

# Determinants of Exclusive Breastfeeding Practice Among Recent Postpartum Women in a Level 3 Maternity Hospital (Abidjan, Côte d'Ivoire)

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## To cite this article:

Diallo Sadio, Ouattara Adama, Dia Jean Marc, Yao Ignace, Okon Gerard, Kume Stephane, Tijani Fahimat, Kehi Siaka, Guie Privat. Determinants of Exclusive Breastfeeding Practice Among Recent Postpartum Women in a Level 3 Maternity Hospital (Abidjan, Côte d'Ivoire). *Journal of Gynecology and Obstetrics*. Vol. 11, No. 5, 2023, pp. 115-119. doi: 10.11648/j.jgo.20231105.12

Received: September 4, 2023; Accepted: September 25, 2023; Published: October 8, 2023

**Abstract:** *Objective:* To identify the obstacles to exclusive breastfeeding among recent postpartum women. *Methods:* A descriptive and analytical cohort study was conducted from December 5, 2021, to August 18, 2022, among recent mothers in a level 3 maternity hospital in Abidjan. This study involved 434 mothers and their newborns followed during their delivery period until 6 months postpartum. *Results:* The rate of exclusive breastfeeding was 18.4%. The rate of mothers with a satisfactory knowledge of exclusive breastfeeding was 27.6%. Protection against diseases and child growth were the most commonly cited benefits (84.6%). Healthcare personnel were the most represented source of information (68.3%), followed by the media (21.1%). The rate of initiating breastfeeding within 30 minutes after delivery was 21%. The reasons given by the mothers for introducing other foods were insufficient milk and the child's thirst, which accounted for 64.6%. The factors influencing exclusive breastfeeding practice included age, marital status, profession, mode of delivery, and lack of awareness about exclusive breastfeeding. *Conclusion:* Our study found that the rate of exclusive breastfeeding is low (18.4%). It reflects the 12% national rate in Côte d'Ivoire. A large-scale awareness-raising policy directed toward all social strata and the creation of breastfeeding facilities in the workplace is necessary to improve this rate in our country.

**Keywords:** Exclusive Breastfeeding, Attitudes, Practices, Knowledge

## 1. Introduction

The research and systematic reviews of recent years on breastfeeding and the use of human milk, have continued to reinforce the conclusion that breastfeeding and human milk are the normative standards for infant feeding and nutrition [1-4].

The benefits of breastfeeding are widely recognized. Since 2001, the WHO has recommended exclusive breastfeeding during the first six months of life of a newborn [5]. Many newborns, however, do not benefit from it. The abusive use of artificial milk as well as cultural and traditional beliefs pose enormous difficulties in the practice of exclusive

breastfeeding.

One can note high rates of exclusive breastfeeding (from 38% to 80) in several developing countries (Mongolia, Rwanda, Burundi, Nepal, Togo, Benin, Senegal, and Mali), [6]. In Côte d'Ivoire, the rate remains low (12%) [7]. In order to contribute to the improvement of this rate in our country, we found it relevant to identify the obstacles to the practice of exclusive breastfeeding among recent postpartum women.

The results of this study will help guide strategies for educating mothers about newborn feeding with a view to encouraging them to adhere to and continue exclusive breastfeeding for up to 6 months in conformity with WHO recommendations.

## 2. Population and Method

The study took place at Hôpital Général de Port-Bouët, a hospital comprising a level 3 maternity ward and located in the southern part of Abidjan. The said maternity ward is one of the referral centers for obstetrical emergencies in the southern zone of Abidjan.

We conducted a prospective study that took place from December 2021 to August 2022, that is, a period of nine months. In total, we selected 434 mother-child couples without serious pathologies contraindicating breastfeeding or requiring hospitalization.

The patient selection period lasted for two months, and the follow-up for each patient was six months. The survey consisted of three components:

- 1) The first component concerned mothers' knowledge of breastfeeding as reported before they left the maternity hospital.
- 2) The second component consisted of a direct or telephone interview with the mothers, starting from six weeks postpartum.
- 3) The third component collected information on the practice of exclusive breastfeeding after six months of delivery.

The variables studied were sociodemographic characteristics, gynecological and obstetric history, characteristics related to childbirth, mothers' knowledge of exclusive breastfeeding, and their attitudes and practices

regarding exclusive breastfeeding. For data analysis, we used SPSS Version 18. Quantitative data were described using mean and standard deviation. Analysis of qualitative data was performed using the Chi-square test. The significance threshold was set at 5%.

## 3. Results

### 3.1. Socio Demographic Characteristics and Gynecological and Obstetric History

Table 1 shows the sociodemographic characteristics and gynecological and obstetric history of the mothers surveyed. The 18-34 age range was the most represented (83.8%). Among the mothers, 54.2% were housewives, 64.1% had a low level of education, and 74.4% lived with a partner. 52.9% of them were paucigest while 40.2% were pauciparous. Mothers who gave birth by vaginal delivery had a rate of 62.7%.

### 3.2. Mothers' Knowledge and Awareness of Exclusive Breastfeeding

Most mothers had not been educated about exclusive breastfeeding before delivery (62.2%). The healthcare personnel (doctor, midwife) were the main source of information among the sensitized mothers (68.3%). The surveyed mothers who did not have a good knowledge of the duration of exclusive breastfeeding represented 72.4%.

*Table 1. Socio demographic Characteristics and Gynecological and obstetric history.*

Socio-demographic characteristics) and gynecological and obstetric history	Size (N)	%
Age group 18-34	364	83.8
Housewife (no occupation)	235	54.2
Insufficient academic level (Primary school or no education)	278	64.1
Mothers in couples	323	74.4
Paucigest	230	52.9
Pauciparous	174	40.2
Vaginal delivery	272	62.7
Cesarean delivery	162	37.3

Regarding the benefits of exclusive breastfeeding, the child's protection against diseases, as well as its cost-effectiveness, were mentioned, with respective rates of 50.1% and 40.1%.

### 3.3. Mothers' Attitudes and Practices About Exclusive Breastfeeding

Table 2 illustrates the attitudes and practices of mothers regarding exclusive breastfeeding. Regarding early initiation of breastfeeding, only 21% of mothers had given breast milk

to their newborns within 30 minutes after delivery. Furthermore, 28.6% of mothers had administered substances other than breast milk to their newborns before the first breastfeeding. Among the surveyed mothers, 60.8% had given colostrum to their newborns. Only 18.4% of mothers had practiced exclusive breastfeeding until 6 months. The reasons cited for the introduction of other foods included insufficient maternal milk supply (41.2%), the newborn's crying due to thirst (23.5%), and constraints related to the mothers' work (18.2%).

*Table 2. Mothers' Attitudes and Practices About Exclusive Breastfeeding.*

Mothers' Attitudes and Practices About Exclusive Breastfeeding	Number (N)	%
Early breastfeeding initiation within 30 minutes	91	21
Mothers who administered other substances to the newborn before breastfeeding	124	28.6
Mothers who gave colostrum to the newborn	264	60.8
Mothers who used Exclusive Breastfeeding for 6 months	80	18.4
Infant weaning due to insufficient milk	146	41.2

### **3.4. Factors Influencing Mothers' Exclusive Breastfeeding Practices**

There was a statistically significant association ( $p < 0.05$ ) between exclusive breastfeeding and the following factors: age of mothers, marital status, occupation, mode of delivery, mother's awareness level.

## **4. Discussion**

### **4.1. Mothers' Knowledge of Exclusive Breastfeeding**

The study revealed that mothers did not have a good overall knowledge of exclusive breastfeeding. The duration of exclusive breastfeeding was unknown to 72.4% of mothers, with only 24% knowing about the period of early breastfeeding initiation. Furthermore, the majority of them (74%) believed that breast milk alone was not sufficient for newborn feeding.

Regarding the benefits of breastfeeding, only 21.3% of mothers were able to list at least one advantage. The most commonly mentioned benefits were the protection of the child against diseases (50.1%) and the cost-effectiveness of breast milk (40.1%). In a study conducted in Morocco by H. Berani [8], the most cited benefits were the protection of the child against diseases (10.5%) and the prevention of breast pathologies (22.7%).

This lack of knowledge among mothers could be attributed to their low level of education and a lack of awareness and information about exclusive breastfeeding. Hence, there is a need to conduct awareness campaigns targeting mothers through media and healthcare personnel.

### **4.2. Mothers' Attitudes and Practices About Exclusive Breastfeeding**

The administration of substances other than breast milk to newborns before their first breastfeeding is a reality revealed by this study (25.6% of mothers). Such substances were administered by the mothers and their family and friends. This can be explained by the mothers' ignorance, cultural practices, and traditions. Such practices expose the newborn to infections when hygiene conditions are poor. The percentage of substances administered observed in this study is similar to the findings of Hassani [9] in Morocco, which was 23.1%. The same observations were made by Maigret [10] and Rigourd [11].

Regarding the nature of the substances administered, water represented 5.1% while artificial milk represented 23.5%. In the study by R Mbusa [12] in Congo, newborns received water, fruit juices, and artificial milk in proportions of 15.4%, 5.8%, and 1.9%, respectively. Early breastfeeding initiation within the first hour after birth was observed in 21% of cases, while 30.6% of mothers only breastfed the day after delivery. These figures are far from the recommendations of the World Health Organization (WHO), which advocates breastfeeding within 30 minutes of birth. Considering the benefits of early

breastfeeding initiation, which can be a determining factor in choosing exclusive breastfeeding, it is important to restore this practice.

60.8% of the mothers gave colostrum to their newborns. These figures are lower than those reported by R Mbusa [12] in Congo, which was 77%. These results indicate the lack of knowledge among some mothers regarding the protective properties of colostrum against infectious agents as for Bellati [13].

Regarding the timing of introducing other foods, it was found that 60.7% of mothers had given other substances to their children as early as the first month. The reasons cited were insufficient breast milk (41.2%), child's thirst (23.8%), and work-related constraints (18.2%). In Mali, Mariko [14] mentioned occupation as an obstacle to the practice of exclusive breastfeeding.

In the survey conducted by Triaa Benhamadi [15] in France, the three main reasons cited by mothers were cracked nipples, insufficient breast milk, and the baby's refusal to breastfeed. Most difficulties leading to the introduction of other substances stem from a lack of knowledge about breastfeeding practices and could easily be addressed with the implementation of some preventive measures.

The survey revealed that the prevalence of exclusive breastfeeding was 18.4%. Mixed feeding accounted for 81.6%. Mothers with low income should consider exclusive breastfeeding as the optimal feeding choice for the child's proper physical and intellectual development.

### **4.3. Factors Influencing the Practice of Exclusive Breastfeeding**

The mother's age is a significant factor influencing the prevalence of exclusive breastfeeding ( $p=0.04$ ). In Mali, Mariko [14] also observed a statistically significant association between the mother's age and the practice of exclusive breastfeeding.

It also appeared that the mothers' abilities and physical conditions are affected by age. Occupation is a determining factor in the choice of breastfeeding mode. The survey showed a statistically significant link between occupation and the practice of exclusive breastfeeding ( $p=0.034$ ).

Stay-at-home mothers practice exclusive breastfeeding more frequently. However, it is less common among women in self-employment (23.7%) and almost nonexistent among civil servants. These results are consistent with those of Hassani [9] in Morocco, which reveal that stay-at-home women (84.7%) breastfeed more than having an occupation. Consequently, the mother's employment is significantly associated with early weaning. In fact, women in self-employment justify this choice due to work-related constraints, while employed or civil servant women face time constraints due to inadequate work schedules. In reality, women often resort to artificial milk feeding for their newborns out of the constraints related to the necessity to return to work. Thus, it is advisable for medical and hospital staff to educate mothers on the methods of expressing and

preserving breast milk to be given to the newborn in the mother's absence [16, 17].

The mode of delivery has a statistically significant influence on the practice of exclusive breastfeeding ( $p=0.038$ ). Mothers who delivered vaginally were more likely to practice exclusive breastfeeding. This observation is consistent with Coulibaly's [18] study in Côte d'Ivoire, where the mode of delivery was linked to the practice of exclusive breastfeeding. In their study, mothers who delivered by cesarean section practiced exclusive breastfeeding less frequently. Indeed, cesarean section has always been cited as an obstacle to the practice of breastfeeding due to the effects of anesthesia, which may not be conducive to early breastfeeding initiation, and the pain from the surgical wound, which makes it difficult to position the child during breastfeeding [18].

## 5. Conclusion

Our study revealed that the rate of exclusive breastfeeding is low, reflecting the 12% national rate in Côte d'Ivoire. The factors influencing its practice are age, occupation, marital status, and mode of delivery.

In view of these results, a large-scale awareness-raising policy on the good practice of exclusive breastfeeding, directed toward the population, is necessary. This would undoubtedly contribute to the reduction of infant morbidity and mortality in Côte d'Ivoire.

## Declaration of Interest

The authors declare that they have no ties of interest.

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