International Journal of Research and Review
[Indexed, Peer-Reviewed Journal]
Volume 13; Issue: 5; May 2026
Website: www.ijrrjournal.com
Research Paper *E-ISSN: 2349-9788; P-ISSN: 2454-2237*

Prevalence of Upper Back and Periscapular Pain Among Postpartum Women in Amritsar

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DOI: https://doi.org/10.52403/ijrr.20260556

ABSTRACT

Background: Postpartum women commonly experience musculoskeletal discomfort due to hormonal changes, altered posture, faulty breastfeeding positions, repetitive infant-care activities, and muscle imbalance. Upper back and periscapular pain are frequently reported complaints during the postpartum period, yet these conditions often remain under-recognized despite their impact on daily activities and quality of life. With more than 45,000 live births occurring annually in Amritsar, postpartum musculoskeletal health has become an important area requiring greater clinical attention and preventive physiotherapy strategies.

Objective: To determine the prevalence of upper back and periscapular pain among postpartum women in Amritsar and to analyze associated factors, including mode of delivery and functional impairment.

Methods: A cross-sectional observational study was conducted among postpartum women aged 20-40 years attending various hospitals in Amritsar. Women between 6 weeks and 12 months postpartum were screened during the study period. Data regarding demographic characteristics, mode of delivery, postpartum duration, and pain characteristics were collected. Pain intensity was assessed using the Numeric Pain Rating Scale (NPRS), and functional impairment was evaluated using the Shoulder Pain and Disability Index (SPADI). Statistical analysis was performed using IBM SPSS software.

Results: The study demonstrated a high prevalence of upper back and periscapular pain among postpartum women. Among the 150 postpartum women screened, reported upper back and periscapular pain, indicating a high prevalence of musculoskeletal complaints during the postpartum period. Women with vaginal deliveries demonstrated comparatively higher pain intensity and SPADI scores than women with cesarean deliveries.

Conclusion: Upper back and periscapular pain are common musculoskeletal complaints among postpartum women and may be associated with altered posture, childcare activities, and delivery-related factors. Early physiotherapy screening, ergonomic education, and postural correction strategies may help reduce pain and improve functional outcomes in postpartum women.

Keywords: Postpartum women, Upper back pain, Periscapular pain, Numeric Pain Rating Scale, Shoulder Pain and Disability Index, Physiotherapy.

INTRODUCTION

The postpartum period refers to the phase following childbirth during which a woman's body gradually returns to its pre-pregnant physiological and anatomical state. This period is associated with substantial

hormonal, biomechanical, musculoskeletal, and psychological changes that can significantly influence maternal health and well-being.[1] Although postpartum care frequently focuses on the obstetric and neonatal concerns, musculoskeletal complaints experienced during this period often remain under-recognised.[2]

Pregnancy and postpartum adaptations result in considerable postural and mechanical stress on the cervical, thoracic, and scapular regions. Enlargement of the abdomen during pregnancy shifts the center of gravity anteriorly, resulting in compensatory thoracic kyphosis, forward head posture, and rounded shoulders. These changes alter scapular positioning and increase loading on the cervical and periscapular musculature. [3,4]

Hormonal changes also contribute to postpartum musculoskeletal dysfunction. Elevated levels of relaxin, progesterone, and estrogen increase ligamentous laxity and reduce joint stability, thereby increasing reliance on muscular stabilization. Persistent ligamentous laxity combined with repetitive childcare activities can predispose postpartum women to pain and postural dysfunction.[5]

Breastfeeding and infant-care activities place additional stress on the upper back and shoulder girdle. Prolonged forward-flexed positions, repetitive lifting, carrying, and unsupported feeding postures may contribute to overactivity of the upper trapezius and levator scapulae while weakening scapular stabilizers such as the rhomboids and lower trapezius. This imbalance may lead to upper back pain, periscapular discomfort, and functional limitations. [6,7]

Previous literature has primarily focused on low back and pelvic girdle pain during pregnancy and postpartum, whereas upper back and periscapular pain remain comparatively underexplored. Studies have reported associations between breastfeeding posture, repetitive childcare activities, and neck-shoulder pain among postpartum women. However, limited data are available regarding the prevalence and associated factors of upper back and periscapular pain in Indian postpartum women. Recent demographic statistics indicate that 45,767 live births were registered in Amritsar in 2023, emphasizing the growing postpartum population and the importance of addressing postpartum musculoskeletal health concerns in this region.[8]

Understanding the prevalence and contributing factors of these conditions is essential for developing targeted physiotherapy interventions and preventive strategies. Therefore, the present study aimed to determine the prevalence of upper back and periscapular pain among postpartum women in Amritsar and analyze associated factors including mode of delivery and postural changes.

Need of study:

Upper back and periscapular pain are commonly reported among postpartum women but are often under-recognized in routine postpartum care. Breastfeeding posture, infant-care activities, and altered biomechanics may contribute significantly to musculoskeletal dysfunction during the postpartum period. There is limited literature regarding the prevalence and associated factors of upper back and periscapular pain among postpartum women in India. Identifying associated factors such as delivery mode and postural changes may help in developing preventive physiotherapy strategies and ergonomic education programs.

Objectives of the study:

1. To determine the prevalence of upper back and periscapular pain among postpartum women.
2. To analyze the association between delivery mode and upper back/periscapular pain.
3. To assess pain intensity, disability, and postural characteristics among postpartum women with upper back and periscapular pain.

MATERIALS & METHODS

Study Design: A cross-sectional observational study.

Study Setting: The study was conducted in various hospitals and outpatient departments in Amritsar.

Study Population: The source for the present study comprised postpartum women attending selected hospitals and physiotherapy outpatient departments in Amritsar during the study period. Recent demographic statistics indicate that more than 45,000 live births occur annually in Amritsar, reflecting a substantial postpartum population vulnerable to musculoskeletal complaints. Postpartum women between 6 weeks and 12 months after delivery constituted the target population for the study.

Sampling Technique: Convenience sampling technique was used.

Sample Size: A total of 150 postpartum women attending selected healthcare facilities were included in the study according to the eligibility criteria during the study period.

Inclusion Criteria:

1. Women aged 20-40 years.
2. Postpartum duration between 6 weeks and 12 months.
3. Women willing to participate in the study.
4. Breastfeeding mothers.

Exclusion Criteria:

1. History of spinal deformities.
2. Neurological disorders affecting posture or limb function.
3. Previous cervical, thoracic, or shoulder surgery.
4. Severe postpartum complications.
5. Systemic musculoskeletal disorders.

Outcome Measures:

1. Numeric Pain Rating Scale (NPRS)
2. Shoulder Pain and Disability Index (SPADI)

Procedure:

Postpartum women attending hospitals and physiotherapy outpatient departments were screened during the study period. The study was conducted among postpartum women derived from the larger maternal population of Amritsar, where approximately 45,000 live births occur annually. Eligible participants between 6 weeks and 12 months postpartum were assessed according to inclusion and exclusion criteria. The purpose of this study was explained, and informed consent was obtained from all participants. Demographic details including age, postpartum duration, and mode of delivery were recorded.

Participants were assessed for the presence of upper back and periscapular pain. Pain intensity was measured using the Numeric Pain Rating Scale (NPRS), while pain-related functional impairment was evaluated using the Shoulder Pain and Disability Index (SPADI).

Statistical Analysis

Descriptive statistics including frequency, percentage, mean, and standard deviation were used to analyze demographic and clinical variables. Inferential statistics including chi-square test and independent t-test were used to analyze associations between variables. Statistical significance was set at $p < 0.05$.

RESULT

A total of 150 postpartum women between 6 weeks and 12 months postpartum duration participated in the study. Table 1 shows that the majority of participants belonged to the age groups of 26-30 years (40.7%), followed by 20-25 years (36.0%), 31-35 years (16.7%), and 36-40 years (6.6%). Regarding postpartum duration, 43.3% of participants were between 6 weeks and 3 months postpartum, 34.0% were between 3 months and 6 months, and 22.7% were between 6 and 12 months postpartum.

Among the participants, Vaginal delivery was more common and constituted 58.7% of the study population, whereas cesarean

delivery accounted for 41.3%. Figure 1 illustrates the distribution of delivery mode among postpartum women included in this study.

Table 1. Demographic Characteristics of Participants

Variable	Frequency (n)	Percentage (%)
Age Group (20–25 years)	54	36.0
Age Group (26–30 years)	61	40.7
Age Group (31–35 years)	25	16.7
Age Group (36–40 years)	10	6.6
Vaginal Delivery	88	58.7
Cesarean Delivery	62	41.3
6 weeks–3 months postpartum	65	43.3
3–6 months postpartum	51	34.0
6–12 months postpartum	34	22.7

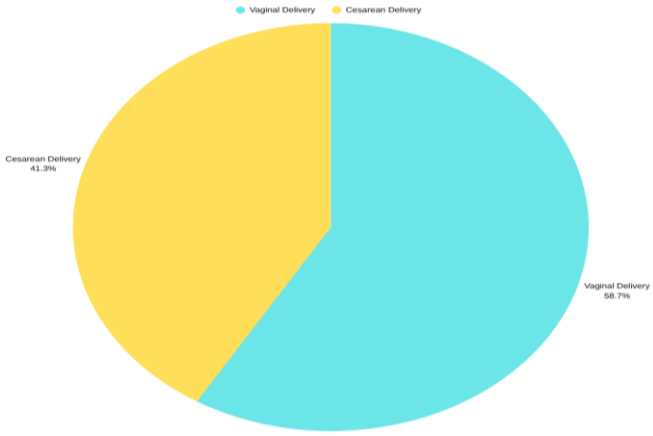

Figure 1. Pie Chart Showing Distribution of Delivery Mode Among Participants

The prevalence of upper back and periscapular pain was found to be high among postpartum women as presented in Table 2. Out of the total participants, 44.7% reported both upper back and periscapular pain, 30.0% reported isolated upper back pain, and 25.3% reported isolated periscapular pain. Figure 2 represents the distribution of pain among participants.

Table 2. Prevalence of Upper Back and Periscapular Pain

Condition	Frequency (n)	Percentage (%)
Upper Back Pain	45	30.0
Periscapular Pain	38	25.3
Both Upper Back and Periscapular Pain	67	44.7

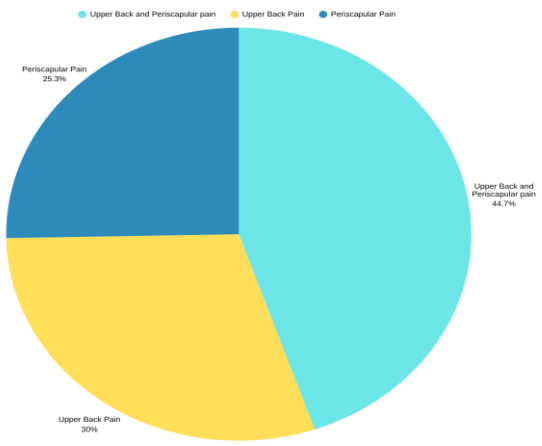

Figure 2. Pie Chart Showing Distribution of Upper Back and Periscapular Pain

Pain intensity and functional impairment were compared according to delivery mode. Women with vaginal deliveries demonstrated higher mean pain intensity and functional limitation scores compared to women with cesarean deliveries. Table 3 shows the mean NPRS score among women with vaginal delivery was 6.0 ± 1.3, whereas women with cesarean delivery demonstrated a mean NPRS score of 4.8 ± 1.1. Similarly, the mean SPADI score was higher among women with vaginal delivery (44.2 ± 8.7) compared to cesarean delivery (32.1 ± 7.4). the differences were found to be statistically significant ($p < 0.05$).

Table 3. Comparison of Pain and Functional Impairment According to Delivery Mode

Variable	Vaginal Delivery Mean ± SD	Cesarean Delivery Mean ± SD	p-value
NPRS	6.0 ± 1.3	4.8 ± 1.1	0.002
SPADI	44.2 ± 8.7	32.1 ± 7.4	0.001

Assessment of pain severity revealed that moderate pain was the most frequently reported category among postpartum women, accounting for 47.3% of participants. Severe pain was reported by 28.7% of women, while 24.0% demonstrated mild pain. Figure 3 and Table 4 illustrate the distribution of pain severity among postpartum women.

Table 4. Distribution of Pain Severity

Pain Severity	Frequency (n)	Percentage (%)
Mild Pain	36	24.0
Moderate Pain	71	47.3
Severe Pain	43	28.7

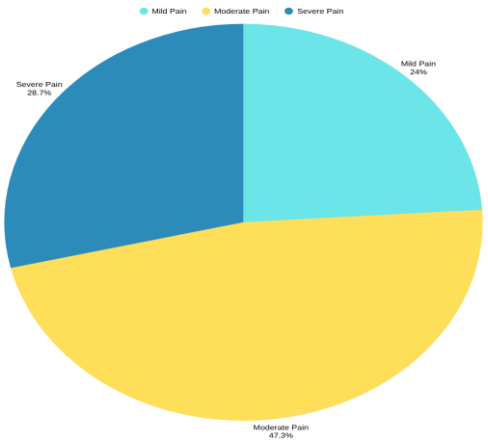

Figure 3. Pie Chart Showing Distribution of Pain Severity

DISCUSSION

The present study investigated the prevalence and associated factors of upper back and periscapular pain among postpartum women in Amritsar. The findings demonstrated that upper back and periscapular pain are common musculoskeletal complaints during the postpartum period.

Several biomechanical and hormonal factors may contribute to postpartum musculoskeletal dysfunction. Pregnancy-related postural adaptations, including thoracic kyphosis, forward head posture, and rounded shoulders, may persist during the postpartum period due to repetitive childcare activities and breastfeeding postures. Sustained flexion positions during infant feeding can increase stress on the upper trapezius, levator scapulae, and thoracic musculature, contributing to pain and fatigue. [3,6,9]

The study demonstrated a greater association of pain among women with vaginal delivery compared to cesarean delivery. Increased physical demands during labor, prolonged positioning during childbirth, early infant-handling activities, and repetitive childcare tasks following vaginal delivery may contribute to upper back and periscapular pain among postpartum women.[10]

Participants with greater pain severity commonly reported difficulty during breastfeeding, prolonged sitting, lifting, and carrying infants. Similar findings have been reported in previous studies examining postpartum musculoskeletal pain related to childcare activities and prolonged faulty posture.

Functional limitations related to lifting, carrying infants, breastfeeding, reaching activities, and prolonged sitting were

frequently reported among women with higher SPADI scores.[7] These findings highlight the importance of early physiotherapy intervention during the postpartum period.

The findings of the present study emphasize the need for postpartum musculoskeletal screening programs and physiotherapy-based preventive strategies aimed at ergonomic education, pain reduction, and prevention of prolonged postural stress during childcare activities.

The limitations of this study are that the study used convenience sampling which may limit generalizability, sample size was relatively small, long-term follow-up was not performed, and psychological and occupational pain were not evaluated. The future studies may include larger multicentric study, analyze the effect of breastfeeding and infant-care on pain severity, and interventional studies for managing the postpartum upper back and periscapular pain.

CONCLUSION

Upper back and periscapular pain are highly prevalent among postpartum women and are associated with postural stress, infant care activities, and delivery-related factors. Women with vaginal delivery demonstrated comparatively greater pain intensity and functional impairment than those with cesarean delivery. Early physiotherapy assessment, ergonomic counselling, and preventive strategies may help reduce musculoskeletal dysfunction and improve quality of life among postpartum women.

Declaration by Authors

Ethical Approval: Approved.

Acknowledgement: The authors express sincere gratitude to all participants in the study for their valuable cooperation and time.

Source of Funding: None

Conflict of Interest: No conflicts of interest declared.

REFERENCES

1. Gutke A, Lundberg M, Ostgaard HC, Oberg B. Impact of postpartum lumbopelvic pain on disability, pain intensity, and health-related quality of life. Acta Obstet Gynecol Scand. 2011;90(1):35-40.
2. Wu WH, Meijer OG, Uegaki K, Mens JM, van Dieen JH, Wuisman PI, et al. Pregnancy-related pelvic girdle pain: terminology, clinical presentation, and prevalence. Eur Spine J. 2004;13(7):575-89.
3. Ratajczak AE, Zawadka M, Rychlik M, Dobrowolska A, Krela-Kazmierczak I. Musculoskeletal pain and posture-related disorders in breastfeeding women: a narrative review. Int J Environ Res Public Health. 2024;21(2):311.
4. Pillastrini P, de Lima E Sa Resende F, Banchelli F, Costi S, Vanti C. Effectiveness of global postural re-education in patients with chronic neck pain: randomized controlled trial. J Back Musculoskelet Rehabil. 2016;29(3):531-8.
5. Takale P, Yadav R, Shinde S. Effect of muscle energy technique on trapezitis among postpartum women. Indian J Physiother Occup Ther. 2022;16(2):45-50.
6. Situt GA, Philip S, Patil P. Prevalence of Scapular Dyskinesis in Breastfeeding Postnatal Women in Satara District—An Observational Study. Journal of Evolution of Medical and Dental Sciences. 2021 Aug 2;10(31):2401-6.
7. Bulguroglu HI, Bulguroglu M, Ozaslan A. Physical activity, musculoskeletal pain, and postpartum functional limitations among women after childbirth. BMC Womens Health. 2023; 23:118.
8. IndiaStat District Infrastructure. District socio-economic profile of Amritsar district, Punjab: live birth statistics 2023 [Internet]. Available from: https://www.indiastatdistrictinfra.com/punjab/amritsar-district
9. World Health Organization. WHO recommendations on maternal and newborn care for a positive postnatal experience. Geneva: WHO; 2022.
10. Phadke A, Bedekar N, Shyam A, Sancheti P. Effect of muscle energy technique and static stretching on pain and functional disability in patients with mechanical neck pain: A randomized controlled trial. Hong Kong Physiother J. 2016 Apr 14; 35:5-11. doi: 10.1016/j.hkpj.2015.12.002.

How to cite this article: Jasmeen Kaur, Varinder Kaur. Prevalence of upper back and periscapular pain among postpartum women in Amritsar. *International Journal of Research and Review*. 2026; 13(5): 612-617. DOI: *https://doi.org/10.52403/ijrr.20260556*

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