



# Comparison of Breastfeeding Positions in Educated and Uneducated Lactating Mothers

Muqaddas Mushtaq<sup>1</sup> and Ghulam Fatima\*<sup>2</sup>

<sup>1</sup> Riphah college of Rehabilitation and Allied health Sciences Riphah University, Lahore; [muqadasmushtaq41@gmail.com](mailto:muqadasmushtaq41@gmail.com)

<sup>2</sup> Riphah college of Rehabilitation and Allied health Sciences Riphah University, Lahore; [ghulam.fatima@riphah.edu.pk](mailto:ghulam.fatima@riphah.edu.pk)

\* [ghulam.fatima@riphah.edu.pk](mailto:ghulam.fatima@riphah.edu.pk)

**Abstract: Objective:** Poor knowledge and attitude of lactating mothers towards breastfeeding positions can cause less efficiency and reduced benefits of this first mother-baby interaction. The objective of this study was to compare the breastfeeding positions adopted by lactating educated and uneducated mothers of Vehari, Punjab. **Methodology:** Taking 296 postpartum females aged 20 to 40 years as the sample size, a comparative cross-sectional study was undertaken. The females had a lactating period of more than 6 months. Data was collected from different hospitals of Vehari, Punjab using a self-structured questionnaire, which included demographics details like; a breastfeeding positioning questionnaire, and the mother's educational status i.e., either educated or uneducated. The analysis of data was done by using SPSS version 21, via the use of the Pearson chi-square test. **Results:** According to the results, 93% mothers adopted cross cradle hold for breastfeeding irrespective of their educational status. There was no significant association between breastfeeding positions adopted by lactating mothers and their educational status with p-value less than 0.05 for most of the positions. **Conclusion:** This study showed that there was no difference in position adaptation by mothers based on their educational level and here was no significant association between breastfeeding positions adopted by lactating mothers and their educational status.

**Keywords:** Growth, Health Literacy, Milk ejection, Motor skills, Sitting Position

## 1. Introduction

Breastfeeding (BF) is a process or procedure of transferring human breast milk to the infant which is needed for the survival of the baby but also causes the development of unique psychosocial and cognitive bonds between mother and baby. It is considered the most healthy and complementary food from the 6 months and even up to 2 years of age (Mbada et al., 2013). It plays an important part in the nourishment of infants and is considered a beneficial procedure for both mother and child's physical as well as mental health (Rani, Habiba, Qazi, & Tassadaq, 2019). Positions adopted during breastfeeding by mothers are the 'cradle hold position, the cross-cradle hold position, the football hold position, the side-lying position, the laid-back position, and the upright position' (Gumasung, Villapando, & Siggaoat, 2019).

Among these mentioned positions, the Cradle hold position is the most commonly used breastfeeding position. Cross-cradle hold position is considered a good position for new nursing mothers and in this position, mothers have great control (Rani et al., 2019). In football hold position mothers can also see the face of the baby (Afshariani, Kiani, & Zamanian, 2019). This position may be considered mechanically efficient due to having less muscular usage in this position (Ojukwu et al., 2021). Females new to motherhood and caregivers require proper and active support systems from the health care system developed for their guidance. Breastfeeding is a learned behavior and a natural act. The proper attachment and positioning of the baby while feeding enhances milk production and milk release (Thakre et al., 2012). For a child's nutritional status, education of both parents is an important constituent. Educated mothers can provide better child care and better use of health services including breastfeeding. An educated mother, can surely, brings up her child



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better than an uneducated mother. Many of us think that breastfeeding is purely a relationship between mother and child but fathers also play an essential role in a successful breastfeeding experience (Banu & Khanom, 2012).

Knowledge and utilization of proper breastfeeding positions is crucial to optimize the benefits for both mother and baby. Many studies are conducted in various other parts of the world to analyze lactating practices but no such studies have explored the practices adopted by lactating mothers in rural areas of Pakistan. The objective of this study was to compare the breastfeeding positions adopted by lactating educated and uneducated mothers of Vehari, Punjab. The findings of this study would be helpful to identify the positions that are mostly adopted by breastfeeding mothers as well as to establish any possible impact of literacy on techniques of breastfeeding and can help to identify the need to educate females regarding appropriate breastfeeding positions.

### 3: Materials and Methods

#### 3.1 Research Design

This study was a comparative cross-sectional analytical study. The study was approved by ethical review committee of Riphah International University, Lahore. (REC/RCR & AHS/22/0502)

#### 3.2 Study settings

The study was conducted in the hospitals of Vehari (DHQ Vehari and Professional hospital Pir murad Vehari).

#### 3.3 study duration

The Duration of this study was six months, from 03/01/2022-03/07/2022.

#### 3.4 Participants:

Participants signed the informed consent form prior to participation in study. Participants were included in the study through convenience sampling technique. Females included in the study were between the ages of 20-40 years aged lactating mothers. Females with a minimum lactating period of 6 months, any parity of the female either primiparous or multiparous, and any mode of delivery were included in the study. The females with no formal school education were considered uneducated and females with formal school education of any level were considered educated.

#### 3.5 Study size:

The sample size of the study was 296 lactating mothers, calculated through open Epi tool with a 95% confidence interval.

### 4. Results

A number of 296 females were observed for this cross-sectional study. 126 (42.6%) females were of the age group 26-30 years and 31 (10.5%) were in the age group 36-40 years. While females in the age groups 25-30 and 31-35 were 82(27.7%) and 57 (19.3%) respectively. Out of 126 mothers, 148(50%) went through a c-section, 58(19.6%) had episiotomy while only 58(30.4%) had a normal vaginal delivery(Table 1).

**Table 1: Socio-demographic characteristics of Lactating mothers**

Variables		N	%
<b>Age</b>	20-25 years	82	27.7
	26-30 years	126	42.6
	31-35years	57	19.3
	36-40years	31	10.5
<b>Socioeconomic Status</b>	Low	57	19.3
	Middle	200	67.6
	High	39	13.2
<b>Parity</b>	Primiparous	129	43.6
	Multiparous	167	56.4
<b>Mode of Delivery</b>	C-section	148	50
	Vaginal delivery	90	30.4
	Episiotomy	58	19.6

Mothers involved in the study adopted different positions such as ‘cradle hold breastfeeding, cross-cradle breastfeeding, football hold breastfeeding, side-lying breastfeeding, laid-back breastfeeding, and upright breastfeeding. There was the highest ratio of adapting the cross-cradle breastfeeding position (90.8%), and the least used breastfeeding position was the up-right breastfeeding position(2.2%) in educated mothers. Uneducated mothers also mostly adopted the cross-cradle breastfeeding position (96%) while only 4%of mothers adopted the upright breastfeeding position. Cradle-hold breastfeeding and cross-cradle breastfeeding were the most frequently used positions by educated as well as uneducated females (Table 2).

**Table 2: Breastfeeding positions in educated and uneducated mothers**

Position	Educated (%)	Un-educated (%)	Total percentage in Lactating mothers
<b>Cradle hold position</b>	77.9%	92.0%	<b>84.95%</b>
<b>Cross-cradle hold position</b>	90.8%	96%	<b>93.4%</b>
<b>Football hold position</b>	10.7%	20%	<b>15.35%</b>
<b>Side-lying position</b>	58.3%	88%	<b>73.15%</b>
<b>Laid-back position</b>	10%	24%	<b>17%</b>
<b>Up-right position</b>	2.2%	4%	<b>0.31%</b>

Table 3 shows that in most of the positions there is no significant association between literacy level and positions adopted by lactating mothers for breastfeeding. Only, the side-lying breastfeeding position has a probability (p-value) of 0.004 and the laid-back position has a p-value of 0.033 (which is  $\leq 0.05$ ) which shows a significant association between these 2 positions and educational status but these positions are among the least adopted positions. In cradle hold breastfeeding, cross-cradle breastfeeding, football hold breastfeeding, and upright breastfeeding positions, there is a non-significant association  $p \geq 0.05$  between positions adopted by lactating mothers and their educational status.

**Table 3: Comparison of breastfeeding positions adopted by educated and un-educated mothers (Pearson Chi-square Test)**

Breast-feeding positions	Cradle hold position	Cross-cradle hold position	Football-hold position	Side-lying position	Laid-back position	Up-right position
Chi-square ( $\chi^2$ )	2.764	0.78	1.947	8.47	4.553	0.316
p-value	0.096	0.377	0.163	0.004	0.033	0.575

p-value is considered significant at 0.05 or below.

### 5. Discussion

The breastfeeding positions adopted by mothers are reported by various previous studies. One previous study reported that the most frequently used breastfeeding position adopted by the mothers was sitting position (56.9%). Cradle hold position was adopted by 27.6% of females and side-lying was used by 22.8% of lactating mothers. Laid-back and cross-leg sitting position were the least used positions by lactating mothers (Kandil, El-Okda, & Mahmoud, 2016). In the current study, both educated and uneducated females reported adopting the cross-cradle position most frequently i.e., 91.2% and 96 % respectively.

In another study conducted on breastfeeding positions in mothers; 70.8% of females reported cross cradle hold breastfeeding position, 21.3% of females reported side-lying position, 5.8% reported cradle hold, 1.0% reported football, and 0.8% reported laid back position for breastfeeding (Rani et al., 2019). In accordance with the current study cross cradle hold position was the most adopted position, while in contrast to current study, cradle position was used by a low percentage of lactating females.

A study was conducted among semi-urban community dwelling Nigerian mothers (Mbada et al.,2013). The study explored the knowledge, attitude and techniques adopted by breastfeeding mothers. The study showed that majority of the females (71.3%) had good knowledge and 54% had positive attitude. In accordance with findings of the current study, cross cradle hold position was adopted by majority of females (80.4%). The study found no significant association between breastfeeding postures and knowledge and attitude scores of lactating mothers. In current study too, no significant association was found between mother literacy level and breastfeeding positions.

Different studies reported different impacts of literacy levels on breastfeeding positions. A previous study showed that educated mothers have higher chances to administer proper skills and positioning of breastfeeding (Kronborg, Foverskov, Væth, Maimburg, & childbirth, 2018). While another study showed that the education level of the mother is not associated with positioning or attachment (Nancy, Sindhuri, Arunagirinathan, Dongre, & Medicine, 2022). Our study was in agreement with the finding that there is no difference in breastfeeding positions adopted by educated and uneducated females.

## 6. Conclusions

The positions adopted by lactating mothers for breastfeeding were almost same irrespective of their literacy level. Cross cradle hold position was most adopted and upright position was least adopted position by both groups of lactating mothers. There was no significant difference among mothers for their position adaptation during breastfeeding periods based on their educational status.

## 8. Limitations and Recommendations

This study was conducted in only one region of Pakistan (Vehari, Punjab). A large-scale study can be conducted in different rural and Urban areas of Pakistan for a broader generalization of results. Further studies can include the nursing mother's awareness level regarding the potential benefits and utilization of each infant carrying position for lactation.

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**Institutional Review Board Statement:** The study was approved by ethical review committee of Riphah International University, Lahore. (REC/RCR & AHS/22/0502)

**Informed Consent Statement:** Patient consent was waived due to secondary analysis of publicly available data.

**Data Availability Statement:** Data supporting the results can be found at [www.dhsprogram.com](http://www.dhsprogram.com). We used data regarding variables of this study from the report of Pakistan Demographic and Health Survey 2018.

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**Conflicts of Interest:** The authors declare no conflict of interest.

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