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The Association of Low Back Pain with Different Breastfeeding Positions in Exclusive Breastfeeding Mothers

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Abstract: This cross-sectional observational study investigated the preferred breastfeeding positions among exclusive breastfeeding mothers and evaluated their association with low back pain (LBP). A self-structured questionnaire was administered to 100 mothers aged 20 to 40 years who were 12 to 15 weeks postpartum and recruited from tertiary hospitals and community settings. Descriptive analysis revealed that the cradle hold was the most frequently adopted position (58%), followed by the cross-cradle hold (24%). Notably, a high prevalence of low back pain was reported, with 76% of mothers experiencing discomfort. While 83% of the participants had received professional advice regarding proper feeding postures, a significant knowledge gap was identified concerning nutritional guidelines, as only 21% were aware of the clinical definition of exclusive breastfeeding. A Chi-square test was applied to determine the relationship between maternal positioning and musculoskeletal discomfort. The statistical analysis revealed no significant association between specific breastfeeding positions and the occurrence of low back pain ($p = 0.6727$). Consequently, the null hypothesis was accepted. The high incidence of LBP among the sample population, despite the lack of direct correlation to a singular feeding posture, suggests that maternal discomfort is likely multi-factorial. Contributing elements may include general postpartum physical weakness, prolonged sitting, and the broader ergonomic strains associated with daily infant care chores. These findings highlight the necessity for comprehensive postpartum ergonomic education that extends beyond breastfeeding positions to encompass general maternal physical well-being.

Keywords: Breastfeeding Positions, Low Back Pain, Maternal Ergonomics, Postpartum Health, Exclusive Breastfeeding.

Introduction

Breastfeeding is essential for the survival and healthy development of infants, creating a unique bond between mother and child and supporting cognitive growth. It is crucial for an infant's well-being during the first year of life and can continue to benefit health when combined with suitable complementary foods starting at six months. Studies indicate that breastfeeding lowers the risk of various neonatal complications and illnesses.

The World Health Organization (WHO) recommends breastfeeding for up to two years, emphasizing exclusive breastfeeding for the first six months and encouraging frequent feedings (more than eight times daily) during the first three months. Initiatives such as the Baby-Friendly Hospital Initiative by WHO and UNICEF aim to promote and support breastfeeding, achieving significant success. However, a range of factors—including cultural beliefs, maternal characteristics, infant health challenges, socioeconomic status, and psychosocial influences—can impede the effectiveness of these efforts.

Understanding factors affecting low back pain so that measures can be taken to reduce the pain would clearly be beneficial to breastfeeding mothers, and would encourage the mothers-to-be to breastfeed their infants. Back pain can result from internal factors such as disc degeneration, sprains or strain, and external factors such as gender, age, and occupation [3]. Beach et al. studied the effects of prolonged sitting on the passive flexion stiffness and found that male showed increasing lumbar spine stiffness after sitting for 1 hour while females showed such increase after 2 hours [4]. The most frequent cause of back pain is degenerated spine manifested in muscle strain, normally found in persons who excessively or improperly use back muscle. Study on back pain showed that 21% resulted from sitting postures [5]. Sitting in bending postures results in bending of spine [6] causing muscle more strain due to increased pressure on disc, which ultimately leads to fatigue and discomfort [4]. To minimize back pain resulting from prolonged sitting, it is necessary to avoid sitting postures that cause bending of the back. Bendix found that, for writing and reading, there was no difference in the pressures between a flat back chair and the chair with 7 cm support [7].

During breastfeeding, mothers adopt a particular supportive position so as to ensure that the baby latches on easily and there is easy free flow of milk. The poor knowledge and wrong position for breastfeeding influence their own health as well as baby's health. Also most of the women forget the proper breastfeeding position during feeding. Breastfeeding needs patience and practice, if not the mother will have trouble such as improper positioning might cause pain and discomfort related to the musculoskeletal system. Musculoskeletal discomfort develops in women during breast feeding due to continued hormonal influence of lactation on the musculoskeletal system with biomechanical and ergonomic stresses of child care related activities. Nowadays most mothers have to breastfeed their babies at any time anywhere and it is a difficult situation during travel. 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.

Low back pain associated with breastfeeding has not been thoroughly studied. This research aims to examine the factors that influence low back pain in breastfeeding mothers. The specific variables to be explored include position of breastfeeding, feeding duration, and the age of the mothers. The insights gained from this study will be valuable for educating the mothers about ergonomics that will provide greater comfort and support for breastfeeding mothers. Exclusive breastfeeding for initial six months provides significant health advantages for both the infant and the mother. Despite these benefits, infants are often given supplemental nutrition due to insufficient maternal awareness and various other constraints. There is an evident necessity to investigate and document the breastfeeding postures most frequently utilized by mothers, alongside the resulting prevalence of low back pain and postural complications. By identifying these common positions and their musculoskeletal impacts, targeted educational and corrective strategies can be developed to mitigate maternal discomfort and improve overall postpartum physical health.

The study aimed to investigate the relationship between various breastfeeding positions and low back pain in mothers practicing exclusive breastfeeding, to achieve this, the following objectives were established:

Identify the diverse breastfeeding positions utilized by exclusive breastfeeding mothers; Assess the incidence of low back pain within this maternal population; Establish a correlation between the specific breast feeding postures adopted and the presence of low back pain.

Upon obtaining title approval and research authorization from the institutional review board (IRB), the study commenced, a self-structured questionnaire was utilized to investigate the correlation between various breastfeeding positions and low back pain among exclusive breastfeeding mothers in this cross-sectional study. The data was collected from tertiary hospital to recruit exclusive breastfeeding mothers who had been nursing for 12 to 15 weeks. After applying inclusion and exclusion criteria to establish the sample size, participants were provided with informed consent in their primary language. This process involved a detailed explanation of the research. After consent the participants were given questionnaire where demographic details, breastfeeding knowledge and attitude, preferred feeding postures, and specific areas of physical discomfort were assessed. Participants were asked to fill the questionnaire and data was documented by the statistical analysis.

Procedural Flowchart

⇓

Submission to and approval by the Institutional Review Board (IRB).

⇓

Selection of study participants based on established inclusion and exclusion criteria.

⇓

Execution of informed consent after briefing participants on study benefits and potential risks.

⇓

Distribution and completion of the self-structured questionnaire.

⇓

Processing of collected data through rigorous statistical analysis.

⇓

Formulation of conclusions regarding the prevalence of low back pain in the target population. Feeding mothers.

Descriptive data analysis was done for the collected data using simple percentage, bar graphs or pie charts. Chi square test was applied to find association between different breastfeeding positions and low back pain in exclusive breastfeeding mothers.

RESULTS

Descriptive data analysis was done on exclusive breastfeeding mothers and it was seen that the most common breastfeeding position attained was cradle hold(58%) followed by cross-cradle hold(24%).(Figure 1)Also 76 mothers out of 100 were seen having pain in the low back region.(Figure 2) Also out of 100, regarding awareness about exclusive Breastfeeding 79 mothers were not aware about exclusive Breastfeeding.(Figure 4) However 83 out of 100 mothers were advised correct postures for Breastfeeding (Figure 5)

Then the data was analyzed to see how many mothers complained of low back region in each breastfeeding positions

	Yes	No
Cradle hold	44	14
Cross cradle hold	17	7
Side lying	5	1
Football hold	9	1
Laid back	1	1

Chi square test was applied to find if there is any association between low back pain and different breastfeeding positions. Chi square test showed there was no significant association of low back pain with different Breastfeeding positions in exclusive breastfeeding mothers.X2 (degrees of freedom, N = sample size) = chi-square value, p = p value). X2 (4, N = 100) = 2.345, p = 0.6727).The level of significance was set at $p<0.05$.

	Contingency	A
1	**Table Analyzed**	Data 1
2		
3	**P value and statistical significance**	
4	Test	Chi-square
5	Chi-square, df	2.345, 4
6	P value	0.6727
7	P value summary	ns
8	One- or two-sided	NA
9	Statistically significant (P < 0.05)?	No
10		
11	**Data analyzed**	
12	Number of rows	5
13	Number of columns	2
14		

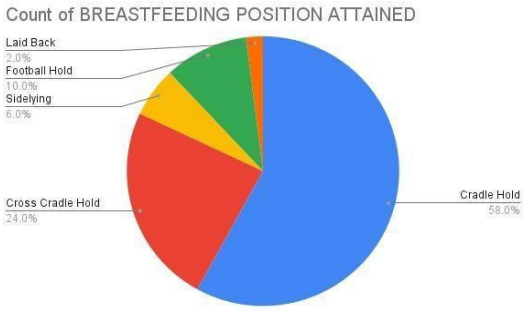

Fig 1:

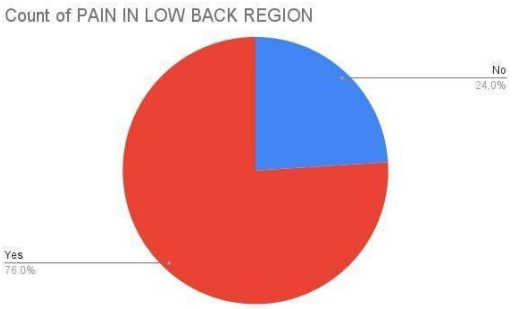

Fig 2:

Fig 3:

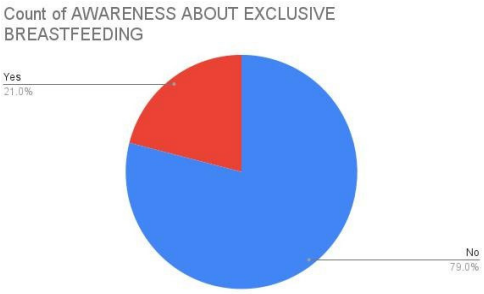

Fig 4:

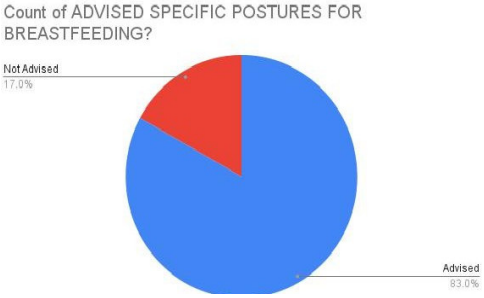

Fig 5:

Results						
	Yes	No				*Row Totals*
Cradle hold	44 (44.08) [0.00]	14 (13.92) [0.00]				58
Cross cradle hold	17 (18.24) [0.08]	7 (5.76) [0.27]				24
Side lying	5 (4.56) [0.04]	1 (1.44) [0.13]				6
Football hold	9 (7.60) [0.26]	1 (2.40) [0.82]				10
Laid back	1 (1.52) [0.18]	1 (0.48) [0.56]				2
Column Totals	76	24				**100 (Grand Total)**

The chi-square statistic is 2.3445. The *p*-value is .672673. The result is *not* significant at $p < .05$.

DISCUSSION

This is the 1st study undertaken in India to evaluate common breastfeeding positions and low back pain and if they are associated with each other. The self-administered questionnaire sought information on socio-demographic and maternal characteristics, knowledge and attitude towards breastfeeding, and the most usual breastfeeding techniques of postures, positioning and the area of pain if any. During the data collection out of 100 sample, 24 women reported no pain associated with breastfeeding in low back pain region while 76 women reported they had pain in low back region. Also the pain in the low back region felt by the mothers in this study is the pain felt after exclusive breastfeeding for 12-15 weeks. This time period was chosen because most mothers recover from fatigue of childbirth till then.

A study was conducted on Nigerian mother's knowledge and position for breastfeeding and its impact on mother's health (in 2013). The results showed that the Nigerian mothers had good knowledge about breastfeeding and its positions. However in the results reported by this study out of 100, 83 mothers have been advised positions and postures for Breastfeeding but 79 mothers were not aware about exclusive breastfeeding. From these results, we can infer that there was a high awareness of about breastfeeding positions among the mothers but awareness is not present regarding Exclusive Breastfeeding and its importance. This finding is inconsistent with previous reports from Nigeria that showed high rates of awareness of Exclusive Breastfeeding among working class mothers and women who are housewives. The high level of awareness about Exclusive Breastfeeding in this study may be attributed to the baby-friendly programmed being practiced and demonstrated at the centres and hospitals.

This study showed that the most common position was cradle hold (58%) followed by cross cradle hold (24%). In cradle hold, position of baby is across the lap by using the same arm to the breast whereas in cross cradle hold, position of baby is across the lap by using the opposite arm to the breast. By adopting these positions the mothers were more comfortable. These breastfeeding positions are believed to allow for more control of the infant's head with just one arm while the mother put the breast in the mouth of the infant.

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. 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. The results reported by this study are similar to our study as in our study, to find whether there is an association of low back pain with different breastfeeding positions in Exclusive Breastfeeding mothers, Chi square test was used.

After applying the Chi square test, p value came out to be 0.672673 which is greater than 0.05(the significance value). So Chi square test concluded there was no association of low back pain with different breastfeeding positions in exclusive breastfeeding mothers.

Since there was no association of low back pain with different breastfeeding positions, even then a significant number of mothers were seen having complains of low back pain. So other factors leading to this pain needs to be found out and further studied and researched.

Furthermore, the result of this study showed that majority of the mothers demonstrated a level of knowledge of breastfeeding ergonomics which include the use of arm support and foot rest and the posturing of the neck and back.

CONCLUSION

It is concluded that the most common position used by breastfeeding mothers was cradle hold followed by cross cradle, football hold, side lying and laid back breastfeeding. Out of 100, 76 mothers were reported to have pain in low back region. While asking about mode of delivery, it was found that majority had undergone C-Section (47) followed by FTND with episiotomy (41) and normal vaginal delivery (12) out of the 100 population. Regarding the knowledge and awareness about exclusive breastfeeding, only 21

mothers were aware out of the total 100 population and the rest 79 mothers were not aware. Out of the 100 population, 83 mothers were advised specific postures for breastfeeding.

Using the chi square test-The result is significant if the p value is equal to or less than the designated significance value of 0.05.Here, since p value(0.672673) is greater than 0.05 – we cannot reject the null hypothesis ,i.e. , Null hypothesis is accepted. Chi square test concluded there was no association of low back pain with different breastfeeding positions in exclusive breastfeeding mothers.

CLINICAL IMPLICATIONS

This test concluded that there was no association of low back pain with different breastfeeding positions; even then a significant number of mothers were seen having complaints of low back pain. So other factors leading to this pain needs to be found out and further studied and researched. Ergonomic advice not only related to breastfeeding but also related to other household chores should be given.

LIMITATIONS AND SUGGESTIONS

We have not evaluated the comparison between housewives and working women. We have not evaluated the comparison between musculoskeletal pain areas other than the Low Back region and different breastfeeding positions. We have not evaluated the comparison between the mothers according to the different mode of delivery or comparison between Multipara and Primipara. This study was limited to a particular geographical area and the study population was also limited. Further studies could also include the ergonomic practices taken up by the breastfeeding mother.

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References

1. Brimdyr K, Blair A, Cadwell K, Turner-Maffei C. The relationship between positioning, the breastfeeding dynamic, the latching process and pain in breastfeeding mothers with sore nipples. Breastfeeding Rev 2003. https://pubmed.ncbi.nlm.nih.gov/14768311/
2. Chidozie EM, Adekemi EO, Joel OF, et al., 2013. Knowledge, attitude and techniques of breastfeeding among Nigerian mothers from a semi-urban community. BMC Research Notes. 6, 552. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3878086/
3. K. Grimmer and M. Williams, “Gender-age environmental associates of adolescent low back pain,” Applied Ergonomics, vol. 31, pp. 343-360, 2000.
4. Tyson A.C. Beach, Robert J. Parkinson, J. Peter Stothart, Jack P. Callaghan, “Effects of prolonged sitting on the passive flexion stiffness of the in vivo lumbar spine,” Spine, vol. 5, pp. 145-154, 2005.
5. C. Campbell, S.J. Muncer, “The causes of low back pain: a network analysis,” Social Science & Medicine, vol. 60, pp. 409-419, 2005.
6. Andersson GBJ, “Epidemiologic aspects on low back pain in industry,” Spine, vol. 6, pp. 53-60, 1981.
7. Musculoskeletal Impairment: Causes of Pain with Breastfeeding Insight into 11 Cases Christiane Charette et al. Breastfeed Med. 2019 Oct. https://pubmed.ncbi.nlm.nih.gov/31314578/
8. Clinical N, Srichand P, Pool Thong, N et al., 2010. Factors affecting low back pain during breastfeeding of Thai women. World Academy of Science, Engineering and Technology International Journal of Medical, Health, Biomedical, Bioengineering and Pharmaceutical Engineering. 4(12), 553-556. http://scir.rmutk.ac.th/files/users/264/conference/1500960482.pdf
9. Chatman LM, Salihu HM, Roofe ME, Wheatle P, Henry D, Jolly PE. Influence of knowledge and attitudes on exclusive breastfeeding practice among rural Jamaican mothers. Birth. 2004 Dec;31(4):265-71
10. Association of breast feeding positioning with musculoskeletal pain in post partum mothers of Rawalpindi and Islamabad. Sadia Rani et al. J Pak Med Assoc. 2019 Apr. https://pubmed.ncbi.nlm.nih.gov/31000863/