

## Structured Physiotherapy Outperforms Traditional Massage for Managing Postpartum Neck Pain in Working Mothers: A Clinical Investigation

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### ABSTRACT

**Background:** Cervical discomfort is a common issue among postpartum women, particularly those returning to desk-based work. This study investigates and compares the outcomes of structured physiotherapy exercises and traditional midwife massage in managing neck pain among lactating working mothers.

**Methods:** A total of 30 lactating women aged 18–40 years, experiencing neck pain, were enrolled in a randomized controlled trial lasting 12 weeks. They were evenly assigned into two groups (n=15 each). Group A received traditional massage therapy administered by midwives, while Group B followed a prescribed physiotherapy exercise protocol. Assessments using the Neck Disability Index (NDI) and Shoulder Pain and Disability Index (SPADI) were conducted at the start and at 15-day intervals. Independent t-tests were used for statistical evaluation.

**Results:** Both treatment groups showed improvement; however, Group B exhibited significantly greater reductions in NDI and SPADI scores, especially by Day 61–90 ( $p < 0.001$ ). SPADI scores in Group B decreased from 105.53 to 22.87, and NDI scores from 44.93 to 4.07.

**Conclusion:** Structured physiotherapy demonstrated superior efficacy over traditional massage in alleviating neck and shoulder pain and disability in lactating women with desk jobs. These findings underscore the importance of incorporating physiotherapy into routine postpartum care for working mothers.

**Keywords:** Postpartum neck pain, Lactating mothers, Physiotherapy intervention, Traditional massage, SPADI, NDI, Desk-based occupation

### 1. INTRODUCTION

Cervical pain is a frequent musculoskeletal condition affecting postpartum women, especially those rejoining office environments during lactation. The dual strain of breastfeeding and prolonged sitting often results in poor posture and muscular imbalance, contributing to persistent discomfort. Such issues can negatively influence breastfeeding, productivity, and maternal wellbeing.

Physiotherapy-based exercise routines are recognized for enhancing posture, strengthening musculature, and improving joint mobility. On the other hand, traditional postpartum massage by midwives remains a culturally favored method for musculoskeletal relief in Indian households. Despite their popularity, comparative clinical data on these two methods remain scarce.

This study aims to evaluate the relative effectiveness of structured physiotherapy versus traditional midwife massage in treating neck pain among working lactating women.

## 2. MATERIALS AND METHODS

**Study Design:** A randomized controlled comparative study spanning 12 weeks.

**Participants:** Thirty lactating women aged 18 to 40 years, employed in desk-based roles and experiencing neck pain associated with breastfeeding posture or prolonged sitting, were recruited. Subjects were randomized into:

- Group A (Control): Received daily massage therapy by a midwife (30–40 minutes)
- Group B (Experimental): Followed a guided physiotherapy exercise program

**Inclusion Criteria:** Postpartum women aged 18–40 years, actively breastfeeding, experiencing cervical pain due to ergonomic strain, and willing to comply with the 12-week protocol.

**Exclusion Criteria:** History of cervical fractures, skin allergies, mental health instability, or non-cooperation.

**Intervention Details:** Group A received traditional massage by an experienced midwife. Group B performed physiotherapy exercises such as chin tucks, isometric neck and shoulder contractions, scapular stabilization movements, and wall push-ups under supervision four times daily.

**Outcome Measures:** NDI and SPADI scores recorded at baseline, and every 15 days over 90 days.

**Statistical Analysis:** Independent t-tests were used to analyze between-group differences. A p-value of  $<0.05$  denoted statistical significance.

## 3. RESULTS

**Demographics:** The average participant age was  $31.2 \pm 2.7$  years. Most subjects used the cradle hold for breastfeeding and were first-time mothers who resumed work within 5 weeks postpartum.

**NDI Scores:** - Group A: Decreased from 45.20 to 10.87 - Group B: Decreased from 44.93 to 4.07 - Significant difference observed from Day 61 onward ( $p < 0.001$ )

**SPADI Scores:** - Group A: Reduced from 107.53 to 47.93 - Group B: Reduced from 105.53 to 22.87 - Statistically significant improvement noted from Day 31 ( $p < 0.001$ )

## 4. DISCUSSION

The findings affirm that structured physiotherapy provides more pronounced and lasting relief for neck pain compared to traditional massage in postpartum working mothers. Physiotherapy exercises target posture correction, neuromuscular control, and endurance, which contribute to long-term benefits.

This aligns with previous research by Ylinen, Falla, and others, supporting exercise-based interventions for chronic neck pain. While massage offers short-term relief, it lacks the active rehabilitation component critical for sustainable improvement.

## 5. CONCLUSION

Physiotherapy exercises demonstrated superior outcomes in reducing neck pain and associated disability in lactating women with desk-based occupations. These results advocate for integrating physiotherapy into maternal health services, especially for women resuming sedentary work roles postpartum.

## 6. LIMITATIONS

- Limited sample size ( $n=30$ )
- Short study duration (12 weeks)
- Potential variability in socioeconomic and cultural backgrounds

## 7. RECOMMENDATIONS

- Conduct larger-scale multicenter studies with extended follow-up
- Promote ergonomic education for new mothers

Include physiotherapists in standard postpartum healthcare teams

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