenatal mother in Control and experimental group

Table 11: Frequency and percentage distribution of Antenatal mother according to their Pretest and posttest pain perception level, (n=30+30)

Level of Pain	Pretest			
	Experimental (n=30)		Control (n=30)	
	Frequency	Percentage	Frequency	Percentage
No pain	0	0	0	0
Mild pain	4	13.3	5	16.7
Moderate pain	13	43.3	11	36.7
Severe pain	13	43.3	14	46.7
TOTAL	30	100	30	100

The above table shows that in pretest group out of 30 sample in experimental group majority of the sample 13(43.3%) are reporting moderate to severe pain and only 4(13.3%) are reporting mild pain whereas in control group majority of them 14(46.7%) %) are reporting severe pain and only 5(16.7%) are reporting mild pain.

Table 12: Frequency and percentage distribution of Antenatal mother according to their posttest pain perception level, (n=60)

Level of Pain	Post Test			
	Experimental (n=30)		Control (n=30)	
	Frequency	Percentage	Frequency	Percentage
No pain	0	0	0	0
Mild pain	16	53.3	6	20.0
Moderate pain	11	36.7	8	26.7
Severe pain	3	10.0	16	53.3
TOTAL	30	100	30	IOO

The above table shows that in posttest test group out of 30 sample in experimental group majority of the sample 16(53.3%) are reporting mild pain and only 3(10.0%) are reporting severe pain whereas in control group majority of them 16(53.3%) are reporting severe pain and only 6(20.0%) are reporting mild.
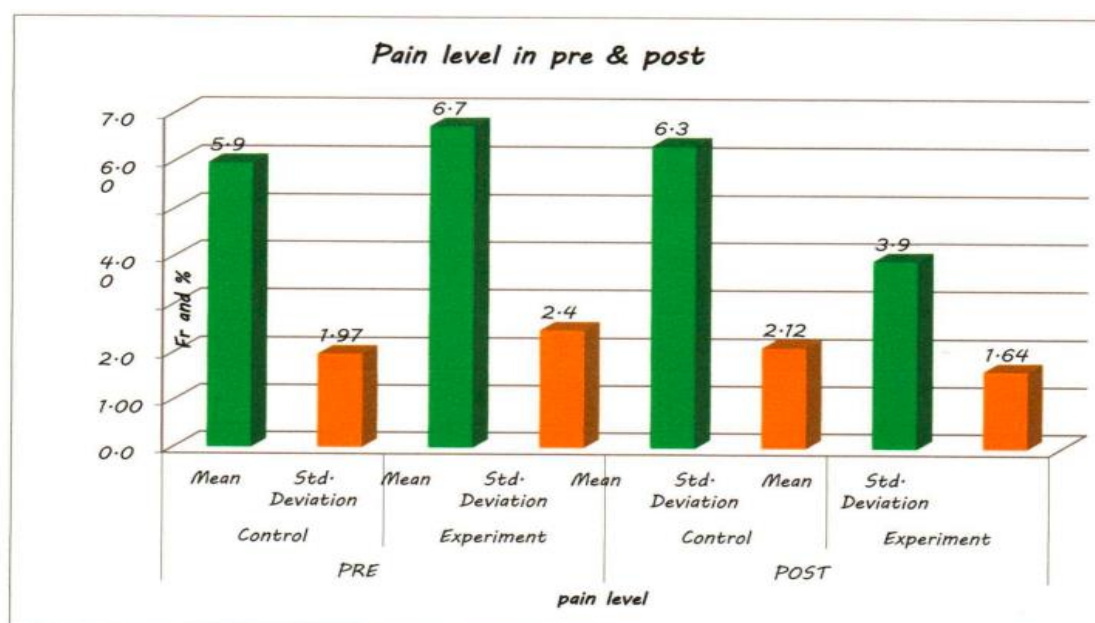

Chart 11: Frequency & Percentage distribution Antenatal mother according to their Pretest and Posttest pain perception level, n= 30+30

SECTION – C

Table 12: Mean, standard deviation and paired 't' test values of Pretest and posttest pain perception level among antenatal mother in experimental and control group

group	pain level	Mean	Standard deviation	Paired t-test	Table values
Experimental (n=30)	Pretest	6.733	2.476	8.764	t = 205 dF=29 p<005
	Post test	3.933	1.638		
Control	Pretest	5.9667	1.973	1.613	t = 205 d&29 p<O.05
	Post test	6.333	2.122		

The above table reveals that in Experimental group the pain level mothers assessment is reduced when compared with the pretest pain level among antenatal mother in experimental group. The mean score of pre assessment is 6.733 and post assessment is 3.933 in experimental group. This shows the t value is 8.764 with standard deviation 1.638. The calculated t value is greater than table value 2.05 at df=29 is statistically significant at p<0.05.

Whereas in Control group the mean score of pre assessment is 5.966 and post assessment is 6.333 in control group. This shows the t value is 1.613 with standard deviation 2.122 in posttest. The calculated t value less than table value 2.05 at df=29 is statistically not significant at p<0.05

SECTION – D

Association between the pretest post-test levels of pain with their selected socio-demographic variables among antenatal women in labor

Table-13: Association between the pretest levels of pain with their selected Scio-demographic variables among antenatal women in labor in experimental group, n=60

S. No	Demographic variable	No pain mild				moderate		Severe		Chi square value	Table value	Inference
		fr	%	Fr	%	fr	%	fr	%			
1	**Age in year**											
	18-22	0	0	3	17.6%	8	47.1%	6	35.3%	9.276 df=4	chi square Table value 9-49	NS
	23-27	0	0	0	0.0%	5	41.7%	7	58.3%			
	28-32	0	0	1	100.0	o	0.0%	o	0.0%			
	above 33	0	0	0	0	0	0	0	0			
2	**Religion**											
	Hindu	0	0	2	9.1%	12	54.5%	8	36.4%	4.87 df=4	chi square Table value 9-49	NS
	Muslim	0	0	1	33.3%	o	0.0%	2	66.7%			
	Christian	0	0	1	20.0%	1	20.0%	3	60.0%			
	Others	0	0	0	0	0	0	0	0			
3	**Education**											
	non formal	0	0	0	0	0	0	0		2-200	chi square Table value 72-59	NS
	Primary education	0	0	1	16.7%	3	50.0%	2	33.3%			
	Secondary	0	0	2	22.2%	4	44.4%	3	33.3%			
	Intermediate	0	0	1	9.1%	4	36.4%	6	54.5%			
	post-graduation	0	0	0	0.0%	2	50.0%	2	50.0%			
4	**Occupation**											
	Home maker	0	0	3	16.7%	7	38.9%	8	44.4%	5.449 Df=8	Alpha =2-306 chi square Table value 75-57	NS
	Daily wages	0	0	0	0.0%	1	50.0%	1	50.0%			
	Self-employee	0	0	0	0.0%	1	50.0%	1	50.0%			
	Government employee	0	0	1	50.0%	0	0.0%	1	50.0%			
	Private employee	0	0	0	0.0%	4	66.7%	2	33.3%			
5	**Income**											
	Less than 5000	0	0	2	40.0%	2	40.0%	1	20.0%	5.808 dF=6	chi square Table value 12-59	NS
	Rs.5001-10,000	0	0	2	16.7%	5	41.7%	5	41.7%			
	Rs.10,001-15,000	0	0	o	0.0%	5	50.0%	5	50.0%			
	Rs.15,001 & above	0	0	o	0.0%		33.3%	2	66.7%			
6	**Type of family**											
	Joint Family	0	0	o	0.0%	5	55.6%	4	44.4%	3.782		

S. No	Demographic variable	No pain mild				moderate		Severe		Chi square value	Table value	Inference
	Nuclear Family	0	0	2	16.7%	6	50.0%	4	33.3%		chi square Table value 9-49	NS
	Extended family	0	0	2	22.2%	2	22.2%	5	55.6%	df=4		
7	**Place of Living**											
	Rural area	0	0	3	15.0%	8	40.0%	9	45.0%	3.17 df=2	Chisqr tabel value 5.99	NS
	Urban area	0	0	1	10.0%	5	50.0%	4	40.0%			
8	**No of Pregnancy**											
	First	0	0	3	11.1%	5	18.5%	19	70.4%	7.407	chi square Table value 5.99	S
	Second	0	0	2	66.7%	1	33.3%	0	0.0%	df=2		
	Third	0	0	0	0	0	0	0	0			
9	**Have you ever had a message before**											
	Yes	0	0	2	14.3%	6	42.9%	6	42.9%	.021 df=2	Chisqr tabel value 5.99	NS
	No	0	0	2	12.5%	7	43.8%	7	43.8%			
10	**Previous knowledge on olive oil message**											
	Yes	0	0	0	0.0%	4	66.7%	2	33.3%	2.115 df=2	Chisqr tabel value 5.99	NS
	No	0	0	4	16.7%	9	37.5%	11	45.8%			
11	**If yes source of knowledge**											
	Health Professional	0	0	4	16.7%	9	37.5%	11	45.8%	4.87 df=4	Chisqr tabel value 9.49	NS
	Mass Media	0	0	0	0.0%	3	75.0%	1	25.0%			
	Friends	0	0	0	0	1	50.0%	1	50.0%			
	Parents	0	0	0	0	0	0	0	0			

Table-14: Association between the posttest levels of pain with their selected Scio-demographic variables among antenatal women in labor in experimental group, n=60

S.no	Demographic variable	No pain mild				moderate		Severe		Chi square value	Table value	Inference
		fr	%	Fr	%	fr	%	fr	%			
1	**Age in year**											
	18-22	0	0	9	52.9%	7	41.2%	1	5.9%	1.853 df=4	chi square Table value 9-49	
	23-27	0	0	6	50.0%	4	33.3%	2	16.7%			
	28-32	0	0	1	100.0%	0	0.0%	0	0.0%			NS
	above 33	0	0	0	0	0	0	0	0			
2	**Religion**											
	Hindu	0	0	14	63.6%	7	31.8%	1	4.5%	5.385 df=4	chi square Table value 9-49	
	Muslim	0	0	1	33.3%	1	33.3%	1	33.3%			
	Christian	0	0	1	20.0%	3	60.0%	1	20.0%			NS
	Others	0	0	0	0	0	0	0	0			
3	**Education**											
	non formal	0	0	0	0	0	0	0	0		chi square Table value 12.59	
	Primary education	0	0	4	66.7%	1	16.7%	1	16.7%	2.139 df=6		
	Secondary	0	0	5	55.6%	3	33.3%	1	11.1%			NS
	Intermediate	0	0	5	45.5%	5	45.5%	1	9.1%			
	post-graduation	0	0	2	50.0%	2	50.0%	0	0.0%			
4	**Occupation**											
	Home maker	0	0	10	55.6%	6	33.3%	2	11.1%		chi square Table value 15.51	
	Daily wages	0	0	1	50.0%	1	50.0%	0	0.0%	5.87 df=8		NS
	Self-employee	0	0	0	50.0%	1	50.0%	1	50.0%			
	Govt Employee	0	0	1	50.0%	1	50.0%	0	0.0%			
	Private Employee	0	0	4	66.7%	2	33.3%	0	0.0%			
5	**Income**											
	Less than 5000	0	0	4	80.0%	1	20.0%	0	0.0%		chi square Table value 12.59	
	Rs 5001-10,000	0	0	6	50.0%	5	41.7%	1	8.3%	3.605 df=6		NS
	Rs 10,001 -15,000	0	0	5	50.0%	4	40.0%	1	10.0%			
	Above Rs 15,001	0	0	1	33.3%	1	33.3%	1	33.3%			
6	**Type of Family**											
	Joint Family	0	0	4	44.4%	5	55.6%	0	0.0%		chi square Table value 9.49	
	Nuclear Family	0	0	7	58.3%	4	33.3%	1	8.3%	3.9		NS

S.no	Demographic variable	No pain mild				moderate		Severe		Chi square value	Table value	Inference
	Extended Family	0	0	5	55.6%	2	22.2%	2	22.2%	df=4		
7	**Place of Living**											
	Rural area	0	0	10	50.0%	7	35.0%	3	15.0%	1.67	chi square Table value 5.99	
	Urban area	0	0	6	60.0%	4	40.0%	0	0.0%	df=2		NS
8	**No of Pregnancy**											
	First	0	0	8	32.0%	6	24.0%	11	44.0%	7.846	chi square Table value 5.99	
	Second	0	0	5	100.0%	0	0.0%	0	0.0%	df=2		NS
	Third	0	0	0	0	0	0%	0	0.0%			
9	**Have you ever had a message**											
	Yes	0	0	7	50.0%	6	42.9%	1	7.1%	0.543	chi square Table value 5.99	
	No	0	0	9	56.3%	5	31.3%	2	12.5%	df=2		NS
10	**Previous Knowledge on Olive oil message**											
	Yes	0	0	3	50.0%	3	50.0%	0	0.0%	1.129	chi square Table value 9.49	
	No	0	0	13	54.2%	8	33.3%	3	12.5%	df=2		NS
11	**Source of knowledge**											
	Health Professional	0	0	13	54.2%	8	33.3%	3	12.5%		chi square Table value 9.49	
	Mass Media	0	0	2	40.0%	3	60.0%	0	0.0%	2.510		NS
	Friends	0	0	1	100.0%	0	0.0%	0	0.0%	df=4		
	Parents	0	0	0	0	0	0	0	0			

NS= Not Significant
S= Significant.

The above table represents that demographic variable such as age, religion, occupation, education, income, type of family, previous knowledge about olive oil application had no association with pain level of antenatal women whereas the demographic variables such as no of pregnancy had an association with pain level of women.

MAJOR FINDINGS OF THE STUDY:
Findings related to demographic variables:
1. Majority 17(56.7%) were in age group 18-22 years and only 01 (3.3%) were in in age group of 28-32 years in experimental group whereas in control group majority of them 18(60.0%) were in age group 18-22 years and only 01 (3.3%) were in in age group of 28-32 years and no sample was found in above 33years of age in both control and experimental group.
2. Majority of the sample 22(73.3%) are Hindu and only 03(10.0%)are Muslim in experimental group. Similarly, in control group majority of them 23 (76.7%) are Hindu and only 01(3.3%)are Muslim and no sample was found from other religion in both control and experimental group.
3. Majority of the sample 11(36.7%) are having intermediate education and only 04(13.3 %) are having post-graduation or above education in experimental group similarly in control group majority of them 11 (36.7%) are having intermediate education and only 03(10.0 %) are having post-graduation or above education and no sample was found under non formal education in both control and experimental group.
4. Majority of the sample18(60.0%) are home makers and only 02(6.7 %) are daily wage, self-

employee, Govt Employee in experimental group similarly in control group majority of them 1 8 (60.0%) are home maker and only 02(6.7%)are daily wages.
5. Majority of the sample 12(40.0%) are having monthly income in between 50011000 and only having monthly income more than Rs 15000inexperimental group whereas in control group majority of them 13(43.3%) are having monthly income in between 5001-1000 and only (10.0%)having monthly income less than 5000.
6. Majority of the sample 12(40.0%) are from nuclear family and only 09(30.0 %) are from joint family and extended family experimental group whereas in control group majority of them 12 (40.0%) are from nuclear family and only 07(23.3%)are extended family.
7. Majority of the sample 20(66.7%) are from rural areas and only 10(33.3%) are from urban area experimental group similarly in control group majority of them 20(66.7%) are from rural area and only 0(33.3%) are from urban area.
8. Majority of the sample 25(83.3%) were primi gravida and only 5(16.7%) were second gravida experimental group whereas in control group majority of them 27(90%) were primi gravida and only 3(10.0%) were second gravida.
9. Majority of the sample 24(80.0%) are not aware about Olive oil massage and only 6(20.0%) are aware of olive oil massage experimental group whereas in control group majority of them 26(86.7%) are not aware about Olive oil massage and only 4(13.3%) are aware of olive oil massage.

10. In pretest majority of the sample 13(43.3%) are reporting moderate to severe pain and only 4(13.3%) are reporting mild pain experimental group whereas in control group majority of them 14(46.7%) %) are reporting severe pain and only 5(16.7 %) are reporting mild pain.
11. In posttest majority of the sample 16(53.3%) are reporting mild pain and only 3(10.0%) are reporting severe pain in the experimental group whereas in control group majority of them 16(53.3%) are reporting severe pain and only 6(20.0%) are reporting mild pain.

The above table reveals that the pain level in post assessment is reduced when compared with the pretest pain level among antenatal mothers in experimental group. The mean score of pre assessment is 6.733 and post assessment is 3.933 in experimental group. This shows the mean score of pre assessment is 5.966 and post assessment is 6.333 in control group. This shows that 't' value in control group is 1.613 with df=29 is less than table value 2.05 is statistically not significant p> 0.05. Whereas 't' value in experimental group is 8.764 with df=29. So calculated t value is greater than table value 2.05 is statistically significant p<O.05.

FINDING BASED ON THE OBJECTIVES:
1. To assess the level of back pain among antenatal women during first stage of labor before interventions in experimental group and control group.
2. To apply olive oil massage on antenatal women during first stage of labor in experimental group.
3. To assess the effectiveness of olive oil massage among antenatal women during first stage of labor in experimental group
4. To find the association between the pre-test level of back pain among antenatal women's during first stage of labor with their selected demographic variable in the experimental group.

To assess the level of back pain among antenatal women during first stage of labor before interventions in experimental group and control group.

Data analysis shows in pretest majority of the sample3 (43.3% are reporting moderate to severe pain and only 4(13.3 %) are reporting mild pain experimental group whereas in control group majority of them 14(46.7%) %) are reporting severe pain and only 5(16.7 %) are reporting mild pain.

In posttest majority of the sample 16(53.3%) are reporting mild pain and only 3(10.0 %) are reporting severe pain experimental group whereas in control group majority of them 16(53.3%) are reporting severe pain and only 6(20.0 %) are reporting mild pain

To assess the effectiveness of olive oil massage among antenatal women during first stage of labor in experimental group,

Data analysis shows that the pain level in post assessment is reduced when comparing with the pretest pain level among antenatal mother in experimental group. The mean score of pre assessment is 6.733 and post assessment is 3.933 in experimental group. This shows the mean score of pre assessment is 5.966 and post assessment is. 6.333 in control group. This shows that 't' value in control group is 1.613 with df=29 is less than table value 2.05 is statistically not significant p> 0.05. Whereas 't' value in experimental group is 8.764 with df=29. So calculated t value is greater than table value 2.05 is statistically significant p<0.05.

To find the association between the pre-test and posttest level of back pain among antenatal women's during first stage of labor with their selected demographic variable in the experimental group.

Chi-square value showed that, demographic variable such as Age, education status of family, family income per month, type of family, had no association with knowledge regarding menopause and demographic variable such as occupation and no. of pregnancy had an association with pain level of antenatal women.

Therefore, H3 There will be a significant association between pretest and posttest level of pain among antenatal women during first stage of labor with their selected demographic variable in experimental group such as number of pregnancy and no association between other socio demographic variables such as age, religion, occupation, education, monthly income, type of family.

CONCLUSION
The study was conducted to assess the effectiveness of back massage with olive oil for pain relief among antenatal women during first stage of labor. Pretest and Posttest Pain mean score was 2.8 with standard deviation 1.63 in experimental group. So, the application of olive oil was helpful in reducing labor pain.

NURSING PRACTICE
The women need to be in a safe and supportive environment and an active participant in the health care. The nurse is responsible for developing a plan of care and individualizing that plan of care based on the patient's needs. The in-charge nurses can plan and conduct the health education programs regarding olive oil massage in labor to reduce intensity of labor pain. The nursing personnel can involve the student nurses to practice

administering olive oil for mother in labor pain. The antenatal women can be educated by the nurses or doctors regarding benefits of olive oil massage. Nurses

can focus on complimentary therapies where it can give more comfort to the patients.

Nursing Education

The nurse educators should be taught about massage techniques for reducing labor pain. Educational institutions should arrange seminars and workshops regarding managing labor pain symptoms through massage techniques. Nurses should maintain standards in providing nursing care to ante natal women. She should improve standards of care by updating her knowledge and skills.

Nursing Administration

Nursing administration need to organize service and continuing education programs for all nurses to update their knowledge on management of labor pain through massage technique. The nurse administrator need to organize in-service education and continuing education programs for all nurses to update their knowledge on reduction of mood pattern. The nurse administrator can emphasize the nursing personnel on nursing interventions in reducing labor pain level in a better way. The nurse administrator can provide the training and educational material to her nursing staff. The nurse administrator can plan the workshops and orientation programs regarding various treatment modalities to reduce the labor pain for antenatal mother. The nurse administrator can make arrangement to provide the pamphlets to the antenatal women and family member describing benefit of olive oil massage to reduce labor pain.

Nursing Research

It is essential to conduct research on more activities, teaching, and modalities to enable antenatal women to participate in learning massage technique for managing labor pain. Nursing research is a systematic inquiry that uses disciplined methods to answer questions or solve problems. The goal of nursing research is to develop, refine and expand a body of knowledge. Further studies must be investigating various interventions to reduce labor pain -It is essential to conduct research on more activities like descriptive studies on nurses' knowledge about complimentary therapies. Research may be done continuously to reduce the pain level of antenatal women in labor in non-pharmacological method. Research provide nurses with the credibility to influence decision making and to administer olive oil massage.

RECOMMENDATION

1. A similar study can be conducted in large sample size to generalize the study findings.
2. A comparative study can be conducted on antenatal mother among latent phase and active phase of labor.
3. A similar study can be conducted in different settings and in different socio-economic groups.

LIMITATIONS

1. The researcher needed more cooperation from few illiterate family members due to lack of interest.
2. The researcher needed to apply olive oil massage in some mother due to frequent contraction of some mother.

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