



A Quasi-Experimental Study To Assess The Effectiveness Of LumboSacral Massage And Hot Application At LumboSacral Area On Level Of Pain During Active Phase Of Labour Among Primigravida Parturient Women At Selected Hospitals Of Udaipur

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ABSTRACT

Since the beginning of time, people have been captivated with pain and how it helps birthing women. "I'll greatly increase your pains in childbearing; you'll give birth to a child with pain," the deity told her after the first recorded violation in Eden's theater. For the parturient, parturition is a complex and varied experience. Childbirth involves pain, and for many older women around the world, it's the most agonizing experience of their lives. Pain has historically presented difficulties for a large number of scientists, nurses, and medical professionals. Considering how widespread the issue is, humanity should aim to overcome this obstacle. More people than any other issue seek medical assistance when they are in pain. Relieving suffering and pain is one of the primary clinical problems that nurses deal with. Labor is the most agonizing pain a woman can ever endure. Primiparida mothers endure more severe and prolonged labor pain, which can negatively affect the brain and reduce confidence, anxiety, and tone. Pain is the cause of suffering. When one is in suffering, consolation might not be feasible to find. When people have little money and are ill-prepared to manage it, they suffer and feel helpless. A woman can better control the pain of childbirth by utilizing many techniques like birthing medicine, probative care, and non-pharmacological pain management tactics.

Keywords:

Quasi-Experimental Study, Effectiveness of LumboSacral Massage, Hot Application, Primigravida Parturient Women at Selected Hospitals of Udaipur.

INTRODUCTION



Every woman gives birth in a different way and at her own time. It's exhilarating, but it also wears you out mentally and physically, leaving you in pain, afraid, and exhausted. Pregnant women almost always suffer pain during childbirth, so how that pain is managed is crucial. The terrible pain a woman experiences during childbirth is caused by the uterine muscles contracting and the pressure this puts on the cervix. Extreme pain and cramping in the back, stomach, groin, and sides of the legs. In addition to the vaginal and delivery canal extending, the head of the baby pressing against the bladder and bowels also causes pain. While childbirth is widely regarded as one of the most excruciating human experiences, pregnant women's pain varies from woman to woman and from pregnancy to pregnancy. Some have linked it to the symptoms of menstruation, while others have drawn comparisons between it and the intense pressure and sharp waves of cramping that accompany diarrhea. Women often have more frequent contractions and less relaxation during labor, although this is rarely due to the pain of the contractions themselves. Both non-pharmacological and pharmaceutical methods are used in pain management. Effective pain management encourages early recovery and a mother's involvement in her child's upbringing. Inadequate pain treatment has been linked to slower healing, anxiety, tachycardia, and extended hospital stays.

Numerous non-pharmacological approaches exist for managing pain. There have been encouraging results from the clinical use of methods such as guided imagery, music therapy, acupuncture, acupressure, reflexology, massage, heat application, breathing exercises, acupressure, and aromatherapy. The goals of these therapies are to improve physiology, decrease pain perception, and promote a healthy way of living. The most effective non-pharmacological treatments for labor pain are hot application and massage therapy because they don't have any unfavourable side effects and are both reasonably priced and safe. They can also be applied in addition to other therapeutic modalities.

Objectives Of the Study

- To assess the level of pain during the active phase of labour among Primigravida Parturient women.
- To assess the effectiveness of Lumbosacral massage on the level of pain during the Active Phase of Labour among primigravida parturient women.
- To assess the effectiveness of Hot application at the Lumbosacral area on the level of pain during the active phase of labour among primigravida parturient women.
- To compare the effectiveness of Lumbosacral massage and Lumbosacral hot application concerning the level of pain during the active phase of labour among primigravida parturient women.

Operational Definitions



- **Effectiveness:** This study refers to the outcome of sacral massage and hot application in the sacral area for reduction of labour pain which is measured by the McGill Pain scale.
- **Parturient Women:** Refers to the women in labour.
- **Level of Pain:** In this study, it refers to the severity of pain experienced and reported by the mother during the process as measured by Mc Gill Pain Scale.
- **Active Phase of Labour:** The active phase of labour starts when the cervix is about 3 to 4 cm dilated. This stage is complete when the cervix is completely effaced and dilated and the baby is ready to be pushed out.
- **Lumbosacral Area:** Refers to the area between the lumbar and coccygeal region of the spine where the mothers feel more pain during labour.
- **Lumbosacral Massage:** Lumbosacral massage refers to scientific manipulation of the soft tissue of the body, consisting of manual techniques such as applying fixed or movable pressure in the sacral area for reduction of pain for women in labour.
- **Hot Applications:** Refers to the application of moist heat in the sacral area for relief of pain for women in labour.

Nursing Practice

1. Identifying the requirements of the patient, this study aims to ascertain the level of pain that 500 primigravida parturient women felt while undergoing the selected treatments.
2. The administrative support needed is 250 primigravida parturient women will receive lumbosacral massages and 250 parturient women will receive lumbosacral heat applications as part of this study.
3. Confirmation of the intervention employed to assist the patient in getting improved outcomes. This study aims to assess the effectiveness of lumbosacral massage and hot application.

REVIEW OF LITERATURE

This Paper main objective is to review non-research literature and research studies that are pertinent to the ongoing inquiry, both published and unpublished. An examination of relevant literature is a crucial component of any scientific study. It comprises the methodical search for, location of, analysis of, and summarizing of textual documents that offer information regarding a study topic. An examination of relevant literature is a crucial component of any scientific study. It comprises the methodical search for, location of, analysis of, and summarizing of textual documents that offer information regarding a study topic.

Dastjerd Fatemeh (2023) A comparison of the effects of an infrared belt and a hot water bag on the



level of pain experienced by primiparous women during the initial stages of labor. Using an infrared belt at dilations of 4-5 and 6-7 cm, intervention group 1 received an independent 20-nanometer heat therapy cycle during the first stage of labor; intervention group 2 received the same cycle using a hot water bag. The group under control received standard medical care. The intensity of the pain was measured using the shortened version of the McGill Pain Questionnaire. A total of 136 women gave their consent to take part in this clinical trial study. The mean score was higher in the control group ($P < 0.001$). The infrared belt group had a significantly lower mean pain intensity ($P < 0.001$) than the hot water bag group. These findings showed that applying heat therapy using an infrared belt reduced the intensity of labor pain during the first stage. The infrared belt is a practical choice for effective and safe pain treatment during labor and delivery.

Ying Lai Chit (2022) The study's goal was to determine how prenatal massage practices and intrapartum surgical compliance relate to the usage of anesthetics during birth. This study looked at a labor massage program that was put into place at two public hospitals and led to almost 8,000 births in total. After attending a massage course for birth education at 36 weeks of pregnancy, couples are encouraged to continue their practice at home. Their compliance with at-home massage therapy was assessed as good if they practiced for at least 15 beats on three or more days per week. An approximate measure of how intrapartum massage works is the length of the first stage of labor divided by the practice period. Women who gave intrapartum massages were also divided into over- and below-median scenarios based on probability of practice. Logistic regression was used to assess the use of pethidine or epidural analgesia, adjusted for the duration of labor and the age of the pregnant woman attending the massage class. Of the 212 women who took part in the study, 103 (48.6) showed good compliance with receiving massages at home. Between the groups with excellent and poor compliance, there was no appreciable difference in the characteristics of the mothers or in the birth issues. The duration of the first stage of labor had a favorable correlation with increased compliance with at-home massage activities ($p = 0.04$) but a negative correlation with the intrapartum massage operation (standard 21.1). Lower intrapartum massage performance was associated with reduced use of epidural analgesia or pethidine for the duration of the first stage of labor (OR 0.33 95 CI), but not with antenatal massage compliance. Couples that utilize massage techniques more frequently during pregnancy may find that intrapartum massage is more effective, which reduces the requirement for pethidine and epidural "analgesia."

Amali Mery, Suman Choudhary, Prakash Mahala, and Prasuna Jelly (2021) Studies reveal that ongoing pain from childbirth may negatively impact the mother's capacity to grow into a fetus, hence continuously changing the course of parturition. According to humanization techniques for healthcare, laboring women should have access to both non-pharmacological and pharmaceutical pain management options. The thorough analysis examines studies conducted between 2013 and 2019 on the effectiveness of back massages in treating labor pain. The electronic databases PubMed, Medline, Nursing Health Journal, Google Scholar, and others were searched for pertinent keywords in order to conduct a systemic review. Research on non-pharmacological methods lends credence to



the notion that back massages can be an effective way to relieve labor discomfort. The present review aims to examine the effectiveness of back massage as a comfort measure and a labor pain relief. Labor pain is experienced differently by women and is impacted by a multitude of neurological and physiological factors. It might also vary a lot in intensity. When childbirth matures, women need pain management. Medications and non-medical therapies are two types of pain treatment techniques. Non-pharmacological techniques have been shown to reduce the discomfort of childbirth. For the input of this review, we linked 10 out of 110 reviews. Studies have shown time and time again how effective back massages are at easing the discomfort associated with childbirth.

Laura Y. Whitburn (2019) The pain associated with childbirth is multifaceted. Although environmental and emotional elements are identified in the research as contributing to labor pain, interventions for supporting women tend to focus on physiological aspects through medication use. to provide an up-to-date, pain science-based evaluation of our understanding of labor pain. The review makes an effort to explain why different women may experience different levels of pain during childbirth—why some cope well while others suffer terribly. In order to provide laboring women with the greatest care possible, this knowledge is essential. A literature search was conducted using the search phrases "labor," "birthing," "pain," "experience," and "perception" in the databases PsycINFO, Medline, and Cumulative Index to Nursing and Allied Health Literature. Thirteen of the submissions were selected for publication in total. Giving birth is an extremely intimate experience. It is tough, emotional, and significant, setting it apart from other types of pain. An essential set of factors impacting labor pain were identified and categorized using three categories: cognitive, social, and environmental factors.

Farzaneh Rahimi (2018) An analysis of clinical studies carried out in Iran and other countries on the advantages of massage, aromatherapy, and acupressure for LP. The current review study used online resources like SID, Iranmedex, Magiran, Iran Doc, Cochrane Library, PubMed, and Google Scholar to locate studies published in Persian or English before 2017. We looked for the Persian translations of "massage," "acupressure," "labor pain," and other related phrases. The Jadad roster was used to evaluate the clinical studies that were recovered. Analysis of the qualitative data was done. A total of 46 clinical studies included participants. Most studies showed that massage, aromatherapy, and acupressure were effective in reducing labor pain. The most regularly used treatments were aromatherapy with lavender essential oil painting and acupressure on the LI4 and SP6 points. Acupressure, massage, and aromatherapy have all been shown to be helpful in lessening the pain of labor. These techniques don't have any significant negative impact on expecting mothers or their babies, and they are generally safe. Thus, they can be applied to reduce labor pain.

RESEARCH METHODOLOGY

In a research study, the investigator asks a question at the beginning, moves logically via predetermined, cross-study-specific processes, and ends with providing a response. The purpose of the methodology section is to inform readers of the steps taken by the researcher to address the



problem or study subject. Research methodology is the framework for conducting a study and a systematic strategy for addressing the research topic.

Research methodology is the process of creating or refining carefully monitored studies or methods for collecting and analyzing data. A scientific field known as research methodology includes the variety of techniques that scientists frequently employ to look into research difficulties and related subjects. The legitimate and trustworthy data collection strategy for a disquisition is often organized in accordance with the exploration technique.

The term "research methodology" refers to the overall procedure that a particular research institute uses to collect data. For this examination, an experimental research methodology was used to accomplish the study's objective. The approach is very helpful in assessing practices, policies, and procedures. Polit and Hungler (2014) In an experimental research study, the independent variables are controlled or modified while participants are randomly assigned to different scenarios. It provides a rational and systematic approach to analyzing the results of controlled scenarios.

RESEARCH DESIGN

The study design refers to a researcher's procedures for generating trustworthy, objective, and meaningful data. The most significant element in developing the study's framework is choosing the research design. The research design incorporates a number of the researcher's most important methodological decisions made during the investigation. It aids the researcher in subject selection, independent variable manipulation, observational tasks, and the kinds of statistical analyses that should be performed to interpret the results. The choice of study design is influenced by the purpose of the experiment, the variables to be altered, and the possible conditions for conducting the experiment.

Sharma S K (2011) Claimed that "The research design is the master plan outlining the techniques and procedures for gathering and analysing the necessary data for a research study."

VARIABLES

- Abdallah and Levine, variables are the unique characteristics or attributes of the subject or object under study.
- Abdallah and Levine, "The effect of the independent variable is represented in the data analysis by the difference between the initial and terminal measurement."
- Polit and Hungler "Concepts are typically referred to as variables within the framework of quantitative research studies."
- A variable is an object, a group, or a situation with variable values, according to Polit and Hungler.



- A quality or feature with several alternative values is referred to as a variable, according to Sharma S.K.

Independent Variables

The conditions or characteristics that the investigator alters or regulates to ascertain their importance to the phenomenon under observation are referred to as independent variables. Independent variables are those that the investigator purposefully changes or adjusts. It is assumed to be the influence or antecedent of the dependent variable. The study's independent variable is the investigator's use of lumbosacral heat and massage on parturient women's discomfort during the active phase of labor.

Dependent Variables

The conditions or characteristics that manifest, disappear, or change as the investigator increases, decreases, or adjusts the independent factors are referred to as the dependent variables. When the researcher modifies the independent variable, the dependent variables change as well. The researcher is attempting to interpret, clarify, predict, or influence the behavior, characteristics, or outcome. The dependent variable in the current study was the parturient women's level of pain during the active phase of labour.

Attribute Variables

- Age
- Education
- Occupation
- Religion
- Type of family
- Period of gestation
- Mode of labour
- Practising relaxation therapy

PILOT RESEARCH

A pilot study is a preliminary investigation required before a large-scale program is developed.

A pilot study, according to Treece and Treece, is an atomic methodological trial run intended for a large-scale project. The two goals of a pilot study are as follows: Determine what aspects of the research project need to be improved upon, and determine what problems need to be fixed before a more extensive investigation is conducted.

After receiving formal administrative approval, the pilot study was conducted at Delhi - Virmani Hospitals from December 18, 2022, to December 29, 2022.



Pilot Study Procedure

Self and rapport were established.

- To obtain an honest and transparent response, the aim of the study was explained.
- Fifty primigravida parturient women were selected using a purposive sample technique.
- Day 1 saw the completion of the pre- and post-tests.

Both inferential and descriptive statistics were used to assess the data from the pilot research. The mean, median, standard deviation, mean difference between the pre- and post-tests, and "t" value were all calculated.

GROUP FOR EXPERIENTIAL MASSAGE

- The person was afforded an opportunity to present themselves.
- Having explained the goal of the study, they were persuaded to help.
- The purposive sample technique was used to select twenty-five patients who were admitted to the labor room during the active phase of labor.
- Patients provided their verbal agreement and were assured of privacy.
- The therapy was initiated right after the post-assessment was finished.

Experimental Hot Application Group

- The person was afforded an opportunity to present themselves.
- An explanation of the purpose of the study was given to them in order to win their cooperation.
- A purposive sample strategy was used to select twenty-five patients who were admitted to the labor room during the active phase of labor.
- Patients provided their verbal agreement and were assured of privacy.
- The therapy was initiated right after the post-assessment was finished.

THE PROCEDURE FOR COMPLETING THE MOST RECENT DATA COLLECTION

Official administrative consent was obtained from R.N.T. Medical Hospital, Udaipur, for the period of March 1, 2023, to August 29, 2023.

The following method was used to collect the data:

- On March 1, 2023, the self-introduction was given.
- The aim of the study was communicated beforehand in order to elicit an honest and transparent response.
- Using a purposive sampling technique, five hundred adult females were selected.
- Confidentiality of their answers was assured, and signed consent was acquired.



- On March 1, 2023, a pre-test was performed using the Modified Mc Gill Pain Scale to gauge pain during the active phase of labor.
- After the pre-test, one group of patients had lumbosacral massage, while another group had hot application. Shortly after the intervention was given, a post-test was given.

This methodology chapter covered the variables of the research design under investigation, the population sample for the study, the creation of sampling strategies, the explanation of data collection instruments, content validity, the try-out procedure, the pilot study procedure for final data collection, and the data analysis plan.

BIBLIOGRAPHY

Books

1. Basavanthappa BT, "Nursing Theories" 1st (2007), Jaypee Publication- New Delhi, pp 147-168.
2. Dutta D.C "Textbook of gynecology" 6th edition, New Central Book Agency (P) Ltd Publisher-Kolkata, pp-135-143.
3. Garrett H.E. and Woodworth R.S. "Statistics in Psychology and Education" 10th edition, Bombay: Vakils: Feffer and Simsons Ltd, 1981.
4. Sharma S.K. "Nursing Research and Statistics" (2011) edition, Elsevier Publication –New Delhi, pp 30,93,125,145.

Journals

5. Hannah Snyder <https://www.sciencedirect.com/science/article/pii/S0148296319304564>.
6. Dr. Kanbargi Ramesh, Dr. Shanta Kanbargi, "An exploratory study Sexually Transmitted Diseases in Bangalore City" The Journal of Family Welfare. March 1996. 42(1). p. 30-37.
7. Ravi Puthuchira Rejoice.et al, "A community based cross-sectional study about Sexually Transmitted Infections among Young Married Rural Women in South India", American Journal of Epidemiology and Infectious Diseases, Volume 2, Issue 1.
8. Samanta A, Ghosh S et al, "Prevalence and health-seeking behaviour of reproductive tract infection/sexually transmitted infections symptomatic: a cross-sectional study of a rural community in the Hooghly district of West Bengal", Indian Journal of Public Health. 2011 Jan-Mar; 55(1):38-41.
9. Kaur Suminder, Talwar Richa.et al, "Cross-sectional study was conducted among female patients attending to Gynecology OPD of tertiary hospital in Delhi with signs and symptoms suggestive of STIs", Indian Medical Gazette, Dec 2011.



Articles

10. Farzaneh Rahimi1, *, Shadi Goli1, Narges Soltani 2, Habibolah Rezaei 3, Zahra Amouzeschi 2, (2018), Effects of Complementary Therapies on Labor Pain.
<https://brieflands.com/articles/mcj-69306.html>
11. Devinder Mohan Thappa, Sowmya Kaimal. Sexually transmitted infections in India: Current status. *Indian journal of Dermatology*.2007 Jun;52(2): [78-82p].
12. Fatemeh Dastjerd 1, Fatemeh Erfanian Arghavanian 2 3, Ameneh Sazegarnia 4, Farideh Akhlaghi 5, Habibollah Esmaily 6, Masoumeh Kordi 7; 2023 Jun 1, Effect of infrared belt and hot water bag on labor pain intensity among primiparous: a randomized controlled trial,23(1):405.
<https://pubmed.ncbi.nlm.nih.gov/37264341/>.
13. Olds S. B, London M. L, Ladewig P. W. 1996. *Maternal newborn nursing A family centered approach*. Menlo Park, CA: Addison Wesley.
14. Mackey M. C. Women's evaluation of their childbirth performance. *Maternal Child Nursing Journal*. 1995;23(2):57–72. [PubMed] McCaffery M, Pasero C. 1999. *Pain Clinical manual*. St. Louis: Mosby.
15. Wilma P., Long B.C., Woods N.F., “Shafer’s Medical –Surgical Nursing” 7th edition, B.I. Publications Pvt Ltd –New Delhi, pp 719-720.