

Determinants of exclusive breast feeding among mothers in a tertiary care hospital

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ABSTRACT

Introduction: One of the easiest and most economical ways to assure a healthy child's survival is Exclusive Breast Feeding (EBF). The World Health Organization states that a child should continue breast milk feeding during first six months of life followed by complementary foods until two years of age.

Objective: To determine the impact of exclusive breast feeding and factors influenced on its duration in a tertiary hospital of Faisalabad, Punjab, Pakistan.

Materials & Methods: A descriptive cross-sectional study was conducted at the Out Patient Departments of Pediatrics and Gynecology in Aziz Fatimah Hospital Faisalabad, from April 2023 to September 2023 on a sample of 384 mothers taken through non-probability convenience sampling. Data were collected & analyzed by SPSS 25 for descriptive and comparative statistics; the Chi square test was used for comparisons and $p \leq 0.05$ was taken as significant.

Results: Out of the 384 participants, the frequency of exclusive breastfeeding was 179(46.6%) up to 6 months of age. The mean age of mother was 29.04 years. Majority of mothers (72.9%) were belonging to urban areas. Association of EBF with age of mother was ($p=0.008$), number of antenatal visits ($p=0.02$), occupation ($p=0.002$), age of child ($p=0.001$) was recorded.

Conclusion: The exclusive breastfeeding practices for infants & young children are strongly linked to maternal antenatal visits, employment, and the age of the child.

Keywords: Breastfeeding, Exclusive; Child Health; Stunting; Delivery, Obstetric; Cesarean Section.

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INTRODUCTION

Exclusive breastfeeding is a form of breastfeeding in which the baby only gets breast milk and no other fluids or solids, not even water, except for rehydration solutions or drops containing vitamins, minerals, or medicines. EBF is recommended due to the fact that breast milk is free of contaminants and contains all essential nutrients for a baby to achieve optimal development and health.¹ Both WHO and UNICEF recommended that mothers begin breastfeeding within the first hour of their birth and continue for 2 years at least.^{2,3} Exclusive breastfeeding is the easiest and most economical ways to help your child survival and is the most effective intervention in reducing child mortality and disease. Breastfeeding has been demonstrated to have a positive effect on reducing the incidence of mild and moderate malnutrition and childhood diseases and has been associated with long-term benefits in the prevention of conditions such as obesity, cardiovascular disease, diabetes and asthma.⁴

Inadequate infant feeding has a detrimental effect on children's health and nutrition; it has a negative impact on their physical and cognitive development. Breast feeding is an essential part of a child's nutritional status that influences their growth and development.⁵ From birth to 2 years of age is the critical period for optimal growth and development. The lack of proper nutrition during this time can result in stunting, making it the key period for any intervention strategy to control under nutrition. The WHO recommends that breastfeeding should continue until 2 years of age as it increases height and weight, prevents many infectious diseases, and increases the child's chances of survival.⁶ Pregnant women's intention towards breastfeeding varies widely across the globe. However, while most expectant mothers are open to breastfeeding their babies; there are many circumstances in which a mother may stop breastfeeding her baby before planned. So, in order to promote breastfeeding in a specific setting, it is important to identify which parameters affect BF prevalence the most.⁷ Despite such enormous potential and many programs to support breastfeeding around the world, the 2017 Global Breastfeeding Scorecard which looked at 194 countries, the survey found that 40% of babies under 6 months of age receive EBF worldwide.

While Pakistan has seen an increase in EBF rates over the past five years, it still has the second lowest EBF rate of all South Asian nations.⁸

In Pakistan, only four out of ten babies are exclusively breastfed, which is lower than in the least developed countries, according to UNICEF. This low breastfeeding rate is mainly due to working mothers who face a lot of obstacles when it comes to breastfeeding. These include not having enough family support, not having enough time off from work, and not having the option of breastfeeding at the workplace. In these cases, most of the mothers are either single breadwinners or supplement their income to cover their basic needs. Even though working women are less likely to breastfeed than non-working women, the demographic and health survey from 2012-2013 showed that the rates for exclusive breastfeeding and non-exclusive breastfeeding were 38% and 67% respectively.⁹

Breastfeeding is generally recommended in patients with Hepatitis C Virus (HCV) infection. Many studies have demonstrated that HCV-positive mothers can safely breastfeed their infants. However, HCV-positive mothers without bleeding or cracked nipples should follow general breastfeeding guidelines while those with bleeding or cracked nipples should abstain from breastfeeding until nipples are healed.¹⁰ Cracked, or bleeding nipples can be prevented by ensuring proper latch-on techniques and by using a lanolin-based nipple cream.

MATERIALS & METHODS

A study was conducted at Out Patient Departments of Pediatrics and Gynecology in Aziz Fatimah Hospital, Faisalabad, Punjab, from April 2023 to September 2023 after Ethical approval with letter no IEC/246-23. A sample of 384 mothers was taken and collected by using non-probability convenience sampling. Mothers having children up to 2 years of age were included while mothers having chronic diseases that are barriers to breastfeed were excluded. Data were collected by a validated questionnaire. The questionnaire consisted of three parts with questions inquiring about socio-demographic, economic, and cultural practices regarding EBF. Statistical analysis was conducted on SPSS version 25. Frequencies and percentages for categorical variables were obtained. The Chi square test was used for comparison of categorical data and the level of significance taken as $p \leq 0.05$.

RESULTS

Out of the 384 participants in the study, the frequency of exclusive breastfeeding was 179(46.6%) till six months of age. The socio-demographic details of mothers are displayed in Table 1. Regarding maternal education, 28(7.3%) mothers had only completed their primary education, while 17(4.4%) mothers were illiterate. Of the females, 176(45.8%) had delivered their kids naturally via vaginal delivery, while 210(54.7%) had done so via caesarean section; 226(58.9%) were male babies and 158(41.1%) were female babies, and 138(35.9%) were first time mothers.

Table 1 Demographic characteristics of the participants (n=384).

Variables	Frequency (f)	Percentage (%)	
Exclusive breast feeding	< 6 months	179	46.6
Mother's education	Uneducated	17	4.4
	Primary	28	7.3
	Middle	56	14.6
	Matric	71	18.5
	Others	212	55.2
Antenatal checkups	Yes	378	98.4
	No	6	1.6
Mode of delivery	Normal	176	45.8
	C-section	208	54.2
Place of delivery	Public hospital	128	33.3
	Home	29	7.6
	Private clinic	227	59.1
Child sex	Male	226	58.9
	Female	158	41.1
Birth order	First	138	35.9
	Second	123	32
	Third	72	18.8
	More than three	51	13.3

Table 2 provides for comparison of data between exclusive breastfeeding and non-breastfeeding mothers. Exclusive breastfeeding was carried out for longer duration (in months) as compared to the non-exclusive group ($p=0.001$).

Comparison of the working status of mothers of both groups also yielded significant results, in that 79.12% of the mothers in the exclusive group were not working compared to 93.65% in the non-exclusive group ($p=0.002$).

The number of antenatal visits in the exclusive group were much more in comparison to the non-exclusive group ($p=0.02$). The difference of ages of mothers in the two groups was also significant with 66.05% mothers of age group 25-35 years in the exclusive group compared to 49.21% of non-exclusive mothers in the same age group ($p=0.008$).

In addition to this, residence in urban or rural areas ($p=0.20$), birth order ($p=0.20$), birth weight ($p=0.50$), mode of delivery ($p=0.20$), and place of delivery ($p=0.40$), were not statistically significant.

Table 2: Statistically significant and non-significant variables with their p-values (n=384).

Variables	Categories	Exclusive Breastfeeding		p value
		No (n=63)	Yes (n=321)	
Age of child (months)	0-6	21	100	0.001
	7-12	26	101	
	13-18	11	65	
	19-24	5	55	
Birth order	First	19	119	0.30
	Second	17	105	
	Third	11	63	
	More than 3	16	36	
Occupation	Working	4	67	0.002
	Non-working	59	254	
Number of antenatal visits	Zero	0	4	0.02
	One	1	4	
	Two	1	15	
	Three	1	15	
	Four	2	38	
	More than four	58	245	
Residence	Urban	41	239	0.20
	Rural	22	82	
Mode of delivery	Normal	21	146	0.20
	C-Section	31	175	
Age of mother (Years)	< 25	19	86	0.008
	25-35	31	212	
	<35	13	23	

The mean ages of mothers, children, and antenatal visits are shown in Table 3. The mean age of mothers was 29.04 ± 5.03

years, while that of children was 2.20 ± 1.05 months; the mean number of antenatal visits was 5.58 ± 0.97 times.

Table 3: Quantitative variables Mean and Standard Deviation (n=384)

Variables	Mean	SD
Age of mother (Years)	29.03	5.03
Age of child (Months)	2.20	1.05
Antenatal visits (Times)	5.58	0.97

The duration of breastfeeding by mothers up till 24 months is shown in Table 4; 63(16.41%) mothers did not breastfeed exclusively while 321(83.59%) mothers did. The majority of exclusive breastfeeding mothers, 179(55.76%), breastfed till 6

months), while 29.91% mothers were breastfeeding for a duration of 6-12 months. Only 13 (4.05%) of mothers continued breastfeeding till 24 months.

Table 4: Duration of breastfeeding continued till 2 years (n=384).

Breastfeeding duration (months)	Frequency	Percentage	
Non-Exclusive Breastfeeding	None	63	16.41
Exclusive Breastfeeding (n=321)	< 6	179	55.76
	6-12	96	29.91
	12-18	33	10.28
	18-24	13	04.05

DISCUSSION

In light of the advantages that an ideal breastfeeding could have for the health and nutritional status of newborn and early children in Pakistan, the rates of breastfeeding practices in the current study are encouraging. Optimizing practices for preventing childhood obesity, a significant health concern nowadays, include

breastfeeding exclusively for the first six months and continuing to do so while adding complementary foods after that point. Specifically, early initiation of solid food, defined as before 4 months of age, is discouraged by EBF. This practice has been linked to a higher chance of juvenile obesity. These EBF rates are also similar with study in Ethiopia.¹¹

In the present study, 58.9% children were male and 41.1% were female. These results are in contrast with another study in Pakistan where there were 48% male and 52% female children.¹²

According to our statistics, the p value of antenatal visits was 0.02 which concludes that relation of breastfeeding with antenatal visits is significant. It is similar with the results of study organized in Somali regions of Ethiopia.¹³ This showed that mothers who visited for antenatal checkups were practicing exclusive breast feeding in comparison to those who did not attend antenatal visits. This may be due to reason that the mothers who attended antenatal visits may have gained different nutrition and other health related education from health professionals during the recovery period which may have a significant effect on exclusive breastfeeding practices. As the follow-up is continuous, the mothers may have received a lot of information, which may have increased their knowledge and changed their attitude towards feeding practices.

In our study 54.7% mode of delivery has been caesarean section. The result of this study is similar to the result in study conducted in Turkey¹⁴ which has also 53% caesarean section mode of delivery which results in late initiation of breastfeeding among newborns. The frequency of mother's education in our study showed that 55.2% of mothers had higher secondary education. These findings are in congruence with the study among Polish women.¹⁵

The relationship of maternal education with EBF was found to be nonsignificant. Cultural norms and societal beliefs can significantly impact a mother's decision to breastfeed exclusively. Individual preferences and choices can also impact the decision to exclusively breastfeed regardless of education. Current findings contrast with the findings in another study conducted in Burao district Somaliland¹⁶ and study conducted in Indonesia¹⁷ where mothers with higher education were likely to breastfeed, while they are supported by findings in a study conducted in China.¹⁸

The relation between breastfeeding and occupation was significant statistically with p value=0.002. Occupation and working hours affect breastfeeding in many ways, e.g., working hours, distance of work from home, leaving the baby alone for that time, loss of emotional connection with the baby and physical

tiredness. The working hours were shown to have an impact on EBF practice in addition to the education. In addition to this, working mothers has less time for breast feeding than non-working mothers. These findings are in line with findings of studies conducted in Indonesia¹⁹ and Pakistan²⁰.

A p-value of 0.008 in the context of exclusive breastfeeding and the age of the mother indicates that there is a statistically significant relationship between these two variables. This means that the age of the mother has a notable impact on the likelihood of exclusive breastfeeding. In practical terms, it suggests that younger or older mothers may be more or less likely to engage in exclusive breastfeeding, and this relationship is not likely due to random chance but is supported by strong statistical evidence. To understand the specific nature of this relationship, further analysis or interpretation of the data would be needed. These findings are in congruence with a study in Sindh.²¹

CONCLUSION

Breastfeeding practices appear to be significantly associated with antenatal visits, maternal employment, and the child's age, and may be indicative of recent favorable trends in Pakistan with regard to breastfeeding practices.

RECOMMENDATIONS

Health professionals should emphasize more on the nutritional needs of newborns and the long-term advantages of exclusive breastfeeding in their prenatal education, in order to encourage and support this feeding practice.

Government health services should place a strong emphasis on providing regular breastfeeding education to staff members, particularly those working in maternity wards and antenatal clinics. Community health workers should visit households and urge mothers to practice exclusive breastfeeding during the first six months of life and to continue for the next two years, along with complementary diets.

LIMITATIONS

Due to the study being from a single center, with sample size limitation, and non-random selection of subjects, generalization of these results on whole population is not justifiable.

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