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Exclusive breastfeeding: the case of mothers of children aged 0 to 6 months followed at the Notre Dame des Apôtres Hospital in N'Djamena, Chad

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Abstract

This study was conducted to contribute to the improvement of exclusive breastfeeding practices in the urban community of N'Djamena. It was a descriptive cross-sectional study conducted from January 1, 2023, to March 31, 2024. 192 mothers of children aged 0 to 6 months admitted to the Nutritional and Therapeutic Unit of Notre Dame des Apôtres Hospital were included in the study. Data were collected and analyzed using Excel 2016 spreadsheet software. The results showed that the surveyed mothers were relatively young and mostly educated. Although 75% of these mothers were informed about the benefits and importance of exclusive breastfeeding, only 23.43% practiced it. The breastfeeding initiation practices of these mothers were commendable as 90.62% had given colostrum to their children. However, there are still many psychological barriers related to breastfeeding that need to be addressed, as exclusive breastfeeding is the best way to prevent malnutrition.

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Introduction

Exclusive breastfeeding is feeding a child exclusively at the breast without adding any other food or drink, not even water, juice, porridge, nothing other than breast milk. Exclusive breastfeeding continues even in hot weather, as breast milk is a complete food and meets the infant's needs for both nutrients and water. Expressed breast milk, that is, milk from the mother, a milk bank, or a wet nurse, is considered in this category of breastfeeding (Mzid *et al.*, 1995; ANAES, 2002).

The World Health Organization (WHO) and UNICEF recommend exclusive breastfeeding for the first six months and continued breastfeeding alongside complementary foods for up to two years. According to the WHO, widespread breastfeeding could prevent more than a million deaths of children under five each year worldwide, while also preventing several childhood illnesses. This practice would also reduce the incidence of breast cancer in women (WHO, 2006).

Breast milk is the main source of nutrients for the child. During the first six months, exclusive breastfeeding, without any other additions, is recommended by the WHO because it passes on the mother's antibodies and all necessary nutrients to the child. Additionally, as breast milk is sterile, it helps prevent diarrhea and other illnesses. Exclusive breastfeeding for the first 6 months of a baby's life reduces infant mortality, halves the risk of diarrhea, and reduces the risk of respiratory infections by one third. Exclusive breastfeeding (EBF) also reduces the risk of obesity and chronic diseases for the child later in life (Labarère *et al.*, 2001; WHO, 2002). Suboptimal breastfeeding, i.e., breastfeeding not in accordance with WHO recommendations, increases the risk of mortality during the first two years of breastfeeding and accounts for 800,000 deaths per year (The Lancet, 2013).

WHO considers breastfeeding as the best way to feed young children and ensure their best possible health? Therefore, national and international public health institutions establish biopolitics when they assert, like WHO, that "breastfeeding is the ideal way to provide

infants with all the nutrients they need to grow and develop in good health. Colostrum, a yellowish and thick milk secretion produced at the end of pregnancy, is, as recommended by WHO, the perfect food for the newborn, who should start feeding within the first hour after birth (Loras-Duclaux, 2000).

Despite all the efforts made for awareness, globally only 38% of infants are exclusively breastfed, with 31% in sub-Saharan Africa (Turck, 2005). In West and Central Africa, only 22% of young children under 6 months are exclusively breastfed (Traoré *et al.*, 2014). In Mali, in the age group of 0-5 years, only one in three children, i.e., 33%, has received only breast milk, meaning they were exclusively breastfed (Sidibé *et al.*, 2018). In Central Africa, in Gabon according to a report in 2024, FAO established a particularly low exclusive breastfeeding rate of 5.1% (FAO, 2024). In Chad, according to the SMART survey conducted in 2022, the exclusive breastfeeding rate is 7.3%, which is very low and proves the society's neglect of this practice that is supposed to protect both mother and child (DNTA, 2022). The objective of our study is to contribute to the improvement of exclusive breastfeeding practice at the urban community level of N'Djamena.

Materials and methods

Type, period, and study site

This is a descriptive cross-sectional study conducted from January 1, 2023, to March 31, 2024, at the Nutritional and Therapeutic Unit of Notre Dame des Apôtres Hospital (HNDA) in N'Djamena, Chad.

Study population

The study population consisted of mothers of children aged 0 to 6 months who attended prenatal consultations at the Nutritional and Therapeutic Unit of Notre Dame des Apôtres Hospital (HNDA) in N'Djamena and wished to participate in the study.

Sampling

The sample size was determined by random selection of mothers at the unit. Mothers were interviewed as they presented for infant consultation or vaccination sessions. Thus, the final sample size was 192 mothers of children aged 0 to 6 months.

Inclusion criteria

All mothers whose children were aged between 0 to 6 months attending infant consultations who agreed to answer the questions.

Exclusion criteria

All mothers of children aged 0 to 6 months attending infant consultations who are unable to answer the questions and/or mothers who have abandoned the ongoing interview.

Data collection tools

A questionnaire addressed to mothers of children was used as the data collection tool. The variables studied included the mothers' sociodemographic characteristics (age, parity, marital status, level of education, and profession, etc.), their knowledge of the benefits of breast milk, infant and young child feeding practices, and conditions under which the mother should not breastfeed the child, their exclusive breastfeeding practices.

Data processing tools

The collected data were entered and analyzed using Excel 2016 spreadsheet software.

Results

Socioeconomic profiles of mothers of children

The results of Table 1 reveal that the surveyed infants aged 0 to 6 months are from relatively young mothers, as the dominant age group is 25 to 34 years old, accounting for 59.37%, and 98.43% of mothers were married. Additionally, the majority of these mothers are educated. Specifically, 36.97% have a primary level of education, 47.91% have a secondary level, and 2.10% have a higher level. Only 13.02% of mothers were illiterate. Most of them are homemakers (53.12%). Civil servants represent 14.06%, while the remainder are either middle managers or workers (32.81%). 77.6% of the surveyed mothers resided in the city center of N'Djamena. The surveyed children are predominantly male (68.75%).

Among all surveyed mothers, 75% were informed about the benefits and importance of exclusive breastfeeding, while 25% did not receive any information before childbirth.

Table 1. Socioeconomic characteristics of mothers of children

Variables	Quantity	Percentage (%)
Mother's Age Group		
15-24 years	19	9,89
25-34 years	114	59,37
35 years and above	59	30,72
Child's Gender		
Male	132	68,75
Female	60	31,25
Mothers' Education Level		
Illiterate	25	13,02
Primary	71	36,97
Secondary	92	47,91
Higher 4	4	2,10
Mother's Marital Status		
Married	189	98,43
Single	3	1,56
Widowed	0	0
Mother's Parity		
Primiparous	24	12,5
Multiparous	168	87,5
Mother's Profession		
Homemaker	102	53,12
Middle Managers or Workers	63	32,81
Senior Managers or Civil Servants	27	14,06
Residential Area		
City Center	149	77,6
Suburb	43	22,39
Source of Mothers' Knowledge on EBF		

Table 2. First breastfeeding after childbirth and colostrum intake

Breastfeeding Time	Frequency	%
Within the hour of birth	108	56,25
12 hours after birth	61	31,77
24 hours after birth	5	2,60
Total	174	90,62

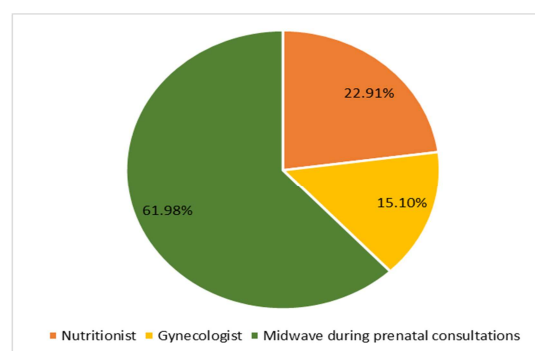


Fig. 1. Representation of mothers' knowledge on EBF

Regarding the informed mothers, various sources of knowledge were identified: 61.98% were informed by midwives during prenatal consultations, 15.10% by gynecologists, and 22.91% by nutritionists (Fig. 1).

First breastfeeding after childbirth

Children breastfed within the first hours after birth accounted for 56.25%, those breastfed 12 hours later were at 31.77%, and 2.60% were breastfed 24 hours after birth. 90.62% of children were able to receive colostrum (Table 2).

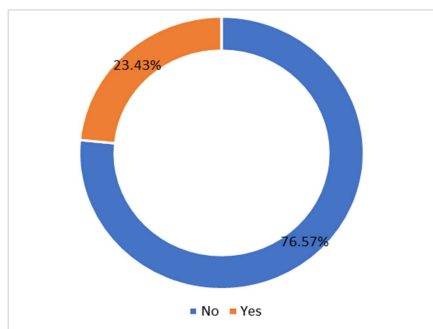


Fig. 2. Exclusive breastfeeding rate in the study Area

Exclusive breastfeeding practice

Analysis of Fig. 2 shows a still low proportion of mothers practicing exclusive breastfeeding. Specifically, 23.43% of children benefited from exclusive breastfeeding, while 76.57% did not have this opportunity.

Discussion

It emerges from this study that half of the surveyed women (50%) have a low level of education (illiterate or primary education) and do not work. These factors are crucial in decision-making regarding the adoption of any behavior. Indeed, a higher level of education is regularly associated with prolonged breastfeeding (Loras-Duclaux, 2000; Turck, 2005). A study conducted in Thailand on breastfeeding adolescent mothers struggled to establish a correlation between breastfeeding and the level of education attained in this population (Spear, 2006). Other studies conducted in Canada by Chalmers Beverley *et al.* (2009) revealed that mothers with higher income observed better exclusive breastfeeding practices, while Sipsma *et al.* (2013) and Bell *et al.* (2015) reported that there is no link between family income and breastfeeding duration. The present study revealed that three-quarters (75%) of mothers received adequate information on the benefits and importance of exclusive breastfeeding often during prenatal consultations. These data are crucial and

demonstrate the advantage of Information, Education, and Communication (IEC) sessions conducted for women during antenatal care or at the Nutrition and Therapeutic Unit on exclusive breastfeeding. The results are consistent with previous studies conducted in the Health District of Fana, which found good knowledge of exclusive breastfeeding benefits among women (Youssoufa, 2015). In 2022, the Chadian Ministry of Health and its partners also reported in a study that there has been significant progress in nutritional education for children (PNDS, 2022). The results of this study demonstrated that exclusive breastfeeding relatively involves few children.

Specifically, the analysis showed that only 23.43% of children benefited from exclusive breastfeeding during the first 6 months. This rate is higher than the national average of 7.3% in 2022. Our results are lower than those of Kemoral *et al.* (2023), who found an exclusive breastfeeding rate of 28.88% in N'Djamena. Diadié and Balla (2021) found an exclusive breastfeeding rate of 33.5% in Niamey, Niger, in 2021. Additionally, the results highlight a very acceptable consumption of colostrum by children. Specifically, 90.62% of children received colostrum even though the initiation of breastfeeding was delayed beyond 24 hours. This demonstrates the abandonment of the previous rejection of colostrum, which was previously considered harmful to the child. This result is similar to that reported by Himeda *et al.* (2022), who noted that 88.75% of newborns received colostrum in N'Djamena.

Conclusion

Exclusive breastfeeding is a valuable asset for the health and well-being of the child. It emerges from our study that almost a quarter of women practice exclusive breastfeeding, exceeding national data, but many psychological barriers related to breastfeeding remain to be addressed because exclusive breastfeeding is the best way to prevent malnutrition. Therefore, it is crucial to value and support this natural practice of exclusive breastfeeding to provide children with a gentle start in life and allow mothers to fully flourish in their role.

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