

## Musculoskeletal pain syndrome in postpartum women

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### ABSTRACT

**Aim:** To estimate the occurrence of musculoskeletal pain syndrome in postpartum women.

**Method and Measures:** A cross sectional study was conducted from August 2018 to February 2020 among 115 postpartum women attending at a tertiary care hospital in north Karnataka. Standardized and pre validated questionnaires “Brief Pain Inventory” and “Visual Analogue Scale” were used for subjective rating of pain. Result expressed in frequency and percentage. Results: Musculoskeletal pain syndrome was present among 99% women and most common complaint was low back pain (74%). General activity, walking ability and mood were much interfered by pain.

**Conclusions:** The results showed there is high occurrence of musculoskeletal pain syndrome in postpartum women at a tertiary care hospital; most common is low back pain.

**Keywords:** Brief Pain Inventory, musculoskeletal syndrome, postpartum women, Visual Analogue Scale.

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### INTRODUCTION

Musculoskeletal pain is defined as pain which has an effect on tendons, muscles, ligaments & bones. It occurs due to repeated activities, postural tensity, sustained immobilization & overuse.<sup>1</sup> Majority women develop musculoskeletal disorders in postnatal period because of constant hormonal impact of breastfeeding on musculoskeletal structure, biomechanics, and ergonomic pressure.<sup>2</sup> usually every women experience few musculoskeletal discomforts and 25% of them undergo few disabling manifestations. Common impairments are diastasis rectus abdominis muscle (67%) and low back pain (30-50 %),<sup>3</sup> wrist pain (2-25%), hip pain,<sup>5</sup> patello-femoral dysfunction,<sup>6,7</sup> pubic symphyseal pain,<sup>4</sup> breast engorgement, calf and foot pain.<sup>8-11</sup>

Early reporting of symptoms and sufficient treatment can be achieved by awareness of problems.<sup>12</sup> However literature has reported burden of few musculoskeletal conditions in western postpartum women, scarcity of this information is observed among Indian postpartum

population hence the study was undertaken to screen various musculoskeletal syndrome during postpartum period and to estimate their prevalence in a tertiary center .

### METHODS

A cross sectional study was conducted from August 2018 to February 2020 among 115 postpartum women attending Department of Obstetrics and Gynecology at a tertiary care hospital in north Karnataka, India

Primiparous and multiparous postpartum women after 6 weeks of childbirth to one year, who agreed to give written consent, were included in the study. Women who had medical conditions such as hypertension and diabetes and stillbirth, intrauterine device, pelvic inflammatory disease, cesarean section, twin and assisted deliveries, and women with advanced musculoskeletal pain syndrome were excluded. Standardized and pre validated questionnaires consisting of eight questions ‘Brief Pain Inventory (BPI)’<sup>12</sup> and Visual Analogue Scale (VAS)<sup>13</sup> were

### CORRESPONDENCE

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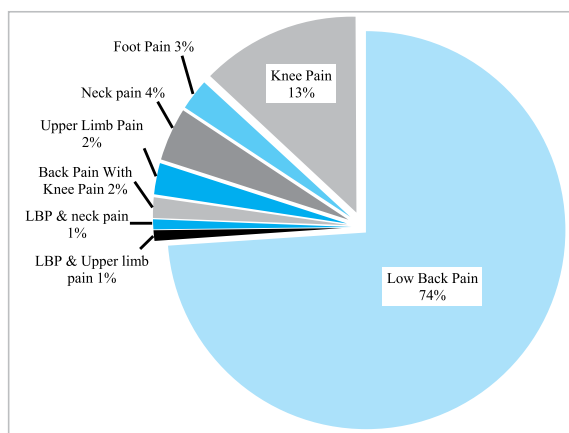
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the data collection tools. The VAS consists of 0 to 10 scales which indicate severity of pain, and BPI consists of 8 questions in which the pain perception by postnatal women in last week and Q5 explains about current pain perception.

Statistical Analysis was done by using Package of Social Sciences (SPSS) Version 22 and descriptive analysis was performed. Ethical Clearance was obtained from institutional ethics committee. Sample size obtained based on prevalence.

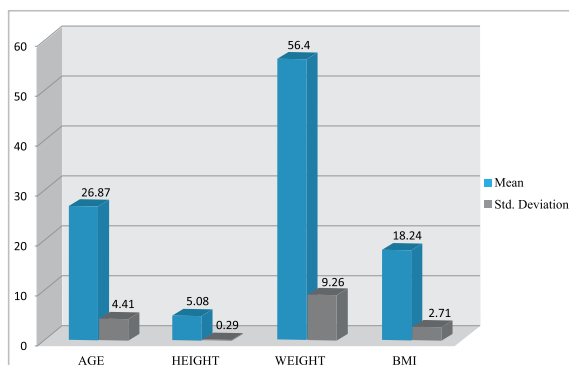
## RESULTS

Out of 160 cases only 115 cases were eligible for the study. Lower back pain was most frequent problem followed by knee pain and neck pain [Figure-1].



**Figure-1: Distribution of Musculoskeletal Syndrome in Postnatal Women (n=115)**

The mean age (in years), mean height (in feet), mean weight (in kg) and BMI (in Kg/m<sup>2</sup>) are calculated [Figure-2].



**Figure-2: Mean of variables by age, height, weight and BMI**

The pain perception by postnatal women last week

& Q5 explains about current pain perception Worst pain, mean 5.21, SD 1.79. Least pain, mean 2.60, SD 1.52. Average pain, mean 3.63, SD 1.17 & current pain, mean 2.20, SD 1.43) (Table 1).

	Mean	SD
Worst pain	5.21	1.79
Least pain	2.60	1.52
Average pain	3.63	1.17
Current pain	2.20	1.43

**Table-1: Mean of pain perception based on subject's response**

Interference of pain in the daily activities & emotional status of postnatal women during past week, out of 10 scales general activities, mean 2.52, SD 1.59. Mood, mean 1.55, SD 1.51. Walking ability, mean 2.52, SD 1.77. Normal work, mean 2.80, SD 1.63. Relation with other people, mean 1.29, SD 1.53. Sleep, mean 1.40, SD 1.80. Enjoyment of life, mean 0.43, SD 0.70 (Table 2).

Q 8 (A-G)	Mean	SD
General activity	2.52	1.59
Mood	1.55	1.51
Walking ability	2.52	1.77
Normal work	2.80	1.63
Relations with other people	1.29	1.53
Sleep	1.40	1.80
Enjoyment of life	0.43	0.70

**Table-2: Distribution of mean of Activities and Emotional Status Interfered by Pain**

## DISCUSSION

Low back pain was the most frequent problem in postnatal women than other symptoms like knee pain, neck pain or limb pain unlike in a study Mousavi et al who used VAS and pelvic provocation test; and found lumbopelvic pain than Pelvic Girdle Pain (PGP) and/or LBP in the majority. The intensity of pain by using VAS was 5.6 and PGP was nearly 2 times higher than LBP.<sup>14</sup>

Breen TW et al studied for both vaginal and caesarean deliveries who reported 79% having incision site pain during first two months of postpartum period and 18% felt pain up to 6 months after delivery. Women who experienced a C-section were more likely to report persistence of pain for a long period.<sup>15</sup>

In contrast; the current study was planned in vaginal delivery subjects only and had low back pain as the most common problem lasting up to one year.

A longitudinal study conducted by Breen TW et al to determine the factors associated with postnatal back pain was found to be related with earlier back ache, higher body mass and younger age. For new origin of pain the higher weight and short stature were responsible.<sup>16</sup> This finding is not supported by the current study.

General activities like walking, normal work, sleep, enjoyment of life & emotional status like mood, relation with other people were affected by pain in this study. This finding is in line with the study done for vaginal and cesarean deliveries by Pereira TR et al

who found activities like standing up, walking, sitting down, lying down and taking a bath to be interfered by pain.<sup>17</sup>

This study is limited by single center hence results cannot be generalized to various geographical areas. It was a short duration study and there was no objective assessment included in the study.

## CONCLUSIONS

The occurrence of musculoskeletal pain syndrome is higher among postnatal women at a tertiary care hospital, especially the low back pain which contributed the most when compared with other symptoms.

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