

# INITIATION OF BREASTFEEDING WITHIN ONE HOUR OF BIRTH AND ITS DETERMINANTS AMONG CAESAREAN SECTION AND VAGINAL DELIVERIES AT GOVT. SHAHDARA TEACHING HOSPITAL LAHORE IN PAKISTAN: A CASE- OBSERVATION STUDY

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## **Abstract:**

**Background:** 22 percent of infant death can be averted by starting breastfeeding within one hour of birth. Several factors affect the practice of breastfeeding, including socio-demographic and obstetric aspects of women, and time-related factors surrounding child birth.

**Objective:** To know the breastfeeding initiation practices and its influencing factors for initiating breastfeeding within one hour of birth in public health facilities of Pakistan.

**Methodology:** In this research, normal deliveries from the districts of Lahore in Pakistan were found at public health facilities. Sample patients were chosen, including caesarean section deliveries, by easy screening, i.e. delivery cases visiting health facilities within the study time were selected. The time of start of breastfeeding was observed among 50 mothers and its association was assessed with the form of health facility, delivery room secrecy, involvement of separate neonatal workers, involuntary breathing, skin-to-skin touch and postnatal mother or newborn contact with health care providers within one hour of delivery. Data was obtained on Feb 13, 2019. The Kruskal-Wallis test was used to calculate the equality of two or more groups of independent variables for the median period of initiation time of breastfeeding. Series of simple logistic regressions were performed followed by multiple logistic regressions to classify the determinants for breastfeeding initiation within one hour.

**Results:** Of the 50 mothers registered, 67 percent started breastfeeding at health facilities within one hour of birth and the median time to start breastfeeding was 38 minutes (Inter-quartile range: 20-56 minutes). After adjusting for maternal age as a possible confounder, if mothers gave birth in district hospitals, the likelihood of starting breastfeeding within one hour of birth was substantially higher.

**Conclusion:** Breastfeeding activation within one hour is correlated with certain important procedures and activities at the time of birth in health facilities. With the global movement towards facility-based deliveries, within the maternal and newborn care landscape, it is very important to recognize some main factors that dramatically enable health care providers and parents to participate in evidence-based newborn care practices,

including early initiation of breastfeeding, which in turn will minimize global rates of newborn mortality.

**Keywords:** Breastfeeding, health facilities, newborn mortality, public health facilities

## INTRODUCTION

The introduction of post-birth breastfeeding is an important part of the healthy childbirth process and is generally accepted as a valuable activity. Breast-feeding is one successful method that can decrease 55-87 percent of all-cause neonatal death and morbidity in the Lancet neonatal survival sequence. Several studies have demonstrated that breastfeeding decreases the incidence of neonatal mortality due to illnesses such as diarrhoea, neonatal sepsis, pneumonia and meningitis (Karim et al., 2018). Delayed initiation of breastfeeding was observed to increase the mortality risks among newborns as further investigated. Current data suggests that in the first 28 days of their lives, newborns who were breastfed within one hour of birth had a 29 percent lower risk of dying than those who were breastfed 2 to 23 hours after birth. Breastfeeding can also avoid up to 22 percent of all newborn deaths within one hour of birth, and the latest Lancet Per Newborn sequence cites that the decrease in mortality can reach up to 44 percent (Tewabe, 2016).

Breastfeeding should be started early and ideally within one hour of birth, the WHO advises. Global and international partners have made great strides in recent years to persuade mothers to start breast-feeding early on (Dorgham et al., 2014). Yet within one hour of birth, just 45 percent of the world's newborns and 42 percent of South Asian newborns are breastfed. Pakistan's most recent longitudinal health monitoring study reveals that within one hour of birth, about half of mothers starts breastfeeding (Raghavan et al., 2014).

Interestingly, the pattern of initiation of early breastfeeding, found from related studies in the last decade, suggests that mothers are less likely to practise if they give birth in health facilities than at home (Mekonen et al., 2018). This ongoing lower coverage of the initiation of early breastfeeding in health facilities is of concern as the promotion of institutional delivery (a qualified attendance proxy) is a priority initiative to meet the Sustainable Development Goals (SDG) objectives of reducing maternal and infant mortality by 2030 (Guelinckx et al., 2012). A public health imperative to strengthen this life-saving activity is in line with the rising institutional delivery rates in the country evaluating the variables influencing early initiation of breastfeeding in health facilities (Patel et al., 2013).

Many aspects affect the practise of breastfeeding and its effect differs across various regions and sub-populations of the globe. The socio-demographic and obstetric profiles of women, proximity to health care support systems and even current cultural values primarily impact the timing of initiation of breastfeeding in South Asian countries in particular (Khanal et al., 2015). Although these characteristics are well explored in many studies to establish their correlation with early breastfeeding initiation, there is insufficient support for characteristics linked to the period around childbirth. Such features, including place of delivery and its comfortable breastfeeding environment, mode of delivery, mother and newborn postpartum health status, support and advice given by birth attendants and family members, are found to affect the

timing of initiation of breastfeeding after delivery (Ahmed &Salih, 2019).

In Pakistan, the exclusive breastfeeding rate is 38%, which is alarmingly low, the EIBF rate is 18%, and the bottle feeding rate has increased from 32.1% in 2006-07 to 42% in 2012-13. The EIBF is part of the 10 Breastfeeding Practice Measures and the key metrics of determining effective feeding habits for babies and young children. It is an ongoing trend for mothers and babies to meet after several hours following a caesarean section (CS), resulting in less chances for early skin-to-skin contact and the start of breastfeeding (Aqeel et al., 2020).

This study was conducted to explore the breastfeeding initiation practices and associated influencing factors for initiating breastfeeding within one hour of birth in public health facilities of Pakistan.

### Objectives of the Study

- To know the demographics of the respondents.
- To know the breastfeeding initiation practices and its influencing factors for initiating breastfeeding within one hour of birth in public health facilities of Pakistan.

### REVIEW OF LITERATURE

Aqeel et al/. (2020) performed a cross-sectional analysis to examine the effect of caesarean section and factors affecting mothers' early breastfeeding initiation in Pakistan. Using a generic questionnaire that was updated accordingly, data was gathered. Using SPSS 20, the data was analyzed. In the initial one hour post-surgery, expected CS has been shown to be associated with

decreased breastfeeding performance. As such, CS adversely effects the start of exclusive breastfeeding.

Ekubay et al. (2018) performed a cross-sectional research of 583 mothers with children less than or equal to 6 months of age attending public health institutions' Maternal and Child Health (MCH) clinics in Addis Ababa, Ethiopia from April to May 2012. To choose the institutions participating in this analysis, a basic random sampling design was used. An interviewer-administered questionnaire was used to gather data from mothers of children. They analysed the data using logistic regression models to explore variables associated with breastfeeding initiation within one hour of birth. Breastfeeding initiation within one hour of birth was tiny. Among multiparous women, mothers aged 30-34 years, and women who initiated prenatal treatment at their fourth month of pregnancy or older, the initiation of breastfeeding within one hour of birth was greatest. Interventions to encourage and endorse early initiation of breastfeeding should be considered by public health authorities and health care professionals.

Jamil et al., (2018) examined the recent awareness, attitude and breastfeeding habits provided to a tertiary care hospital in Lahore by mothers of infants. During face-to-face interviews with the mothers, a self-structured questionnaire was completed. A majority of mothers were found to have an encouraging mindset, as 90% of mothers perceived breastfeeding to be more comfortable than other ways of eating. There was a correlation between early breastfeeding initiation and mode of delivery ( $p=0.034$  i.e.  $p<0.05$ ). They found that amid supportive behaviours, we concluded that there was a lack of correct breastfeeding procedures. The prevalent mode of feeding after exclusive breastfeeding was mixed

feeding in six-month-old babies. Providers in health services should be allowed to educate mothers on acceptable awareness and procedures for breastfeeding.

Karim et al., (2018) investigated the initiation patterns of breastfeeding and related driving factors for starting breastfeeding within one hour of birth in public health facilities in Bangladesh. In 15 public health facilities from 3 districts in Bangladesh, normal deliveries were observed. Research subjects were chosen, besides caesarean section deliveries, by easy screening, i.e. delivery cases visiting health facilities during the study time. Among 249 mothers, breastfeeding time was observed and its association was measured with type of health facility, delivery room privacy, presence of separate newborn staff, spontaneous breathing, skin-to-skin contact, and postnatal mother or newborn contact with health care providers within one hour of delivery. They find that breastfeeding activation within one hour is correlated with certain important activities and occurrences at the time of birth in health facilities. With the global movement towards facility-based deliveries, within the maternal and newborn care landscape, it is very important to recognize some main factors that dramatically enable health care providers and parents to participate in evidence-based newborn care practices, including early initiation of breastfeeding, which in turn will minimize global rates of newborn mortality.

Kaleem et al., (2017) conducted a cross-sectional analysis in Sir Gangaram Hospital Lahore to examine the current awareness and behaviours of mothers regarding optimal breastfeeding practices. They observed that after antenatal care visits, two-thirds of mothers had not received any counseling

on breastfeeding habits. Mothers had greater understanding of breastfeeding, however, but the methods were sub-optimal. In order to put their expertise into reality, they advised that mothers require constant counseling and support.

Samad et al. (2017) suggested that transmission for women of reproductive age is a natural occurrence. Both normal and caesarean are underway and have an effect on early breast feeding initiation, i.e. colostrum feeding. Maximum gains are assured by the start of breastfeeding within one hour and the continuation of just breast milk for up to six months. The rate of exclusive breastfeeding is 64%, which is low in Bangladesh. In particular, the tradition of exclusive breastfeeding among breastfeeding mothers is not relevant in slum areas. It found that 44% of babies began breastfeeding within one hour and 56% began breastfeeding more than one hour later. In the babies whose birth pattern was regular, the early initiation of breast feeding was greater than their extremely important caesarean equivalent. In comparison, the percentage of early breast feeding initiation was higher than that of preterm birth for average term birth babies and was statistically important. Thus in the case of regular childbirth and term infant, a high incidence of early breast feeding initiation was seen, while more than half of the baby began breast feeding after one hour of birth.

## METHODOLOGY

The Government of Pakistan is introducing the Every Mother Every Newborn Quality Improvement (EMEN QI)" programmes in selected government health facilities, with the assistance of UNICEF headquarters and UNICEF Pakistan, to improve treatment at the time of child birth. Prior to the adoption of EMEN QI requirements on 13 Feb 2019, a baseline assessment was

done. This paper draws the results from the benchmark assessment that mostly used direct hospital-based evaluation to define intrapartum and immediate postpartum treatment standard. Originally, the sample size was determined on the basis of the above baseline research objectives and the goal was to observe 50 implementation cases with a 50 percent prevalence of standard of care metrics and a design impact of 1.5. Convenient or non-probability sampling procedures were applied, i.e. distribution cases were chosen as prospective research subjects visiting the selected facilities during the study time. Deliveries done via caesarean section were omitted in the selection of participants as this is a recognised deterrent to early initiation of breastfeeding.

The organized observation of intrapartum and postpartum events was initiated by a team of eight (08) Post RN research students when the newly born mothers visited the chosen regular vaginal delivery (NVD) health facilities during Feb, 2019. In choosing research doctors, women were granted priority because it was traditionally more appropriate for them to personally witness deliveries in the sense of Pakistan..During the data collection phase, the analysis Post RN kept a round the clock roster to continue observation without interruptions. Both 8 test nurses were replaced by professional obstetricians on the standardized observation checklist to eliminate inter-observer bias. A systematic ascertainment of all effect and explanatory variables was assured. A total of 50 cases involving advanced resuscitation are subject to observation, leaving 50 cases to be used in the final study. Distributions of the time periods were tested for normality between delivery and start of breastfeeding. Since time periods were not usually spread, the median time to start breastfeeding was

calculated to be stratified by potential covariates.

## RESULTS AND DISCUSSION

### Time of initiation of breastfeeding

Overall, the total breastfeeding period was 36 minutes. There were no major variations in the median period between various groups of mother's age, education, occupational status, and religion for starting breastfeeding. Similarly, between the mothers who delivered at full-term pregnancy and those who had a pre-term abortion, and even for the mothers who were first pregnant, the time of initiation did not vary.

**Table 1**

#### *Socio-demographic data*

<b>Characteristic</b>	<b>Frequ ency</b>	<b>Perce ntage</b>	<b>To tal</b>
<b>Age</b>	148	59.4%	
19-25 years	86	34.5%	
26-35 years	15	6.0%	24
More than 35 years			9
<b>Education</b>			
Illiterate	69	27.7%	
Primary	103	41.4%	
Matriculation and above	77	30.9%	24
			9
<b>Religion</b>			
Muslim	231	92.8%	
Non-Muslim	18	7.2%	24
			9
<b>Occupation</b>			
Housewife/une employed	234	94.0%	
Employed	15	6.0%	24
			9
<b>Gestational age while delivering baby</b>			
<37 weeks	31	12.4%	

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≤37 weeks	179	71.9%	
Information missing	39	15.7%	24 9
<b>Parity</b>			
Primary	128	51.4%	
Multi	115	46.2%	
Information Missing	6	2.4%	24 9

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**Table 1**

*Associated factors of initiation the breastfeeding within 1 hour after birth(Regression analysis)*

<b>Variables</b>	<b>Total</b>	<b>Initiation of breastfeeding by the mothers within 1 hour</b>
<b>Age (Years)</b>		
19-25 years	12	24%
26-35 years	7	14%
More than 35 years	6	12%
<b>Education</b>		
Illiterate	5	10%
Primary	5	10%
Matriculation and above	1	2%
<b>Privacy maintenance</b>		
Maintained	49	98%
Not maintained	1	2%
<b>Occupation</b>		
Housewife/unemployed	18	36%
Employed	8	16%
<b>Availability of separate staff</b>		
Presence of 1 staff member	42	84%
No availability of staff	8	16%
<b>Infant crying/breathing</b>		
Spontaneous	43	86%
After resuscitation	7	14%
<b>Skin to skin contact</b>		
Yes	42	84%
No	8	16%

**Positional contact**

Yes	42	84%
No	8	16%

**DISCUSSION**

Our research shows that despite the universal recommendation of early initiation of breastfeeding, just seven out of every ten newborns are breastfed in health facilities within one hour of birth. Among usual vaginal deliveries, the observed proportion of this procedure is far higher than the recorded average of all facility deliveries in Pakistan (38 percent) and even in some other South-East Asian countries. A potential explanation for this marked disparity in the proportions recorded and reported is that the DHS study accounts for caesarean parts of the facility deliveries, which is a recognized deterrent to early breastfeeding initiation. The study's multiple regression model shows that certain important behaviours at the time of birth promote the initiation of early breastfeeding. Such measures involve placing an infant into the belly of the mother shortly after birth for skin to skin touch, preserving modesty in the delivery room, spontaneous breathing or vomiting, and receiving the baby's postnatal assessment in the hospital within one hour. The results demonstrate the need to encourage these procedures from the beginning of the mother in labour until her discharge from the hospital for an optimum breast-feeding friendly atmosphere in the clinic.

**CONCLUSION**

Although developed countries are heading toward growing institutional births, demand for an ideal breastfeeding atmosphere in health care facilities is also rising. This research recognizes that progress in the introduction of early breastfeeding in a health facility depends more on certain important postpartum factors than on the specific

characteristics of the baby. To counter these causes, in 1991, the WHO and UNICEF initiated a global awareness of the Baby Friendly Hospital Initiative (BFHI) to encourage breastfeeding in maternity wards of health facilities. One of its mandates is to incorporate Ten Effective Breastfeeding Measures, which include a comprehensive approach to strengthening the health facilities' infrastructure and policy climate. This research made a substantial contribution to the current knowledge base, showing that having workers committed to the treatment of the baby within the first hour after birth is an important supporting factor for the prompt start of breastfeeding, in addition to providing privacy. The focus research areas for encouraging early introduction of breastfeeding should be the framework for appropriate and creative channels to encourage skin-to-skin treatment, reduce mother-newborn separation and assist mothers in addressing lactation issues.

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