

Original Article

Knowledge, Attitude, and Breastfeeding Practices of Mothers Visiting Tertiary Care Hospital

Ilamathi Sekar¹, K. Devi Meenakshi²

¹Department of Pediatrics, Government Primary Health Centre, Dharmapuri, ²Department of Pediatrics, Government Kilpauk Medical College, Chennai, Tamil Nadu, India.

***Corresponding author:**

Ilamathi Sekar,
Department of Pediatrics,
Government Primary Health
Centre, Dharmapuri,
Tamil Nadu, India.

hiamilamathi@gmail.com

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ABSTRACT

Objectives: Breastfeeding is the single most important determinant of infant mortality and under-five mortalities. The objective of the study was to estimate the knowledge, attitudes, and practices of mothers regarding the World Health Organization (WHO) recommendations for breastfeeding.

Material and Methods: This cross-sectional study was done on 350 mothers of children aged 2–5 years in a tertiary care hospital in Chennai. Data were collected on sociodemographic variables, knowledge, attitude, and practices of breastfeeding through face-to-face interviews. Data were analyzed using the Statistical Package for the Social Sciences.

Results: About 78.9% knew about early initiation of breastfeeding, 78.6% about exclusive breastfeeding, and 71.1% about breastfeeding till 2 years of age. About 66.9% of mothers initiated early breastfeeding, 60.6% exclusively breastfed, and 48.9% of mothers breastfed their children till 2 years. Only 26% fulfilled all the three criteria of the WHO recommendation for breastfeeding.

Conclusion: Although the knowledge and attitude about breastfeeding were good, practices were not optimal. Strong information, education and communication (IEC) activities are needed to encourage mothers regarding breastfeeding practices.

Keywords: World Health Organization, Knowledge, Attitude, Breastfeeding practices

INTRODUCTION

The World Health Organization (WHO) recommendations on breastfeeding include early initiation of breastfeeding (EIBF) within 1 h of birth, exclusive breastfeeding for the first 6 months of life, and introduction of complementary feeds after the completion of six months of age with continued breastfeeding up to two years. Colostrum is a rich source of antibodies, proteins, and essential fatty acids and should be offered to all neonates.^[1] Exclusive breastfeeding is defined as giving mothers milk to infants without the inclusion of water, juice, non-human milk, or any food (with the exception of vitamins, minerals, or medicines if needed) up to 6 months of age.

Most of the studies concluded that there is a direct correlation between high under-five mortality rates and a less than satisfactory rate of exclusive breastfeeding. EIBF has been shown to decrease the neonatal mortality by 22%. As per WHO, faulty and misled breastfeeding practices contribute to 53% of diarrhea and 55% of pneumonia deaths within the first 6 months of age.^[2] According to a systematic review, the infants who initiated breastfeeding after 1 h were 33% at risk of neonatal

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mortality.^[3] India has made some progress in increasing EIBF rates. Currently, it ranges from 36% to 42% National Family Health Survey (NFHS) 5. In Tamil Nadu, 60.2% of children are breastfed within 1 of delivery, and exclusive breastfeeding till 6 months is 55.1%.^[4]

Adequate knowledge and appropriate attitude are essential for optimum practices. The objective of this study was to assess the knowledge, attitude, and practices of mothers regarding breastfeeding and to know the prevalence of appropriate feeding practices as recommended by the WHO among mothers with children aged 2–5 years attending our outpatient department.

MATERIAL AND METHODS

This cross-sectional study was done at a tertiary hospital in South India from October 2021 to November 2021. Mothers of children aged between 2 and 5 years attending the pediatric outpatient department was included in the study. Mothers who did not consent were excluded from the study. The sample size was calculated using the previous study^[5], which reported an early breastfeeding rate of 34.5% and an exclusive breastfeeding rate of 72%. With 5% estimation error and 5% α error, the minimum sample required was 343 and 310, respectively. Hence, the sample size was fixed at 350.

The study was commenced after obtaining approval from the Institutional Ethics Committee. Mothers of children between 2 and 5 years of age attending the pediatric outpatient department were enrolled. Informed consent was obtained from the mothers. Data were collected through face-to-face interviews. It included basic demographic characteristics such as education status and employment of the mother, type of the family, number of antenatal (AN) visits, and AN counseling regarding breastfeeding practices, order of birth, and mode of delivery. Questions to assess the knowledge of mothers regarding breastfeeding included the time of initiation of breastfeeding, knowledge about colostrum, duration of exclusive breastfeeding, frequency of feeding of babies, and duration of breastfeeding. Questions to assess the attitude of mothers toward breastfeeding included nutritional adequacy of breast milk, the protection offered by breastfeeding against infections, and the digestion of breast milk. Mothers were also enquired about their feeding practices by the following questions, which include the time of initiation of breastfeeding after delivery and if later than an hour, the reason for late initiation of feeding, pre-lacteal feeds, duration of exclusive breastfeeding, usage of top feeding, time of introduction of complementary feeds, and duration of breastfeeding. Mothers who followed all three WHO recommendations were termed as having appropriate breastfeeding practices.

Initiation of breastfeeding within 1 h of delivery was termed as EIBF. Exclusive breastfeeding was defined as giving

mothers milk to infants without the inclusion of water, juice, non-human milk, or any food (with the exception of vitamins, minerals, or medicines if needed) up till 6 months of age.

Data were entered into Microsoft Excel, and analysis was done using the software Statistical Package for the Social Sciences version 28. The outcome variable was expressed in proportion with a 95% confidence interval. Bivariate and multivariate analyses were done to determine the factors favorable for breastfeeding. Statistical significance was set at 5% ($P < 0.05$).

RESULTS

The mean (standard deviation) age of the mothers was 27.5 (3.6) years. In our study, a maximum of 288 (82.3%) women belonged to <30 years of age, and 62 (17.7%) were more than 30 years. The majority 106 (30.3%) were graduates, 85 (24.3%) completed high school, 66 (18.9%) studied up to high school, and 45 (12.9%) completed diploma courses. On the whole, 328 (93.7%) were literate and 22 (6.3%) were illiterates. As many as 224 (64%) were homemakers and 126 (36%) were employed. Among mothers, 176 (50.3%) were a part of the nuclear family, while the rest, 174 (49.7%), were a part of a joint family. About 194 (55.4%) children were aged 2–3 years, whereas 156 (44.6%) were aged 4–5 years. Among them, 191 (54.6%) were male, and the rest 159 (45.4%) were female children. Among mothers, 307 (87.3%) had at least four AN visits, and 43 (12.3%) had <4 visits. However, only 243 (69.4%) received counseling regarding breastfeeding during the AN period. As many as 107 (30.6%) mothers did not receive counseling regarding breastfeeding during the AN period. Nearly 208 (59.4%) mothers had natural labor, 129 (36.9%) underwent lower-segment cesarean section (LSCS), and 13 (3.7%) underwent instrumental delivery. The majority, 269 (76.9%) of babies, belonged to the first order of birth, followed second order of birth, 72 (20.6%).

The majority, 276 (78.9%) of mothers knew about the timing of initiation of breastfeeding. Nearly 317 (90.6%) mothers knew that colostrum was good for the baby. Similarly, most of the mothers, 275 (78.6%), had adequate knowledge about the duration of exclusive breastfeeding, 222 (63.4%) about the frequency of feeding, and 249 (71.1%) about breastfeeding duration. We found that more mothers, 306 (87.4%), felt that breastfeeding fulfills the nutritional requirement of the baby. Almost 343 (98%) mothers agreed that breastfeeding makes babies strong against infections. Furthermore, a high proportion of 339 (96.9%) mothers felt that breastfeeding is easier than formula or cow's milk feeding. Among those mothers, 344 (98.3%) agreed that breast milk is easier to digest. Almost all 350 mothers (100%) agreed that breast milk is more economical.

Table 1: Bivariate logistic regression analysis for the WHO breastfeeding criteria fulfillment.

S. No.	Variables	Recommendations fulfilled n (%) (n=91)	P-value	OR (95% CI)
1.	Age of mother >30 years	37 (30.3)	0.18	0.72 (0.43–1.17)
	Age of mother <30 years	54 (23.6)		
2.	Illiterate mother	7 (32)	0.52	1.36 (0.53–3.45)
	Literate mother	84 (25.6)		
3.	Employed mother	35 (27.8)	0.58	0.87 (0.53–1.43)
	Unemployed mother	56 (25)		
4.	Nuclear family	54 (30.7)	0.04	1.64 (1.01–2.66)
	Joint family	37 (21.2)		
5.	Breastfeeding counselled mothers	73 (30)	0.01	2.22 (1.19–3.85)
	Uncounselled mothers	18 (16.8)		
6.	LSCS delivery	56 (43.4)	0.01	4.07 (2.47–6.73)
	Non-operative delivery	35 (15.8)		

WHO: World Health Organization, OR: Odd's ratio, CI: Confidence interval, LSCS: Lower-segment cesarean section

Table 2: Multivariate logistic regression analysis for ideal breastfeeding practices.

S. No.	Variables	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
1.	Nuclear family	1.64 (1.01–2.66)	1.83 (1.21–2.84)
2.	Breastfeeding counseled mothers	2.22 (1.19–3.85)	2.46 (1.28–4.02)
3.	LSCS delivery	4.07 (2.47–6.73)	4.13 (2.53–6.86)

OR: Odd's ratio, CI: Confidence interval, LSCS: Lower-segment cesarean section

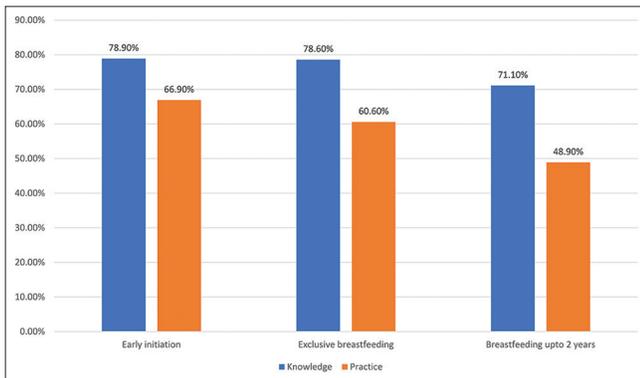


Figure 1: Knowledge and practices of World Health Organization recommendations.

In this study, 234 (66.9%) mothers initiated breastfeeding within an hour, and 116 (33.1%) mothers delayed the initiation of breastfeeding. The reasons for delayed initiation of breastfeeding were illness in the baby in 57 (49.1%) mothers, mother feeling exhausted by 28 mothers (24.1%), discarded colostrum by 11 (9.4%), illness in the mother by 8 mothers (6.9%), inadequate secretion as said by 6 (5.1%), not aware about early initiation by 5 (4.3%) mothers, and baby slept by 1 (0.8%) mother. The majority, 308 (88%), had not given any pre-lacteal feed to their baby, and 42 (12%) had given pre-lacteal feed. In total, 212 (60.6%) mothers gave exclusive breastfeeding up to 6 months. About 75 (22%) mothers used top feeding. They were packaged milk used by

28 (37.3%) mothers, fresh cow's milk by 27 (36%) mothers, and formula milk by 20 mothers (26.7%). The majority of mothers, 315 (90%), continued breastfeeding after the initiation of complementary feeds. Nearly 230 (65.7%) mothers initiated complementary feeding after 6 months, whereas 120 (34.3%) mothers started complementary feeding before 6 months. Nearly 251 (71.7%) babies breastfed on demand, whereas 99 (28.3%) babies breastfed at specific time intervals. One hundred and seventy-one (48.9%) babies were breastfed till 2 years of age, but breastfeeding was stopped before 2 years in 179 (51.1%) babies.

All three WHO recommendations for breastfeeding, namely, initiation of breastfeeding within 1 h of delivery, exclusive breastfeeding till 6 months of age, and breastfeeding to be continued till 2 years of age, were followed in only 91 (26%) mothers, with 95% confidence interval being 21.48–30.93%. Bivariate analysis showed factors such as living in a nuclear family, receiving breastfeeding counseling during the AN period, and delivery by lower-segment cesarean section to be associated with ideal breastfeeding practices [Table 1]. Logistic regression confirmed the association [Table 2].

DISCUSSION

The study revealed that as much as three-fourths of mothers had adequate knowledge about ideal breastfeeding practices, but roughly only two-thirds practiced EIBF and exclusive breastfeeding till 2 years of age, while less than half of them

breastfed up to 2 years of age. All three recommendations were followed by only one-fourth of the mothers. Nuclear family, receiving counseling regarding breastfeeding during the AN period, and operative delivery were associated with recommended breastfeeding practices.

The knowledge regarding breastfeeding influences breastfeeding practices, mainly the initiation of breastfeeding, duration of exclusive breastfeeding, and the need to give colostrum at birth, and all these contribute to the better survival and development of children. In our study, 30.3% were graduates and nearly two-thirds of mothers received AN counseling regarding breastfeeding practices, whereas it is 86% in another study done in Tamil Nadu^[2] and 48%^[6] and 58%^[7] in the previous studies done in various centers in India.

In this study, 78.9% had correct knowledge of breastfeeding initiation. However, only 66.9% had given breast milk within 1st h of birth [Figure 1]. The reason for delayed initiation of breastfeeding was mostly due to illness in the baby (49.1%), and it was 97% in previous studies and the most common reason being separation of baby from mother due to illness in the baby (2%) or advice from mother in law (1%).^[8] In the previous study, the knowledge of EIBF was 80%, but only 34.5% had EIBF.^[9] In another study, it was 77.6% who breastfed within 1 h of birth.^[10] This higher rate in our study may be due to a higher number of graduates in our study group.

About 90.6% of mothers knew that colostrum was good for their baby, which is higher than the previous study (56%).^[6] About 87.4% of mothers knew that breastfeeding fulfills the nutritional requirement of the baby, and nearly all knew that it protects against infections, which is higher when compared with previous studies (80% and 72.8%^{[2],[7]}). Pre-lactal feeds were given by 12% of mothers, which are 10.5% in another study^[9] and 19% (6% honey and 3% ghee) in another study done in Bengaluru.^[8] In the present study, 78.6% knew the duration of exclusive breastfeeding, but only 60.6% breastfed exclusively till 6 months, which is less than the previous study (72%). Seventy-five mothers used top feeding 350 mothers, the most common being packaged milk, which is cow's milk in the previous study.^[8]

In this study, the factors that affect the appropriate breastfeeding practices were found to be the nuclear type of family where the breastfeeding practices were more appropriate. This could be due to the fact that in modern joint families, the mother's comfort is given more priority than the baby's needs by the mother's parents. More of the mothers who received AN counseling (69.4%) had good practices of breastfeeding. Moreover, another factor is the mode of delivery, where LSCS mothers fulfilled the criteria than the mothers who delivered by natural means. This may attributed to the counseling given by healthcare workers during their

longer stay in the hospital. In the previous study, the reasons quoted were influenced by relatives,^[11] least number of AN visits, and early age at marriage.^[8]

The majority of mothers in our study had adequate knowledge about breastfeeding, but the practice of exclusive breastfeeding is not satisfactory, as per NFHS reports.^[4] Hence, though the knowledge on breastfeeding by mothers is encouraging, to increase the exclusive breastfeeding rate and subsequent reduction of infant mortality and under 5 mortality, the need of the hour is supporting lactating mothers by various methods, which may start from the AN period to the completion of the family.

CONCLUSION

The level of knowledge on breastfeeding was good, but practices of breastfeeding were suboptimal, with only one in four mothers following all three WHO recommendations for breastfeeding. Nuclear family, AN counseling regarding breastfeeding, and cesarean mode of delivery resulted in better breastfeeding practices.

Ethical approval

The research/study was approved by the Institutional Review Board at Government Kilpauk Medical College, Chennai, number 614/2021, dated October 07, 2021.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-z for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript, and no images were manipulated using AI.

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