IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 9, Issue 4 Ser. IX (Jul. – Aug. 2020), PP 35-42
www.iosrjournals.org

"A study to evaluate the effectiveness of lavender oil massage on labour pain reduction & level of satisfaction among parturient in selected hospitals at Udaipur, Rajasthan."

Ms. Neetu Maru[1], Mrs. Yashaswini Deepak[2]
(Obstetrics and Gynaecological Department, Geetanjali college of Nursing/Geetanjali University, India)
(Associate professor, Geetanjali college of nursing/Geetanjali university, India)

Abstract:
Background: *Pain in labour is nearly universal experience for child bearing women. Pain and its relief for women in labour has been a subject of interest since the dawn of mankind. Child birth has been associated with pain and throughout history measures had been introduced to help relieve it. Pain can vary during different times in the same labour and during different birth by the same woman. Lavender oil massage therapy has the potential benefits such as decreasing the intensity of pain, relieving the muscle spasm, increasing physical activity, promoting general relaxation and reducing anxiety.*
Materials and methods: *It included the True experimental research approach, randomized pre-test post-test control group design variables under study were lavender oil massage as independent variable, labour pain and level of satisfaction as dependent variable. Research used conceptual framework based on Helping Art of Clinical Nursing Theory by Wiedenbach's in 1964. Selected Hospital of Udaipur city as research setting, total 60 samples, and simple random sampling techniques was used. The nursing intervention was used for this study and tool used for data collection were socio-demographic data and Universal pain scale& the short assessment of patient satisfaction. The data obtained were analysed and interpreted in the light of objectives and hypothesis using both descriptive and inferential statistical in terms of frequency, percentage and chi-square.*
Results: *Result revealed that calculated t value of labour pain (10.48) and level of satisfaction (8.06) is found highly significant at the level of P=0.0001.it shows that there is a significant relationship between effect of lavender oil massage, labour pain & level of satisfaction. Hence research hypothesis H_1 is proved and accepted. In experimental group, the socio-demographic variables such as Age in Years ($\chi 2$=18.02), educational status ($\chi 2$ =26.17), religion($\chi 2$=22.04), area of living ($\chi 2$ =18.25), life style ($\chi 2$ =20.36), food habit ($\chi 2$ =16.54), source of information regarding massage therapy ($\chi 2$ = 19.05)found significant (P=0.05) where as In control Group Age in Years ($\chi 2$=21.09), educational status ($\chi 2$ =24.87), religion($\chi 2$=21.01), area of living($\chi 2$ =19.34), life style ($\chi 2$ =16.44), food habit($\chi 2$ =13.02), source of information regarding massage therapy($\chi 2$ = 19.05)found significant(P=0.05). Hence Research hypothesis $H_2$is accepted.*
Conclusion: *The main focus of a study to evaluate the effectiveness of lavender oil massage on labour pain reduction & level of satisfaction among parturient in selected hospitals. The mean labour pain score among experimental group Mean=7.3 was lower than the mean labour pain score for the control group Mean=9.76 and the calculated 't' value is t= 10.48 greater than the table value& the mean level of satisfaction score among experimental group Mean=3.03 was greater than the mean level of satisfaction score for the control group Mean=1.3 and the calculated 't' value is t=8.06 greater than the table value. The finding shows that lavender oil massage was effective on labour pain reduction and increases the level of satisfaction. Hence, research hypothesis H_1 accepted.*
Keywords: *Evaluate, Effectiveness, Lavender oil, Massage, Labour pain, Satisfaction, Parturient.*

Date of Submission: 01-08-2020 Date of Acceptance: 16-08-2020

I. Introduction

The most ambitious dream of a woman in her life is giving birth. The best part of pregnancy is the thought that there is a little person developing within her child birth is a thrilling, exciting, revealing and life changing experience.[1]A woman having pain during child birth is unique and rememberable event in their life. Labour is a much painful and stressful situation mostly felt higher in primigravida mothers than multiparous.[2]Labour is the physiological process by which foetus, placenta and membranes are expelled through the birth canal after viability (22nd week of pregnancy). Labour may be Spontaneous or induced.[3]

Labour pain is part of a normal process. Although expected during process, it is considered as the most undesirable and unpleasant aspect of the labour experience during childbirth. Labouring women often experience intense pain, uterine contraction resulting in visceral pain. During descent, the foetus head exerts

pressure on the mother's pelvic floor, vagina and perineum causing somatic pain transmitted to the Pudendal nerve. As women's labour progresses, labour pain also increases especially for primiparas. Pain during birth involves two components; the physiologic component – that which includes reception by sensory nerves and transmission to the central nervous system and the psychological compared to other types of pain, labour pain is unique in the sense that is normal and self – limiting can be prepared, and end with a baby 's birth.[4]

II. Material and Methods

True-experimental approach, a sub type of quantitative approach was used for the present study. This approach would help the researcher to evaluate the effectiveness of lavender oil massage on labour pain reduction & level of satisfaction among parturient in selected hospitals at Udaipur, Rajasthan.

Research design –True experimental pre-test post-test control group design.

Research Settings: The study was conducted in the antenatal ward M.B. Govt. hospital Udaipur Rajasthan.

Study duration: February 2020 to March 2020

Sample Size:60 primi Parturients.

Population: The target Accessible population comprised of all Parturients who are admitted in hospitals with first stage of labour pain. In this present study the sample consisted of 60 Parturients,30 each in the experimental group and control group.

Sampling Technique: Simple random sampling technique.

Inclusion criteria:

1.Sample who are willing to participate
2.Sample who have no high-risk condition
3.Sample who can understand Hindi and English
4.Sample who are cooperative
5.Parturients who are available at the time of data collection

Exclusion criteria:

1.Sample age below 20 years
2.Sample planned for any surgical procedure
3.Sample having specific musculoskeletal problem

Procedure Methodology: The researcher adopted a quantitative experimental research approach with True experimental,randomized pre-test, post-test control group design. 60 participants were selected, by using simple random (lottery) sampling technique. Pre-test was done with universal pain scale and the short assessment of patient satisfaction. The average time taken by each participantwas 2 hours & scoring time was 3minutes. Based on pre-test score the lavender oil massage was administered on the lumbosacral region by the researcher to the participants. The post-test was conducted after 2 and half hours of Pre-test.The collected data were analysed based on the above-mentioned objective using the descriptive and inferential statistics.

Statistical analysis: The obtained data were analysed in terms of objectives of the study using descriptive and inferential statistics. The plan for data analysis was as follows Organization of data in master sheet. Obtained data were analysed in terms of frequencies and percentages. Description Statistics: Description of demographic characteristics mean, median, SD and mean percentage is used to describe the area wise pre-test&post-test in experimental and control group of the participant regarding labour pain & level of satisfaction. Inferential Statistics: 't' test is used to find out the effectiveness of lavender oil massage on labour pain reduction and level of satisfaction among Parturients.Chi-square is used to find the Association between pre-test labour pain & level of satisfaction score of experimental group & control group participant with socio-demographic variables.

III. Results

Section A: Level of labour pain and level of satisfaction among experimental & control group.

Section B: Effect of the lavender oil massage therapy in reducing perception of labour pain & increasing level of satisfaction.

Section-A: Level of labour pain and level of satisfaction among experimental & control group

Table 1: Level of labour pain in experimental group

N=30

Level of pain	Pain score	Pre-test	%	Post-test	%
No pain	0	-	-	-	-
Mild pain	1-3	-	-	-	-
Moderate pain	4-6	-	-	8	26.66%
Severe pain	7-9	12	40%	20	66.66%
Worst pain	10	18	60%	2	6.66%

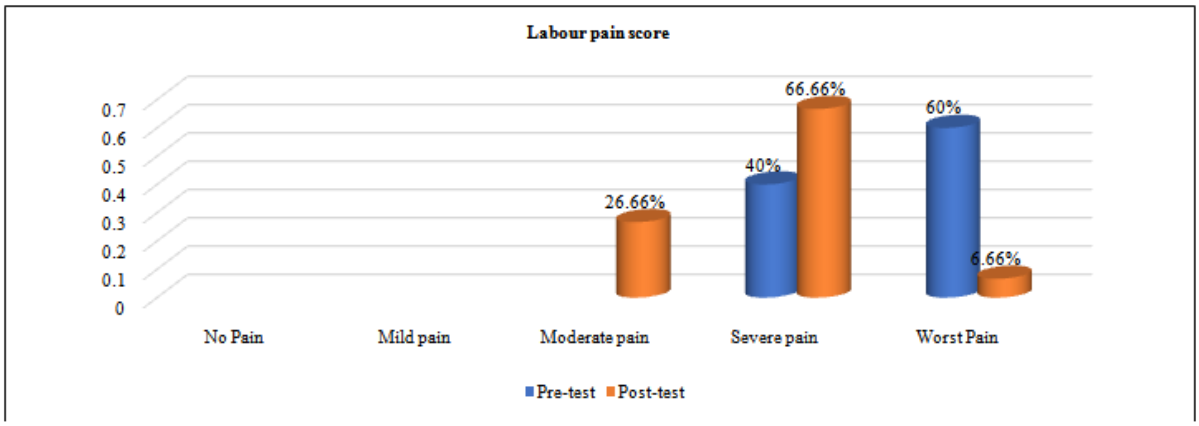

Figure1: Level of labour pain in Experimental Group

Table 1 and Figure 1: projected that level of labour pain in experimental group in this pre-test labour pain score i.e.60% had worst pain and 40% had severe pain & 66.66% participate in post-test had severe pain, 26.66% participate had moderate pain and 6.66%participate had worst pain, respectively. There is a significant difference in level of labour pain. Hence research hypothesis H_1 is accepted.

Table 2: Level of labour pain in control group

N=30

Level of pain	Pain score	Pre-test	%	Post-test	%
No pain	0	-	-	-	-
Mild pain	1-3	-	-	-	-
Moderate pain	4-6	-	-	-	-
Severe pain	7-9	9	30%	7	23.33%
Worst pain	10	21	70%	23	76.66%

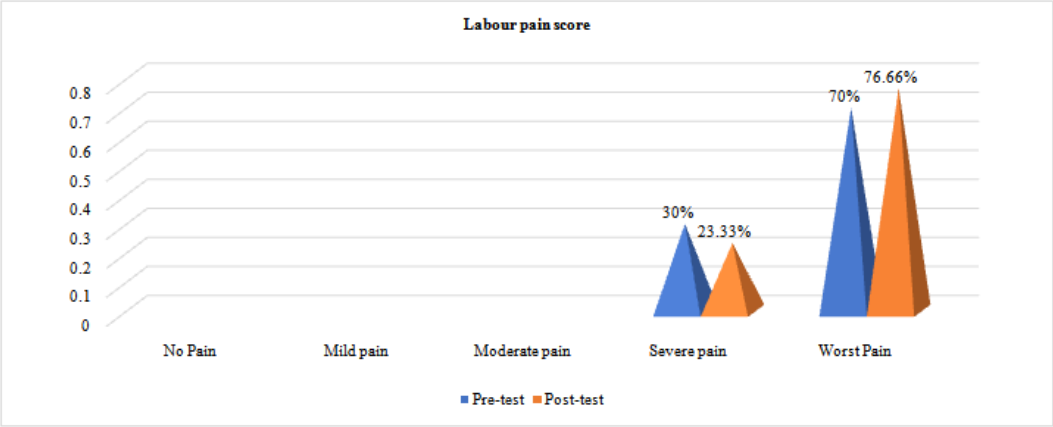

Figure2: Level of labour pain in control Group

Table 2 and Figure 2:projected that level of labour pain in control group in this pre-test labour pain score i.e70% had worst pain and 30% had severe pain &76.66% participate in post-test had worst pain& 23.33% participate had severe pain, respectively. There is no significant difference in level of labour pain. Hence research hypothesis H_1 is not accepted.

Table 3: Level of satisfaction in experimental group

N=30

Level of satisfaction	Satisfaction score	Pre-test	%	Post-test	%
Very satisfied	4	-	-	7	23.33%
Satisfied	3	-	-	18	60%
Neither satisfied nor dissatisfied	2	9	30%	4	13.33%
Dissatisfied	1	19	63.33%	2	6.66%
Very dissatisfied	0	2	6.66%	-	-

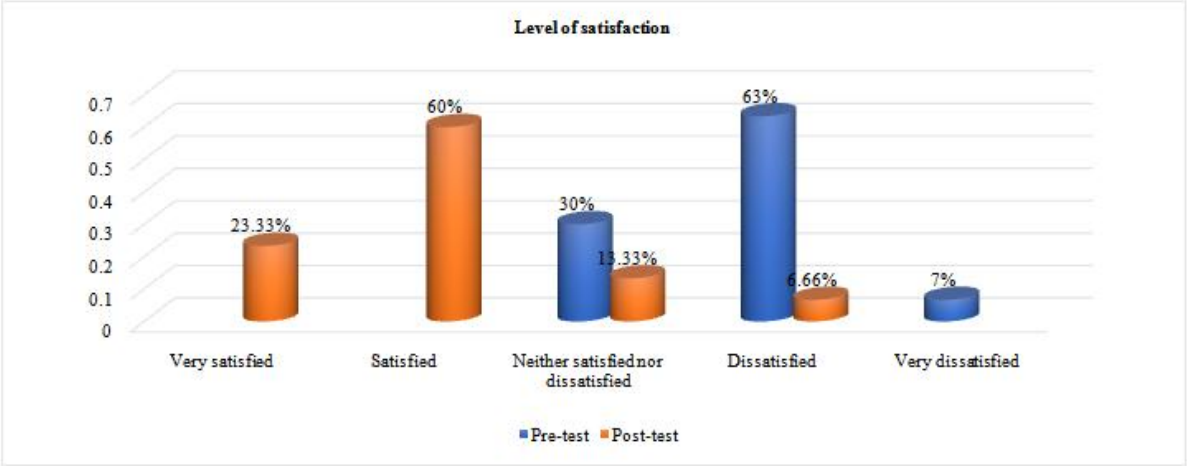

Figure 3: Level of satisfaction in Experimental Group

Table 3 and Figure 3: projected that level of satisfaction in experimental group in this pre-test satisfaction score i.e63.33% had dissatisfied, 30% had neither satisfied nor dissatisfied & 60% participate in post-test had satisfied, 23.33% participate had very satisfied, 13.33% participate had neither satisfied nor dissatisfied & 6.66% participate had very dissatisfied, respectively. There is a significant difference in level of labour pain. Hence research hypothesis H_1 is accepted.

Table 4: Level of satisfaction in control group

N=30

Level of satisfaction	Satisfaction score	Pre-test	%	Post-test	%
Very satisfied	4	-	-	-	-
Satisfied	3	-	-	-	-
Neither satisfied nor dissatisfied	2	11	36.66%	9	30%
Dissatisfied	1	18	60%	21	70%
Very dissatisfied	0	1	3.33%	-	-

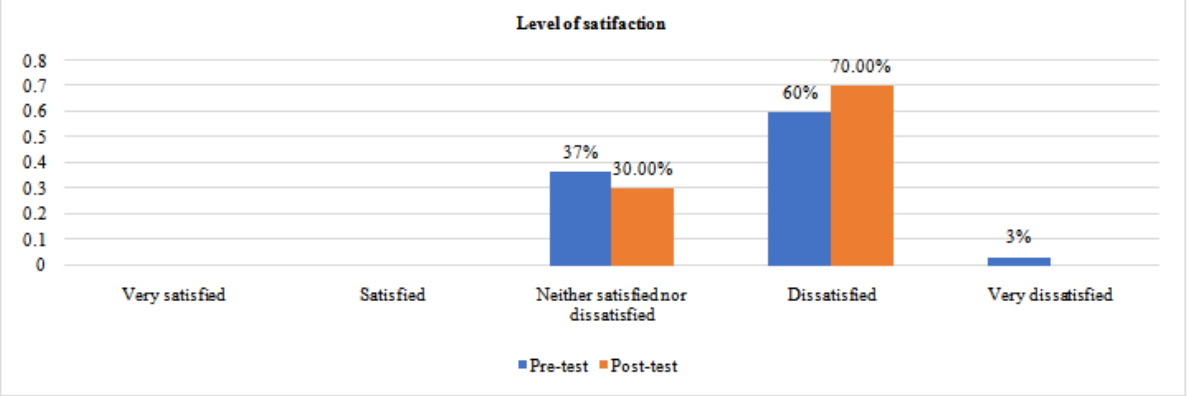

Figure4: Level of satisfaction in control Group

Table 4 and Figure 4: projected that level of satisfaction in control group in this pre-test satisfaction score i.e60% had dissatisfied, 36.66% had neither satisfied nor dissatisfied & 3.33% participate had very dissatisfied in post-test 70% participate had dissatisfied and 30% participate had very dissatisfied, respectively. There is a no significant difference in level of satisfaction. Hence research hypothesis H_1 is not accepted.

Section B: Effect of the lavender oil massage therapy in reducing perception of labour pain & increasing the level of satisfaction.

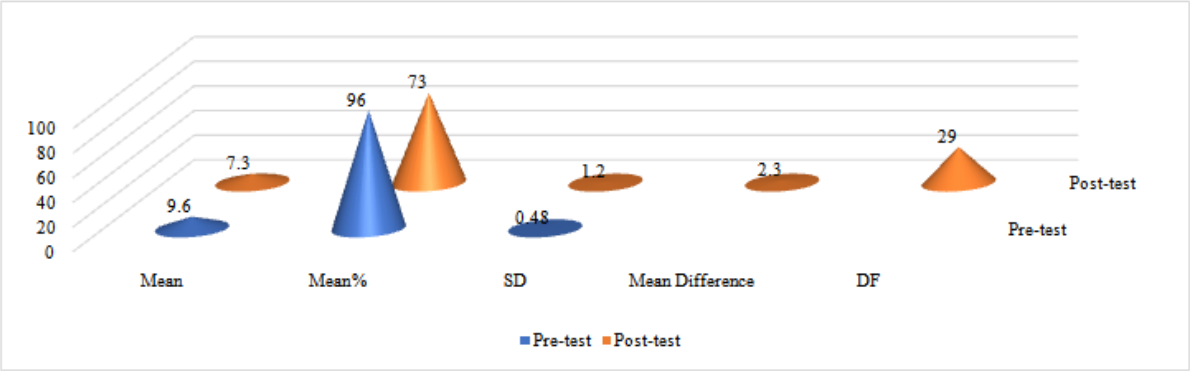

Table 5: Comparison of labour pain scores in experimental group

N=30

Labour pain	Mean	Mean Percentage (%)	SD	Mean Difference	DF	't' test	P Value	Inference
Pre-test	9.6	96%	0.48	2.3	29	10.48	0.0014	S*
Post-test	7.3	73%	1.2					

Table 5 and Figure 5: projected that in experimental group, pre-test v/s post-test wise analysis shows that in pre-test the mean obtained by the respondents was 9.6 with mean percentage of 96%, SD of 0.48& in post-test the mean obtained by the respondents was 7.3 with the mean percentage of 73%,SD of 1.2,the mean difference is 2.3,df 29,the obtained 't'value is 10.48, P= 0.0014,(significant).

There is a significant difference between the pre-test, post-test labour pain score among Parturients. A hypothesis was tested at 0.05levels. The calculated 't' value 10.48 is significantly higher than the table value 2.91 at 0.05 level of significance.Hence research hypothesis H_1 is proved & accepted.

Table 6: Comparison of labour pain scores in control group

N=30

Labour pain	Mean	Mean Percentage (%)	SD	Mean Difference	DF	't' test	P Value	Inference
Pre-test	9.7	97%	0.46	0.06	29	1.02	0.731	NS
Post-test	9.76	97.60%	0.43					

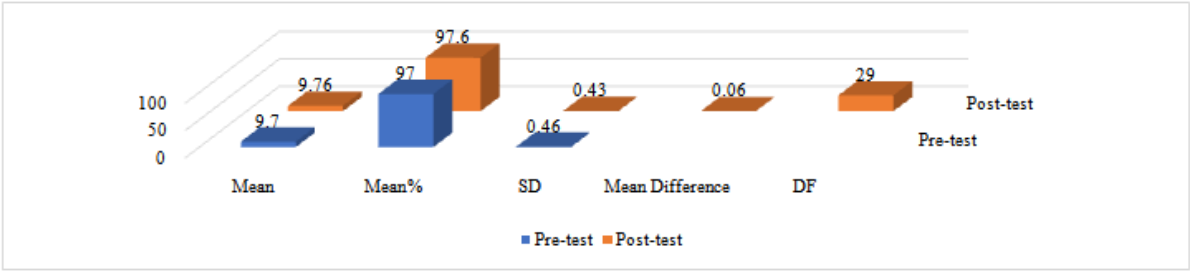

Figure 6: Comparison of labour pain scores in control group.

Table 6 and Figure 6: projected that in control group, pre-test v/s post-test wise analysis shows that in pre-test the mean obtained by the respondents was 9.7 with mean percentage of 97%, SD of 0.46& in post-test the mean

obtained by the respondents was 9.76 with the mean percentage of 97.60%,SD of 0.43,the mean difference is 0.06,df 29,the obtained 't'value is 1.02, P= 0.731,(non-significant).

There is a no significant difference between the pre-test, post-test labour pain score among Parturients. A hypothesis was tested at 0.05levels. The calculated 't' value 1.02 is non significantly lower than the table value 2.91 at 0.05 level of non-significance.Hence research hypothesis H_1 is not accepted.

Table 7: Comparison of level of satisfaction scores in experimental group

N=30

Level of satisfaction	Mean	Mean Percentage (%)	SD	Mean Difference	DF	't' test	P Value	Inference
Pre-test	1.32	33%	0.475	1.71	29	8.06	0.0049	S
Post-test	3.03	75.75%	0.718					

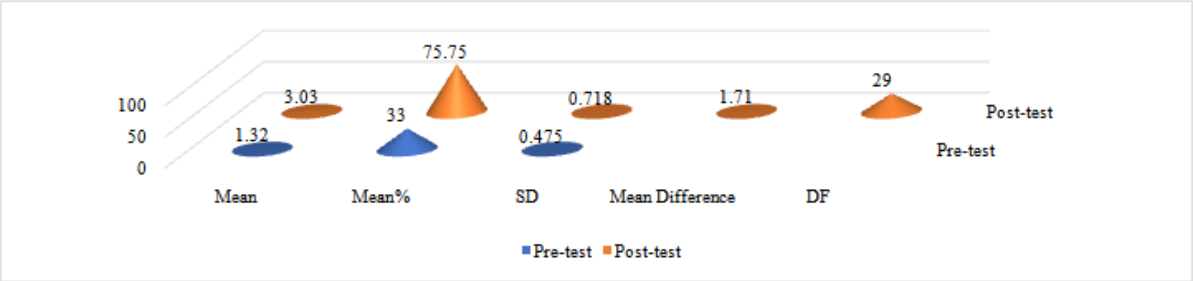

Figure 7: Comparison of level of satisfaction scores in experimental group.

Table 7 and Figure 7: projected that in experimental group, pre-test v/s post-test wise analysis shows that in pre-test the mean obtained by the respondents was 1.32 with mean percentage of 33%, SD of 0.475& in post-test the mean obtained by the respondents was 3.03 with the mean percentage of 75.75%,SD of 0.718,the mean difference is 1.71,df 29,the obtained 't'value is 8.06, P= 0.0049,(significant).

There is a significant difference between the pre-test, post-testlevel of satisfaction score among Parturients. A hypothesis was tested at 0.05levels. The calculated 't' value 8.06 is significantly higher than the table value 2.91 at 0.05 level of significance.Hence research hypothesis H_1 is proved & accepted.

Table 8: Comparison of level of satisfaction scores in control group

N=30

Level of satisfaction	Mean	Mean Percentage (%)	SD	Mean Difference	DF	't' test	P Value	Inference
Pre-test	1.379	34.47	0.493	0.079	29	0.97	0.616	NS
Post-test	1.3	32.50	0.466					

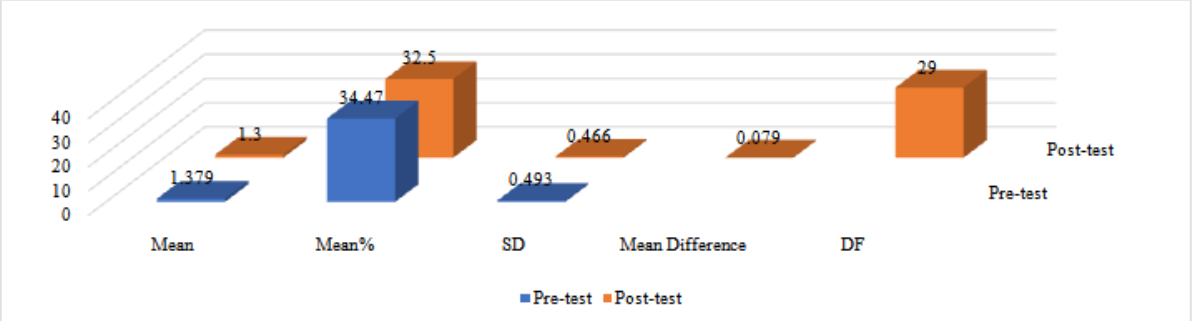

Figure 8: Comparison of level of satisfaction scores in control group.

Table 8 and Figure 8: projected that in control group, pre-test v/s post-test wise analysis shows that in pre-test the mean obtained by the respondents was 1.379 with mean percentage of 34.47%, SD of 0.493& in post-test

the mean obtained by the respondents was 1.3 with the mean percentage of 32.50%,SD of 0.466,the mean difference is 0.079,df 29,the obtained 't'value is 0.97, P= 0.616,(non-significant).

There is a no significant difference between the pre-test, post-test level of satisfaction score among Parturients. A hypothesis was tested at 0.05levels. The calculated 't' value 0.97is non significantly lower than the table value 2.91 at 0.05 level of non-significance.Hence research hypothesis H_1 is not accepted.

IV. Discussions

The present study has been undertaken to"A study to evaluate the effectiveness of lavender oil massage on labour pain reduction & level of satisfaction among parturient in selected hospitals at Udaipur, Rajasthan."

Section I: Assessment of pre-test post-test level of pain perception in experimental and control group of respondents regarding effect of lavender oil massage.

Experimental group- The majority of the respondents shows the pre-test post-test pain level among Parturients, before & after lavender oil massage, in pre-test, 18(60%) of Parturients are having worst pain and 12(40%) of them having severe pain whereas in post-test 20(66.66%) of Parturients are having severe pain and 8(26.66%) of Parturients are having moderate pain and 2(6.66%) of them having worst pain.

Control group- The majority of the respondents shows the pre-test post-test pain level among Parturients, before & after without intervention, in pre-test 21(70%) of mothers are having worst pain and 9(30%) of them having severe pain whereas in post-test 23(76.66%) of Parturients are having worst pain and 7(23.33%) of them having severe pain.

Similar study conducted by **Lamadah S., et al (2016)-**

Experimental group (post-test)-The most of respondents63.3% of the Parturients are having mild pain, 30.0% of Parturients are having moderate pain and 6.7% of them are having severe pain.

Control group(post-test)-The most of respondents 26.7% of the Parturients are having mild pain, 56.7% of Parturients are having moderate pain and 16.6% of them are having severe pain.

Section II: Assessment of pre-test post-test level of satisfaction in experimental and control group of respondents regarding effect of lavender oil massage.

Experimental group- The majority of the respondents shows the pre-test post-test satisfaction level among Parturients, before & after lavender oil massage, in pre-test, 19(63.33%) of Parturients are having dissatisfied, 9(30%) of Parturients are having neither satisfied nor dissatisfied and 2(6.66%) of them having very dissatisfied whereas in post-test 18(60%) of Parturients are having satisfied, 7(23.33%) of Parturients are having very satisfied, 4(13.33%) of Parturients are having neither satisfied nor dissatisfied and 2(6.66%) of them having dissatisfied.

Control group- The majority of the respondents shows the pre-test post-test satisfaction level among Parturients, before & after without intervention, in pre-test 18(60%) of Parturients are having dissatisfied, 11(36.66%) of Parturients are having neither satisfied nor dissatisfied and 1(3.33%) of them having very dissatisfied whereas in post-test 21(70%) of Parturients are having dissatisfied and 9(30%) of them having neither satisfied nor dissatisfied.

Similar study conducted by**Lamadah S., et al (2016)-**

Experimental group(post-test)-The most of respondents82% of the Parturients are satisfied, 14.3% of Parturients are neutral and 3.7% of them are dissatisfied.

Control group(post-test)-The most of respondents 69.4% of the Parturients are satisfied, 20% of Parturients are neutral and 10% of them are dissatisfied.

Section III: To assess the effectiveness of lavender oil massage in labour pain reduction among Parturients in first stage of labour.

The result showed that the overall mean scores among pretest & posttest of experimental group. Mean percentage of pretest 96 % was obtain in pretest with mean was 9.6 and SD of 0.48 and mean percentage of posttest 73% was obtained in the posttest with mean was 7.3 and SD was 1.2. The difference was 23% pain score. Difference is large. This difference is statistically significant. Statistical significance was calculated by using difference of mean 't' test. The 't' value was 10.48(significant at 0.05 level).

The result showed that the overall mean scores among pretest & posttest of control group. Mean percentage of pretest 97% was obtain in pretest with mean was 9.7 and SD of 0.46 and mean percentage of posttest 97.60% was obtained in the posttest with mean was 9.76 and SD was 0.43. The difference was -0.6% pain score. Difference is small. This difference is statistically non-significant. Statistical non significance was calculated by using difference of mean 't' test. The 't' value was 1.02(non-significant at 0.05 level).

Similar study conducted by**Sivasankari k., et al (2017)** findings where most of respondents. In post-test, in experimental group with mean score was 1.16 and SD of 0.37 and in the control group with mean score was 2.25 and SD was 0.44. The difference was 1.09 pain score. Difference is large. The difference is

statistically significant. Statistical significance was calculated by using difference of mean 't' test. The 't' value was 7.40(significant at 0.05 level).

Section IV: To assess the effectiveness of lavender oil massage in increase level ofsatisfaction among primi gravida mothers in first stage of labour.

The result showed that the overall mean scores among pretest & posttest of experimental group. Mean percentage of pretest 33% was obtain in pretest with mean was 1.32 and SD of 0.475 and mean percentage of posttest 75.75% was obtained in the posttest with mean was 3.03 and SD was 0.718. The difference was 42.75% satisfaction score. Difference is large. This difference is statistically significant. Statistical significance was calculated by using difference of mean 't' test. The 't' value was 8.06(significant at 0.05 level).

The result showed that the overall mean scores among pretest & posttest of control group. Mean percentage of pretest 34.47% was obtain in pretest with mean was 1.379 and SD of 0.493 and mean percentage of posttest 32.50% was obtained in the posttest with mean was 1.3 and SD was 0.466. Thedifference was -1.97% satisfaction score. Difference is small. This difference is statistically non-significant. Statistical non significance was calculated by using difference of mean 't' test. The 't' value was 0.97(non-significant at 0.05 level).

Similar study conducted by **Sivasankari k., et al (2017)** findings where most of respondents. In post-test, experimental group with mean score was 36.9 and SD of 4.53 and in the control group with mean score was 34.17 and SD was 1.73. The difference was 2.73 satisfaction score. Difference is large. The difference is statistically significant. Statistical significance was calculated by using difference of mean 't' test. The 't' value was 3.17(significant at 0.05 level).

Section V: Association between pre-test score of respondents regarding effectiveness of lavender oil massage with selected socio demographic variables.

There was significant association between level of pain perception among Parturients with selected demographic variables in experimental group such as Age in Years ($\chi 2$=18.02), educational status ($\chi 2$ =26.17), religion($\chi 2$=22.04), area of living($\chi 2$ =18.25), life style ($\chi 2$ =20.36), food habit($\chi 2$ =16.54), source of information($\chi 2$ = 19.05)were found to be significant at 0.05 level. Hence research hypothesis H_2 is proved and accepted.

There was significant association between level of pain perception among Parturients with selected demographic variables in control group such as Age in Years ($\chi 2$=21.09), educational status ($\chi 2$ =24.87), religion($\chi 2$=21.01), area of living($\chi 2$ =19.34), life style ($\chi 2$ =16.44), food habit($\chi 2$ =13.02), source of information($\chi 2$ = 19.05)were found to be significant at 0.05 level. Hence research hypothesis H_2 is proved and accepted.

Similar study conducted by **Sivasankari k., et al (2017)** findings where most of study. Association between pain perception and socio demographic variables: Chi – square test was used to compute the association between pain perception and socio demographic variables such as age, educational status,dietary pattern,religion, area of living. Based on the analysis it was evident that there was no statistically significant association between pain perception and above-mentioned socio demographic variables.

IV. Conclusion

The study was conducted on "A study to evaluate the effectiveness of lavender oil massage on labour pain reduction & level of satisfaction among parturient in selected hospitals at Udaipur, Rajasthan." In the present study 60Parturients who are admitted in hospital were selected through simple random sampling technique. Researcher used True Experimental, pre-test, post-test control group research design to assess the labour pain & level of satisfaction of Parturients. Data were collected through universal pain scale and the short assessment of patient satisfaction and data were analysed through suitable statistical method.

References

[1]. L Manjula, et al; study on effleurage massage; April (2015); Available from http://repository-tnmgrmu.ac.in/10122/1/300316315manjula.pdf
[2]. Mohammad Ali N, Broumandfar K. et al; Iranian Journal of Nursing and Midwifery Research; (2010); Available from; https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3093177/.
[3]. K Heera c, et al; Introduction to normal labour; (2019); Available at https://www.slideshare.net/MrsHeeraKCParajuli/introduction-to-normal-labour.
[4]. Simona L, M Simon et al; Reviews in pain; (2008); Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4589939/.
[5]. Mumda et al; Massage; (2020); Available at https://mumda.org/massage/.
[6]. Fam Am et al; The nature and management of labour pain; (2003); Available at https://www.aafp.org/afp/2003/0915/p1109.