

# A Quasi-Experimental Study On The Effects Of Warm Mustard Oil Massage For Postpartum Back Pain In Selected Government Hospitals

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## Abstract

**Introduction:** Motherhood is a blessing and a challenge. Pregnancy-related back pain is common and can start as early as the first trimester. The vast majority of instances are mild and go away on their own. Some women experience it for months or even years after giving birth, and it can become chronic.

The purpose of this study is to evaluate the effectiveness of a warm mustard oil massage in reducing pain in an experimental group.

### Methods and Material:

This study used a quantitative strategy and a quasi-experimental research design for its materials and methods. Two hundred postnatal mothers admitted to the selected government hospital for treatment of back pain were randomly assigned to one of two treatment groups (the control group or the experimental group) using a non-probabilistic purposive sampling technique.

**Result:** The results showed that 80% of the samples in the control group were beyond the age of 30, whereas 64% of the samples in the experimental group fell into that age range. On day three of therapy, 85% of the samples were feeling moderate pain, 15% were suffering mild pain, and 0% were experiencing severe pain; the majority of the samples in the experimental group were housewives (90%), first-time mothers (66%), and had moderate pain (85%). By the third day, 92% of the control group's samples were in severe pain, while just 8% were in the moderate pain range. revealed on day 3, the mean pain score in the experimental group was 33.76 (SD = 5.64), while the control group's mean pain score was 57.55 (SD = 3.51).

the data provides significant evidence that the pain level of the experimental group was reduced after getting mustard oil massage compared to the control group (unpaired t value = 35.82, p = 0.0001).

**Conclusion:** Back discomfort is frequent in postpartum women as a result of physiological and pathological changes; warm mustard oil has been found to be useful in alleviating this pain.

**Key Words:** Back Pain, Postnatal Mothers, Warm Mustard Oil.

## Introduction:

Motherhood is a rewarding and complex experience. To put it simply, women are built to give birth. Her pelvic structure, hormones, and strong muscles all work together to assist in the birthing process. Muscles and joints become more supple and lax as a result of pregnancy-related hormonal shifts. These alterations place extra pressure on the vertebrae and pelvic joints of the lower back and hips. Pregnancy-related back pain is common and can start as early as the first trimester. This discomfort can range from mild to severe and chronic for women. The sacroiliac and lumbar regions [1] are frequently affected by pain. Most cases are mild and go away on their own. Sometimes it becomes a persistent issue that lasts for months or even years after giving birth. The pelvis goes through typical, pregnancy-related modifications to make room for the developing baby and make childbirth easier. Back discomfort is the outcome of these alterations.

In the weeks and months following labour, back discomfort is a frequent problem.

Postpartum back discomfort is the name for this issue.

Pain between the 12th rib and the gluteal fold/pubis symphysis, which may radiate to the posterolateral thigh, the knee, and the calf, but not the foot, is commonly understood to be low back pain [3]. The effects of relaxin, a hormone that loosens ligaments,[4] carrying extra weight, which shifts the centre of gravity and puts pressure on the mother's spine, and poor body posture when breastfeeding are all contributing factors. Pregnancy-related back pain, back discomfort prior to pregnancy, and being overweight are all strong risk factors for ongoing back pain in the postpartum period, according to a systematic review[5].

Persistent low back pain in women was associated with more time off work and more visits to the doctor than intermittent pain. The most common alternative treatment was acupuncture, followed by chiropractic care and physical therapy. [7]

**Problem statement: A Quasi-Experimental Study on the Effects of Warm Mustard Oil Massage for Postpartum Back Pain in Selected Government Hospitals**

**Objectives:** To assess the level of pain in the experimental group after massage with warm mustard oil.

## **Material and Method:**

### **RESEARCH APPROACH**

Researcher used a quantitative method to assess how well a warm mustard oil massage alleviates postpartum women' back pain.

### **PLAN FOR STUDY**

The researcher used a quasi-experimental approach to his study.

Postpartum women at a subset of government hospitals are the intended audience.

### **PREMISES ON WHICH THE STUDY WAS CONDUCTED**

The suggested research will take place at a few of Sindhudurg, Maharashtra, India's public hospitals.

### **THE ART OF SAMPLING**

This research employed a non-probabilistic, non-random method of sampling called purposive sampling.

### **SIZE OF SAMPLES**

Two hundred postpartum women will be sampled; one hundred will serve as the experimental group's test subjects, and the other hundred will serve as the control group's.

#### Criteria for Sampling

The following were used as criteria for inclusion and exclusion during the sampling process:

#### Inclusion Criteria:

- (1) New mothers experiencing chronic low back pain.
- Second-time and first-time mothers after giving birth.
- Third, pregnant women who have recently given birth and are available for participation in the study
- Fourth-term mom who had a natural or aided vaginal birth.
5. Volunteers for the research project.
6. Bilingual (Marathi/English) speakers.

#### EXCLUSION CRITERIA:

Primary LSCS in the postpartum period

2 Participants in the Pilot Study.

#### DESCRIPTION OF THE TOOL

Two standard rating questionnaires were formulated and administered to nursing professionals within sampling population.

#### Questionnaire consists of Two sections:

**Section I:** The demographic data: it consists of 7 demographic variables like age, education, occupation, parity, outcome of delivery no of live birth, breast feeding and ANC supplement Medication during ANC Period.

**Section II:** Pain rating Index by using McGill Pain Questionnaire – This gives scores for pain rating index (PRI) and present pain intensity (PPI)

#### RESULT:

**Table 1: Distribution of postnatal mothers in experimental and control group with their socio demographic characteristics**  
N=200(100,100)

Sr. No	Demographic Variable	Category	Experimental Group		Control Group	
			Frequency	%	Frequency	%
1	Age	<30 Years	64	64.00	80	80.00

		30-35 Years	31	31.00	12	12.00
		35- 40 Years	5	5.00	8	8.00
		40 Years & Above	0	0.00	0	0.00
2	Education	Illiterate	0	0.00	0	0.00
		Primary	41	41.00	27	27.00
		Secondary	35	35.00	58	58.00
		Graduate & Above	24	24.00	15	15.00
3	Occupation	Housewife	90	90.00	84	84.00
		Working	10	10.00	16	16.00

4	Parity	First	66	66.00	37	37.00
		Second	34	34.00	63	63.00
5	Outcome of Delivery No of Live Birth	Single	97	97.00	98	98.00
		Twins	3	3.00	2	2.00
		Triplets	0	0.00	0	0.00

		Quadruplets & Above	0	0.00	0	0.00
6	Breast feeding	Yes	92	92.00	83	83.00
		No	8	8.00	17	17.00
7	ANC Supplement Medication during ANC period	Yes	76	76.00	26	26.00
		No	24	24.00	74	74.00

As can be seen in Table No. 1, all of the samples in the experimental group are under the age of 40, with 64 (64%) being in the 30-35 year old range, 31 (31%) in the 30-39 year old range, and 5 (5%). Among the controls, 80 percent are under 30 years old, 12 percent are between the ages of 30 and 35, 8 percent are between the ages of 35 and 40, and none are older than 40.

For example, in the experimental group, 41% of the samples had completed primary school, 35% had completed secondary school, 24% had completed college or higher, and 0% were illiterate, while 58% of the samples in the control group had completed secondary school, 27% had completed primary school, 15% had completed college or higher, and 0% were illiterate.

The bulk of the samples in the experimental group (90%) were housewives, while just 10% of the samples in the control group (84% of the total) were employed.

In terms of parity, the majority of the women in the experimental group (66%) were experiencing their first pregnancy, while 34% were experiencing their second, and 37% were experiencing their third. In contrast, 63% of the women in the control group were experiencing their second pregnancy, while 37% were experiencing their third.

Regarding breast feeding, the vast majority (92%) of the sample was doing so in the experimental group, while just 8% of the sample was not breast feeding their child. In the control group, 83% of the sample was breast feeding their child, while 17% of the sample was not.

The majority of the experimental sample (76%) used ANC supplements whereas the majority of the control sample (74% used none) used ANC supplements while the remaining 26% used them during the ANC phase.

## B). ASSESSMENT OF LEVEL OF PAIN IN THE EXPERIMENTAL GROUP AFTER MASSAGE WITH WARM MUSTARD OIL.

**Table No. 2 Posttest frequency and percentage distribution of level of pain Rating Index (PRI) among experimental group and control group N=200(100,100)**

Level of Pain	Pain Rating Index (PRI) Score	Experimental Group				Control Group			
		Frequency (Day 1)	% (Day 2)	Frequency (Day 3)	% (Day 3)	Frequency (Day 1)	% (Day 2)	Frequency (Day 3)	% (Day 3)

Mild Pain	20-26	0	0	15	15	0	0	0	0
Moderate	27-52	42	42	85	85	0	0	8	8
Severe	53-78	58	58	0	0	100	100	92	92

In the posttest experimental group on day 2, the majority of the samples (58 of them, or 58%) were experiencing severe pain, 42 of them (or 42 of them) were experiencing moderate pain, and none of the samples were in mild pain. On day 3, however, the majority of the samples (85 of them, or 85 of them) were experiencing moderate pain, 15 of them (15 of them) were experiencing mild pain, and none of the samples were experiencing severe pain. This is shown in table no. 2. In distinguish with control group on day 2, all 100 (100%) samples were experiencing severe pain, whereas on day 3, majority of the samples 92(92%) were experiencing severe pain and only 8(8%) were moderate pain level.

**Table No. 3 Assessment of effect of warm mustard oil massage in reducing the back pain by comparing day 1 and day 3 in experimental group N100**

Experimental Group		Mean	SD	SEM	t-test value	p-value
Day 1 Vs Day 3 (PRI)	Pretest	67.32	4.03	0.403	84.14	P<0.0001 (Significant)
	Posttest	33.76	5.63	0.563		

When compared to the pre-test (day 1) mean pain score of 67.32 with SD 4.03 in the experimental group, the mean pain score at post-test (day 3) was 33.76 with a standard deviation of 5.63, as shown in table no. 3. It demonstrates that following the intervention, there was a reduction in the mean degree of pain. The results of the statistical paired t test show that the t value is 84.14, and the p value is less than 0.0001. At the level of 0.05%, the difference in pain level between the pre-test and the post-test was determined to be statistically significant in the experimental group.

The analysis, which used a significance threshold of 5% and 99 degrees of freedom, came to the conclusion that the data presented above provide adequate evidence to suggest that a mustard oil massage is useful in relieving back discomfort.

### Discussion:

Compared to the control group, the majority of samples in the experimental group (64%) belong to the age group of above 30 years, but none of the samples belong to the age group of 40 or older. On the other hand, the majority of samples in the control group (80%) also belong to the age group of above 30 years, but none of the samples belong to the age group of 40 or older. In terms of occupation, the majority of the samples in the experimental group (90%) were housewives, while only 10% of the samples in the control group (84%) were working. In contrast, the majority of the samples in the experimental group (90%) were housewives, while only 16% of the samples in the control group were working.

An investigation into comparisons made by Ms. Remya Mohan and Professor Renuka. The results of a study conducted by Kon[8] to compare the efficacy of warm mustard oil to that of warm mustard oil combined with camphor in relieving knee joint pain in rural women show that a total of 60 rural women who experienced knee joint pain during the course of the study were recruited to take part. The majority of the samples, twelve (or 40 percent) in group I and ten (or 33.33 percent) in group II, fall into the age range of 51 to 55 years. Regarding the body mass index, the majority of the samples, thirteen (43.3%) in group I and twenty-eight (50%) in group II, had a BMI in the range of 25-29.9. Concerning employment, the vast majority of women in group I (23, or 76.7%) and group II (12, or 40%) were homemakers. Furthermore, 7 (or 23.3%) of the women in group I and 11 (or 36.7%) of the women in group II were active with self-help group functionaries.

When compared to the pre-test (day 1) mean pain score of 67.32 with SD 4.03 in the experimental group, the post-test (day 3) mean pain score was 33.76, and the standard deviation was -5.63. It demonstrates that following the intervention, there was a reduction in the mean degree of pain. The results of the statistical paired t test show that the t value is 84.14, and the p value is less than 0.0001. At the level of 0.05%, the difference in pain level between the pre-test and the post-test was determined to be statistically significant in the experimental group.

A study that was conducted by Dr. Danasu R., Mrs. Sridevi R., and Ms. Sangeetha T[9] to evaluate the effectiveness of warm mustard oil massage in reduction of back pain among the postnatal mothers at srimanakulavinayagar medical college and hospital, Puducherry shows that the pretest mean value are 70.95 with standard deviation 1.91 and the mean% are 84% and the post-test mean value are 13.75 with standard deviation

## Conclusion:

Back pain is a common condition that occurs in postnatal women as a result of physiological and pathological changes; in order to treat this issue effectively, warm mustard oil can be used; it has a great effect on back pain, and the back pain of postnatal women can be reduced by applying warm mustard oil massage therapy to the postnatal women. Back pain is a common condition that occurs in postnatal women; this is due to the fact that back pain is a common condition that occurs in postnatal women.

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