



Original Article

Prevalence of Neck and Low Back Pain in Women During Postpartum Period

Amna Asif¹, Fareeha Amjad^{2*}, Hamza Dastgir¹, Wajiha Asif³, Adina Adil³, Mahad Afzal¹

¹University of Coventry, United Kingdom

^{2*}Riphah International University, Lahore, Pakistan

³Combined Military Hospital, Lahore, Pakistan

ABSTRACT

Background: Due to the changes in the woman's body during pregnancy, neck and back pain are common complaints among postpartum women. **Objective:** To determine the prevalence of neck and low back pain in the postpartum period of pregnancy. **Methods** This descriptive cross-sectional study was carried out within six months after the approval of the synopsis. After receiving their written consent, participants from the Jinnah and Services hospitals were given a standard questionnaire to complete. Pregnant females aged between 20-40 years of age were included in the study. Those having complications like gestational diabetes, pre-eclampsia or other serious conditions were excluded from the study. A predesigned Nordic questionnaire was utilized for the data collection purpose. A total of 19 closed-ended questions were included in the survey, covering the subjects' demographic information, parity, recent C-section or normal delivery, physical activity, low back and neck pain during the postpartum period. After completing the questionnaire, data was gathered to assess the prevalence of neck and low back pain. Using SPSS 22.0, the data was analyzed and for the quantitative variables, means and standard deviations were computed, while the qualitative variables were shown as frequency and percentage. **Results:** Among 119 postpartum women, 53 (44.5%) had a normal vaginal birth and 66 (55.5%) had the cesarean mode of delivery, 43 (36.1%) were breastfeeding, 22 (18.49%) were bottle-feeding and 54 (45.38%) were given both. In 12 months, 62 (52.10%) reported neck pain, whereas 80 (67.23%) reported low back pain. Women experiencing neck pain were 53(44.54%) and 72(60.50%) in the previous seven days respectively. **Conclusion:** The study revealed that the frequency of neck pain and lower back pain was found to be 44.54% and 60.5% respectively in pregnant females.

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* Corresponding Author:

Fareeha Amjad, Riphah International University, Lahore, Pakistan

Email: fari_fairy@yahoo.com

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INTRODUCTION

The main cause of low back pain has not yet been discovered, it has been noted that sacral stress fractures and postpartum sacroiliitis are rare causes. Arthritis, sciatica, lumbar disc pathology, urinary tract infection, lumbar stenosis and cauda equine syndrome are among its differential diagnoses.¹ The woman suffers microscopic or severe tissue damage during labor and delivery. The level of a person's psychological, medical and economic well-being greatly influences the amount of pain this injury causes. During labor and delivery, the nerves that transport signals from the uterine cervix and lower uterine segment become more sensitive and sprout.

This occurs when inflammatory chemicals are released, which sensitize nociceptors and increase the risk of chronic pain. This may also be the case with cesarean sections, which may result in surgical damage to the uterine tissues or nerve traction.² Neck, shoulder and low back regions are the areas musculoskeletal disorders typically manifest. Musculoskeletal pain is caused by environmental and hereditary factors respectively.³ The most common musculoskeletal condition is low back pain which is currently the main contributor to musculoskeletal disability.

The second most common musculoskeletal condition worldwide is neck pain.⁴ It is typically caused by bone and joint problems, trauma, bad posture, degenerative diseases, malignancies and muscle strains.⁵ In the postpartum period, low back pain is the main problem caused by breastfeeding, hormonal changes, changes in muscle strength and tone and bending over to care for the infant.⁶ This pain cannot be avoided during pregnancy and in the postpartum period.⁷ Back pain is caused by changes in posture, weight gain and shifting of the center of gravity during pregnancy. Similar adjustments take place while the baby

is breastfeeding.⁸ Back pain, incontinence and dyspareunia may get worse or better over time, but some women continue to have them after giving birth.⁹ Stress, both physical and mental, is typical following delivery. Common postpartum symptoms include headache, backache, piles and depression. The majority of health issues arise because people are not aware of available interventions.¹⁰ There is a condition known as postpartum syndrome which can include shoulder discomfort, neck stiffness, jaw pain, headache, lower back and hip pain.¹¹ Low back discomfort and pelvic floor weakness which are known risk factors for pelvic floor dysfunction is more common after episiotomies and during surgical vaginal deliveries.¹²

The manual practitioners utilize spinal manipulation treatment to treat headaches, cervical spine and low back pain.⁷ A postnatal examination is crucial because it provides the chance to lower the risk of impairment or excruciating pain.^{9,13} Physical discomfort is one of the unpleasant symptoms of neck and shoulder pain.^{13,14} Pelvic girdle discomfort during childbirth might result in back pain which has less positive long-term effects.⁴ Following a cesarean delivery, women frequently have chronic pain.²

Although it begins during pregnancy, the back discomfort continues at a low and gradual intensity. Back pain and posterior pelvic pain are distinct, but neither has an appropriate follow-up.^{14,15} Neck discomfort can be brought on by bad posture, labor complications, unexpected motions and straining.^{15,16} Carotid dissection can result from this, if there are no restrictions for back pain after birth, spinal therapeutic manipulation is thought to be a successful treatment. It also helps in the treatment of associated symptoms.^{16,17} It has been theorized that using epidural analgesics during delivery causes long-term back pain. Non-selective nerve blockage

causes the muscles in the back and legs to relax, which results in bad posture and immobility. The postures taken during birth are essentially the stressful ones that harm the spine and cause the patient to have chronic back pain.^{17,18} When it comes to treating neck and low back pain, self-management is regarded as an intervention in physiotherapy. It refers to the woman's capacity to control the symptoms, administer treatment for them, control the physical and psychosocial side effects and alter her way of life to get over the chronic condition.

In this method, the patient and the physical therapist collaborate to practice short bouts of fear avoidance and self-management. The patient can carry out daily living activities pain-free while undergoing fear-inducing movements, creating personal action plans, and performing stabilizing exercises for the lumbar spine and pelvic girdle.^{18,19} Numerous studies have been carried out to determine the patterns of pain and discomfort experienced by pregnant women. However, the purpose of this study was to determine how common neck and lower back pain was during the postpartum period. Additionally, this study examined whether women frequently experience neck and back pain during the postpartum period of pregnancy.

METHODS

This descriptive cross-sectional study was carried out within six months after the approval of the synopsis. After receiving their written consent, participants from the Jinnah and Services hospitals were given a standard questionnaire to complete. Pregnant females aged between 20-40 years of age were included in the study. Those having complications like gestational diabetes, pre-eclampsia or other serious conditions were excluded from the study. A predesigned Nordic questionnaire was utilized for the data collection purpose. A total of 19 closed-ended questions were included in

the survey, covering the subjects' demographic information, parity, recent C-section or normal delivery, physical activity, low back and neck pain during the postpartum period. After completing the questionnaire, data was gathered to assess the prevalence of neck and low back pain. Using SPSS 22.0, the data was analyzed and for the quantitative variables, means and standard deviations were computed, while the qualitative variables were shown as frequency and percentage. A convenient sampling technique was used and the size of the sample was calculated by the following formula: $n = \frac{Z^2 P(1-P)}{d^2}$

where

α = confidence level = 0.92 x 100= 92%

P=anticipated population proportion

d= absolute precision required= 0.08

n=sample size 119

RESULTS

Among 119 postpartum women, 53 (44.5%) had a normal vaginal delivery, 66 (55.5%) had a cesarean (C-section), 43 (36.1%) were breastfeeding mothers, 22 (18.49%) were bottle-feeding mothers and 54 (45.38%) were given both. In terms of frequency during 12 months, neck pain occurred in 62 (52.10) and low back pain in 80 (67.23%) women respectively. Women who visited a physician for neck discomfort were 40 (33.61%) and those who did so for low back pain were 36 (30.25%). Of those experiencing neck pain over the past seven days, 53 (44.54%) and 72 (60.50%) did not.

To determine the relationship between the manner of birth and the discomfort in the neck and back, as well as the relationship between the style of feeding and the pain in those areas, crosstabs were created. Exercise and overall health status were linked however, there was no connection between delivery method and current health. In the previous 12 months, a

correlation between delivery method and neck discomfort was discovered. Both 58.5% of women who delivered normally vaginally and 47% who underwent cesarean section (C-section) complained of neck pain. Low back discomfort was reported by 64.2% and 69.7% of women who had a normal vaginal birth respectively while 52.1% of women experienced difficulties with low back

discomfort and were unable to work, 39.5% of women had been prohibited from working due to childbirth. Due to the method of birth, 33.6% of women consulted a doctor for neck discomfort and 30.3% of women visited a physician for low back pain. In the last seven days following birth, 44.5% of women reported neck discomfort and 60.5% of women reported low back pain.

Table I: Crosstab Between Baby Feeding and Trouble in Neck During Last Days

Baby feed	Trouble in Neck During Last 7 days	Total
Breastfeeding	25 (58.1%)	43 (100%)
Bottle feeding	9 (40.9%)	22(100%)
Both	19(35.2%)	54(100%)
Total	53(44.5%)	119(100%)

*Pearson Chi-square= 5.25

There is no association between breastfeeding a newborn and recent neck pain in the last week. (p=0.75)

Table II: Crosstab Between Baby Feeding and Lower Back Pain During the Last 7 Days

Baby feed	Trouble in Lower Back During Last 7 Days	Total
Breastfeeding	31(72.1%)	43(100%)
Bottle feeding	14(63.6%)	22(100%)
Both	27(50%)	54(100%)
Total	72(60.5%)	119(100%)

*Pearson Chi-square= 5.00

There is no association between breastfeeding and whether you have experienced low back discomfort in the past week. (p=0.85)

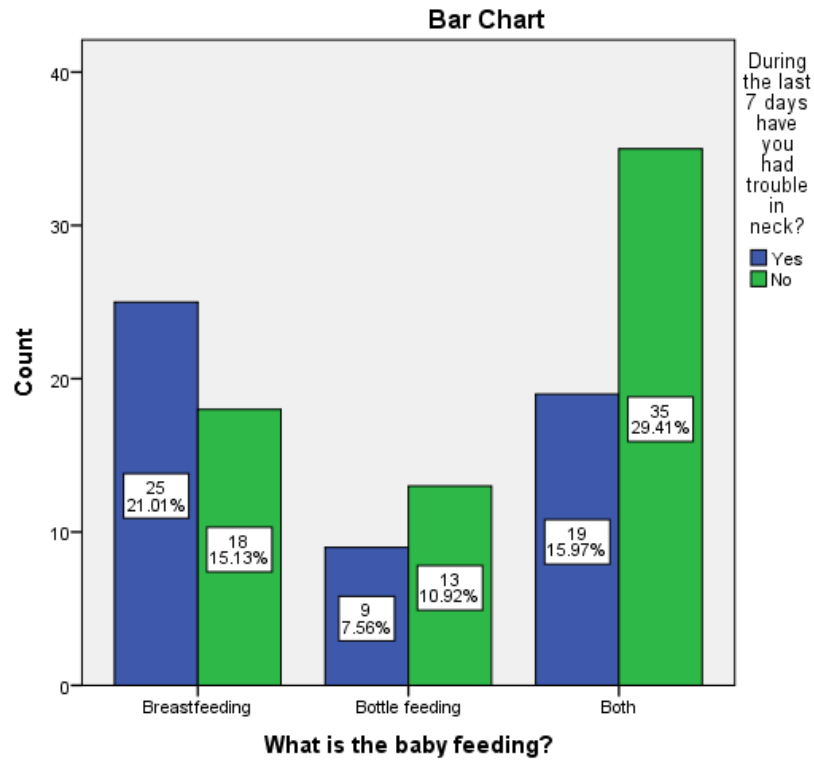


Figure I: Frequency and Percentages of Baby Feeding and Trouble in Neck Pain

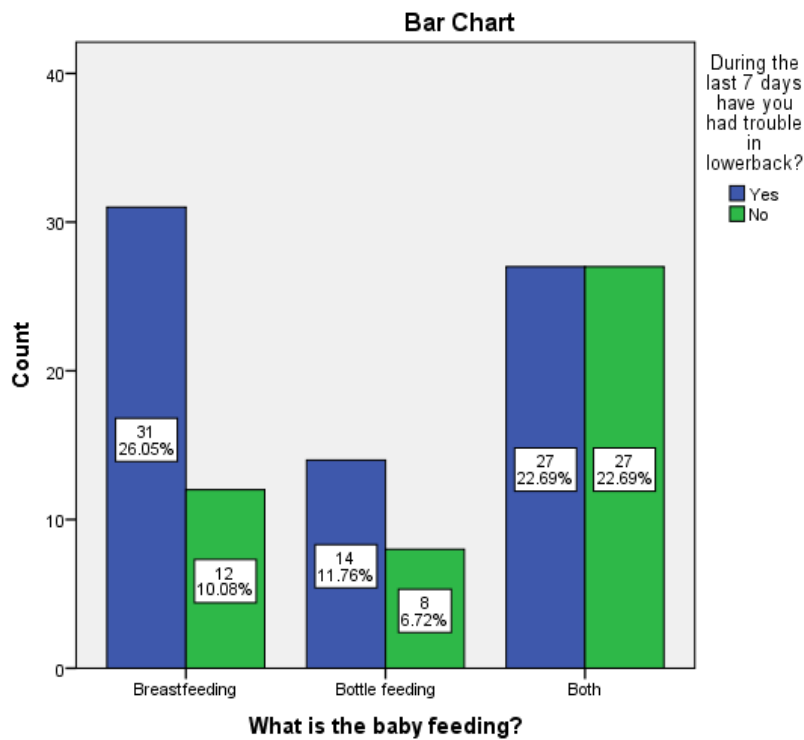


Figure II: Frequency and Percentages of Baby Feeding and Trouble in Lower Back Pain

DISCUSSION

The findings indicate that low back and neck discomfort is common among postpartum women. Most of these women's neck discomfort does not affect their quality of life; however, lower back pain does. The discomfort was brought on by the job, which included caring for the infant, doing home chores, feeding the infant and dealing with low back pain following delivery. As the postpartum phase of the study on the Swedish women went on, neck and shoulder discomfort got worse. Rest from physical exercise and mental relaxation were both necessary to ease it. At one year, these women's lower back pain developed.⁹

In a study, M. Corso showed that low back pain is a common complaint in new mothers. The findings of this study support our study which concludes that lower back is a prevalent condition during the postpartum period. The stress of childbirth and related hormonal changes cause pain to worsen or develop in novel ways throughout pregnancy. Women typically end up living with low back pain since it has been difficult to discover studies for the condition. There are several differential diagnoses for low back pain that should be kept in mind, including osteomyelitis.¹

According to study analysis, the most frequent symptoms among other aches in Japanese women were neck and shoulder discomfort. It revealed the cause of neck and shoulder discomfort, which was physiological stress as well as the postural angle of nursing the infant, which either made the pain worse or provided no relief at all.^{13,14} Cluster random sampling was used in research to determine the prevalence of persistent prenatal pain in the State of Kerala. About 9305 mothers in all were chosen and 8302 of those provided valid replies. In the postpartum period, 56.7% of women reported experiencing pain, with back

discomfort accounting for 51% of the population.^{19,20} The findings of this study correlate with the findings of our study as well. Another study conducted in the Nordic nations in 1993 found that 59% of women reported having headaches. They were under 30 years old, and between 37 and 40 percent of women reported having neck and low back discomfort (67%). The pain was more common than it was before pregnancy. The factors taken into account included depressive symptoms, domestic duties and the employment of some women, which prevented them from relaxing and caused their pain to worsen.¹⁰ The findings of this study support the findings of our study.

According to a study by Glazener et al., it becomes more difficult to accept the truth about sleep disruption and increasing physical demands during the postpartum period. The health issue impacting half of his sample was backache. He discovered a link between back pain, having kids who are heavier at birth and having an epidural. His research was in line with the findings of McArthur et al.^{20,21} Caroline conducted a self-management intervention research and included the exclusion data that indicated low back pain can be improved by therapies after the first month following childbirth.

This demonstrated that low back discomfort has a favorable prognosis and may be addressed after delivery.^{18,19} The findings of this study correlate with the findings of our study as well. Robin Russell researched the backache that mostly results from prolonged labor. According to the information gathered from the women, many of them were not aware of the significance of posture during childbirth and the postpartum period. To prevent tension in the back, which can result in chronic back pain, normal posture is restored for women receiving epidural analgesics. Women were requested to undergo postpartum administration. The advice was given on how

to lift the baby, feed the infant, and change the baby's diaper with the least amount of back strain possible.^{17,18} The findings of this study correlate with the findings of our study. It is advised that future researchers carry out a larger-scale study with a larger sample size to increase the precision and generalizability of results. The researchers are advised to compare a personalized rehabilitation program for women with neck and lower back pain to conventional physical therapy in a randomized controlled trial.

CONCLUSION

The study revealed that neck and low back pain are substantially related to the manner of delivery and baby feeding throughout the postpartum period, with low back pain being more common than neck pain. Neck and low back pain are also the primary cause of disability among females in the post-partum period of pregnancy.

DECLARATIONS

Consent to participate: Written consent had been taken from patients. All methods were performed following the relevant guidelines and regulations.

Availability of data and materials: Data will be available on request. The corresponding author will submit all dataset files. **Competing interests:** None

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Authors' contributions: All authors read and approved the final manuscript.

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