

## Association of breast feeding positioning with musculoskeletal pain in post partum mothers of Rawalpindi and Islamabad

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### Abstract

During breastfeeding, lactating mothers adopt different positions that can cause musculoskeletal problems. The purpose of this study was to determine common breastfeeding positions and musculoskeletal problems in our population and the association between them. A descriptive cross-sectional survey was conducted on 400 breast feeding mothers from hospitals, universities and community of Rawalpindi and Islamabad using a self-structured questionnaire. It was found that 283(70.8%) reported cross cradle hold (opposite arm) breastfeeding position, while 86(21.5%) reported breastfeeding in side lying position. Also 31(7.9%) were those mothers who adopted other different BF positions. Mechanical neck pain was seen in 147(36.8%) women and mechanical low back pain was seen in 88(22.0%) women. When chi square test was applied to find out association between breastfeeding position and musculoskeletal problems p value was 0.989 that there was no significant difference between them.

**Keywords:** lactating mothers, BF positions, Musculoskeletal pain, postpartum mothers

### Introduction

Breast feeding is a beneficial procedure for both physical and mental health of mothers and children. Mothers adapt a supportive position while nursing babies so that they latch on easily in addition provide better control of breasts to allow free flow of milk. Common BF positions are side-lying hold, cradle hold (same arm), cross cradle hold (opposite arm), football hold, twins hold, laid-back breastfeeding (biological nurturing), laid back breastfeeding after caesarean and babysitting breastfeeding.<sup>1</sup> In side lying position mother's back and hips are kept in straight line with pillows placement at the back and baby's head is cradled with the top arm of mother and face lifted towards breast. Cradle hold is a classic BF position in which mother is sitting with back

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and feet supported while cradling baby in her arm crook and baby face, stomach and legs are facing towards mother. In cross cradle, hold baby is not in the crook of mother's arm instead his head is on the mother's hand to guide towards breast that's why it is useful for small babies. In Foot ball hold baby is on the side under mother's arm with the face forward and body at the back like a hand bag or foot ball under arm.<sup>2</sup> Mechanical neck pain, brachial plexus pain, carpal tunnel syndrome, kyphosis, lordosis, scoliosis, sciatica and mechanical low back pain are few of the problems most commonly encountered in breastfeeding mothers. These musculoskeletal postural problems have a higher dependency on different positions of breastfeeding, which can either aggravate or relieve it. Pain originating due to these postural issues can involve any site of the body and can be felt any time during or after breastfeeding. During breastfeeding, wrong position and placement of hands to support baby's weight cause irritation of musculature of hand. Then use of same position again and again causes radiating pain in elbow and hands.<sup>3</sup>

By adopting different postures to compensate pain in sitting, standing or lying cause mechanical change in cervical, thoracic and lumbar spine that alters the correct posture of the body. If it is not corrected it can cause long term deformities by disturbing normal curvature of spine and produces hyper kyphosis and hyper lordosis.<sup>4</sup>

Low back pain is common in lactating mothers due to weakness after birth and faulty posture that mothers adopt during breastfeeding by bending over their child instead of taking baby towards them by putting pillows or using any props.<sup>5</sup>

In 2013 Mbada et al studied Mother's poor knowledge and wrong positions for breastfeeding among Nigerian mothers. The Study was a cross sectional survey including 383 lactating mothers. A self structured questionnaire was used. They studied that poor knowledge and wrong position for breastfeeding influence their own health as

well as baby's health.<sup>6</sup>

The study was planned to identify the commonly used breastfeeding positions adopted by post partum mothers and their associated musculoskeletal problems so that further actions should be done for its education, prevention and management.

## Methods and Results

A cross sectional survey was conducted through convenient sampling technique from 400 lactating mothers between the age of 20 to 40 years from hospitals, institutes and community centres of Rawalpindi and Islamabad, from September 2016 to January 2017. A self-structured questionnaire containing 11 closed ended questions regarding demographics, breast feeding positioning and related musculoskeletal pain among them was used with the confidentiality and privacy ensured to be maintained with the written consent taken from them. Ethical approval for the study was obtained from Ethical Review Committee, Riphah International University, Islamabad. Data were analyzed using SPSS 21.

The Mean age of breastfeeding mothers was  $27.3 \pm 4.89$  years. It was found that 127(31.8%) women were gravida 1 while 1(0.3%) was gravida 9. Mostly 128(32%) women were para 2 While asking for mode of delivery it was found that majority had gone through normal vaginal delivery i.e. SVD 209(52.3%). While 159(39.8%) women had C-section and 32(8%) had SVD with episiotomy. Majority of the women were housewives i.e 354(88.5%) while percentage of working women was very low i.e. 46(11.5%).

Table 1 shows that 283(70.8%) women reported cross cradle hold (opposite arm) breastfeeding position, side lying position was adopted by 86(21.3%), cradle hold (same arm) by 23(5.8%), football hold by 4(1.0%), and laid back breastfeeding (biological nurturing) by 3(0.8%), laid back breastfeeding after caesarean by 1(0.3%).

Table 2 shows that 104 women reported no pain in any area of the body i.e. 26% While 294(74%) women reported they had pain. Out of 294, mostly had cervical pain i.e. 149(37.3%), 87(21.8%) had lower back/ lumbar pain, 23(5.8%) had upper back, 14(3.5%) had shoulder pain, 10(2.5%) had arm pain, only 10(2.5%) reported leg pain.

During data collection out of 74% women, 153(38.3%) women reported pain during breastfeeding while 110(27.5%) reported pain after breastfeeding. Only 33(8.3%) reported their pain remained constant. Result

**Table-1:** Position of breastfeeding.

BF positions	Frequency	Percentage
Cross Cradle hold (opposite arm)	283	70.8
Side lying hold	86	21.5
cradle hold (same arm)	23	5.8
Football hold	4	1.0
Laid back breastfeeding	3	0.8
Laid back breastfeeding after Caesarean	1	0.3
Total	400	100

**Table-2:** Location of pain.

Location of Pain	Frequency	Percentage
cervical/neck	149	37.3
Shoulder	14	3.5
Arms	10	2.5
Hands	3	.8
upper back/ thoracic	23	5.8
lower back/ lumbar	87	21.8
Legs	10	2.5
Total	294	74
Missing	104	26.4
Total	400	100

showed 232(58.0%) women claimed to have got relief from pain by resting, while 30(7.5%) said lying relieved their pain. Women who said medication had great impact on relieving pain were 29(7.3%) while 3(0.8%) said standing decreased their pain while only 2(0.5%) reported sitting relieved their pain.

Out of 296 women, 204(51%) reported sitting as their aggravating factor, 76(19.0%) women reported standing aggravates their pain, 10(2.5%) women said lying position aggravates their pain while only 6(1.5%) women reported pain with activity. It is concluded that the most common position used by breastfeeding mothers was cross cradle hold resulting in Mechanical neck pain. Chi square test was applied to find the association between breastfeeding position and musculoskeletal pain. The p value was 0.989 No significant difference was found between the various positions but there was a significant clinical association between them.

## Discussion

This is probably the first study undertaken in Pakistan to evaluate common breastfeeding positions associated with musculoskeletal problems. It showed that most common position was cross cradle hold associated with mechanical neck pain while other positions also showed some musculoskeletal problems related to breastfeeding

positioning. In cross cradle hold position of baby is across the lap by using the opposite arm to the breast. This position is better for very small babies or for those babies and infants who got trouble latching on.<sup>1</sup> By adopting this position mothers were more comfortable and this position also showed association with mechanical neck pain due to improper posture of mothers. During data collection out of 400 sample, 104(26%) women reported no pain associated with breastfeeding in any area of body while 294(74%) reported they had pain in different regions during and after breastfeeding. Out of 74% women, 153(38.3%) reported pain during breastfeeding while 110(27.5%) reported pain after breastfeeding. Only 8.3% reported their pain remained constant.

While in 2013, Mbada et al<sup>6</sup> conducted a study on Nigerian mother's poor knowledge and wrong position for breastfeeding and its impact on mother's health. The result showed that Nigerian mothers had good knowledge about breastfeeding positions. The result reported by this study were very similar to those of our study.

Other studies were conducted to focus on importance of breastfeeding and discussed factors to influence exclusive breastfeeding. In contrast this study was done to determine commonly used breastfeeding position resulting in any musculoskeletal problem.<sup>7,8</sup>

Clinical trials and comparative studies should be done to evaluate effects of correct breastfeeding positions on women and child health.

Women health physiotherapists and lactation specialists should be available in public and private hospitals to educate women regarding the position, procedure and importance of breastfeeding.

### Limitations

We have not evaluated nursing mothers' awareness level after our survey and also the comparison between the working women and housewives.

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