Research article

Breastfeeding Practices by Women Attending the Vaccination and Pediatric Out-Patient Clinics at the Yaounde Gynaeco-Obstetric and Pediatric Hospital Cameroon

Pratique de l'Allaitement Maternel Exclusif par les Mères en Consultation Vaccinologique et Pédiatrique à l'Hôpital Gynéco Obstétrique et Pédiatrique de Yaoundé

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Abstract

PURPOSE / AIM

Despite the well-known benefits of exclusive breastfeeding in sustaining infant well-being, breastfeeding rates still remain low in many countries. We aimed at investigating the practice and determinants of exclusive breastfeeding for the first six months of life in Cameroonian women.

METHODS

In this cross-sectional study, we interviewed a consecutive sample of 310 mothers at the Yaounde Gynaeco-Obstretic and Pediatric. The study was conducted from 1st September 2011 to 29th February 2012. Variables related to the practice of breastfeeding within the first 6months of life were assessed. Odds ratio was used to determine the predictive variables of exclusive breastfeeding for 6 months.

RESULTS

The reported rates of exclusive breastfeeding were 84.8% at birth and 23.5% at six months. Medical advice (49.3%) and concern for the child's health (42.5%) were the two main reasons for practicing exclusive breast-feeding for the first six months of life; while resumption of studies or work (38.4%) and the belief that the newborn was not 'satisfied' (34.2%) were the main reasons for introducing other foods. Most children (84.5%) did not receive any foods before the first breastfeed. Breast milk substitutes were given to 70.5% of the babies. Most women (87.1%) breastfed on demand, and breast pain was the main difficulty in 60.5% of the mothers. Being a housewife was positively associated with exclusive breast-feeding (OR:2.18, 95% CI: [1.25-3.81], P= 0.005).

CONCLUSION

Exclusive breastfeeding in the first 6 months remains low in this setting. Sensitization and education of mothers during prenatal visits and routine consultations should be reinforced.

KEY WORDS:

Exclusive breastfeeding, practices, determinants, Yaounde, Cameroon

Résumé

OBJECTIFS

Malgré les avantages connus de l'allaitement maternel exclusif dans le maintien du bien-être de l'enfant, les taux d'allaitement maternel restent bas dans plusieurs pays. Cette étude avait pour but d'évaluer les pratiques et déterminants de l'allaitement maternel exclusif pendant les six premiers mois de la vie chez les femmes Camerounaise.

MÉTHODES

Dans cette étude transversale, nous avons interrogé un échantillon consécutif de 310 mères à l'Hôpital Gynéco-Obstétrique et Pédiatrique de Yaoundé. L'étude a été conduite du 1er septembre 2011 au 29 février 2012. Les variables ayant un lien avec la pratique d'allaitement pendant les 6 premiers mois de vie ont été évalués. L'odds ratio a été utilisé pour déterminer les variables prédictives d'un allaitement exclusif pendant 6 mois.

RÉSULTATS

Les taux rapportés de l'allaitement maternel étaient de 84,8% à la naissance et 23,5% au sixième mois. Le conseil médical (49,3%) et le souci de la santé de l'enfant (42,5%) étaient les deux raisons principales d'effectuer un allaitement exclusif pendant les six premiers mois de vie ; pourtant la reprise des études ou de travail (38,4%) et la croyance que le nouveau- né n'était pas 'satisfait' (34,2%) étaient les principales raisons pour introduire d'autres aliments. La plupart des enfants (84,5%) n'avait rien consommé avant la première tétée. Les substituts du lait maternel étaient donnés chez 70,5% des bébés. La plupart des femmes (87,1%) allaitaient à la demande, et les douleurs mammaires étaient la difficulté principale dans 60,5% des femmes. Etre ménagère était lié positivement à un allaitement exclusif (RC: 2,18, 95% IC : [1,25-3,81], P=0,005).

CONCLUSION

L'allaitement exclusif pendant les 6 premiers mois de vie reste faible dans ce contexte. La sensibilisation et l'éducation des mères au cours des visites prénatales et les consultations de routine doivent être renforcés.

MOTS CLÉS

Allaitement maternel exclusif, pratiques, déterminants, Yaounde, Cameroun

BACKGROUND

Breastfeeding is the best way of providing ideal food for the growth and development of the infant **[1-4]**. In 2007, approximately 68% of children born worldwide were breastfed, but fewer than 15% were in accordance with current recommendations of exclusive breastfeeding during the first six months of life **[2]**. In Cameroon, 98% of children under six months are breastfed, but only one out of five (20%) of these children were exclusively breastfed**[5]**. Some studies have shown that early introduction of complementary foods is associated with an increased risk of diarrheal diseases **[6, 7]**, a shortening of the duration of breastfeeding **[6, 8]**, and a four-fold increase in the risk of hospitalisation for acute respiratory infections **[9]**. To minimise these risks, the World Health Organisation (WHO) and United Nations Children's Emergency Fund (UNICEF) recommend the initiation of breastfeeding within the first hour following delivery, and exclusive breastfeeding (EBF) for six months; breastfeeding should be continued for up to 2 years or more, complemented with gradual introduction of adequate and appropriate foods that meet with the additional needs of the infant **[3, 4]**. Although the concept of EBF for 6 months might seem obvious to many, it still faces many socio-cultural barriers in developing countries **[9]**. In Nigeria, EBF was higher in rich and middle level households, with younger infants, amongst mothers who had four or more antenatal visits, for female infants, and in mothers who lived in the North Central geopolitical region **[10]**. In Ethiopia, being unmarried, having a high economic status, and having a younger infant were predictors of EBF **[11]**. In Cameroon, specifically in Yaounde, in 1992, a prevalence of EBF of 17.1% was noted, and the duration on EBF statistically increased with the number of siblings**[12]**. Given the importance of EBF, and the geographic variation of its determinants, we decided to study the practice and determinants of EBF at the Yaounde Gynaeco-Obstetric and Pediatric hospital in Cameroon.

METHODS

Study design

This was a cross-sectional, descriptive study conducted at the outpatient and vaccination units of the Yaounde Gynaeco-Obstetric and Paediatric Hospital, which is a reference centre for mother and child care. The study was conducted over a 6 month period (1st September 2011 to 29th February 2012).

Sample size

The sample size (N) was calculated from the formula:

$$N = \frac{t^2 \times P(1-P)}{M^2}$$

t= confidence interval at 95%

P=prevalence (we considered 20% which is the rate of exclusive breastfeeding for 6months in Cameroon as reported in EDS-MICS 2011) [5]

M= Error margin of 5%

The minimal sample size (N) from this formula was 285 mothers

A. Sample population and procedure

The study population was a consecutive sample of all mothers whose children were aged between 6 and 12 months and had been breastfed for the first 6months of life. These mothers had come to the hospital either for paediatric consultations or for vaccination of their infants, and were consecutively enrolled into the study, after their informed consent.

They were interviewed either in English or French, depending on the mothers' preference.

The following variables were noted : age of the mother, parity, matrimonial status, profession, level of education, sex and birth weight of the child, previous experience of the mother with breastfeeding, duration of EBF, reasons for breastfeeding, time and reason for weaning, foods given before the first breastfeed and for weaning, difficulties encountered, and the frequency of breastfeeding.

This information was entered into a pretested questionnaire. After the interview, the mother was counselled on proper breastfeeding practices, and encouraged to continue if she was following current recommendations.

B. Ethical clearance

Permission to conduct the study was obtained from the hospital authorities, and ethical clearance from the Institutional Ethics Committee of the Faculty of Medicine and Biomedical Sciences, Yaounde.

The purpose of the study was explained to the mothers and those who accepted to participate in the study signed a consent form.

C. Data analysis

Data collected were analysed using the Statistical Package for Social Sciences (SPSS) version 17.0 and Microsoft Excel 2007. Counts and percentages or means and standard deviations are reported where appropriate. Odds ratio was used to determine the predictive variables of exclusive breastfeeding for 6 months. The Chi squared test was used to compare proportions, and p values<0.05 were considered to be statistically significant.

RESULTS

The socio-demographic characteristics of the participants are reported in table I.

TABLE I: CHARACTERISTICS OF THE STUDY POPULATION

Characteristics	Number	Percentage (%)
Maternal age (years)		
≤20	16	5.2
20-30	190	61.3
>30	104	33.5
Religion		
Muslim	10	3.2
Christian	299	96.5
Other	1	0.3
Marital status		
Single	53	17.3
Couple	257	82.9
Profession		
Salaried	94	30.3
Self employed	63	20.3
Pupils/Student	69	22.3
Unemployed	84	27.1
Level of education		
Illiterate	8	2.6
Primary	12	3.9
Secondary	156	50.3
Higher education	134	43.2
Parity		
Primipara	121	39.0
Multipara	174	56.1
Grande multipara	15	4.8

A. Evolution of exclusive breastfeeding during the first six months of life.

Out of the 310 mothers interviewed, 263 (84.8%), had their babies exclusively breastfed at birth but more than half introduced other foods before 4 months. At 6 months only 73 (23.5%) breastfed exclusively (figure 1). The mean age of weaning was 3.56 months. Most mothers (87.1%) breastfed their babies on demand and 10.3% followed a planned schedule.

B. Reasons for the practice of exclusive breastfeeding

Advice from health personnel (49.3%) and ensuring good health of the child (42.5%) were the main reasons given by the mothers who practised exclusive breastfeeding. However, for those who did not practice EBF, the main reasons put forward were: resumption of work or studies (38.4%) and the belief that the breast milk was insufficient (34.2%) and mother's or child's ill health (14.3%).

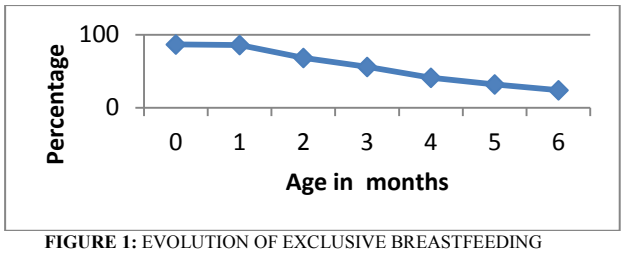

FIGURE 1: EVOLUTION OF EXCLUSIVE BREASTFEEDING ACCORDING TO AGE

C. Introduction of other foods before the first breastfeed

Breastmilk substitutes were the foods most often given (70.5%) (Figure 2).

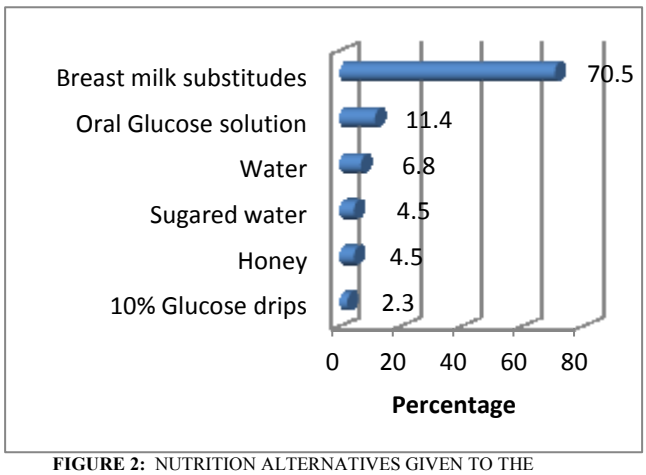

FIGURE 2: NUTRITION ALTERNATIVES GIVEN TO THE NEONATES BEFORE THEIR FIRST BREASTFEEDING

D. Difficulties encountered during breastfeeding

Breast pains (60.5%) and fissured nipples (31.6%) were the main difficulties the mothers encountered during breastfeeding (figure 3).

E. Factors that influenced the practice of exclusive breastfeeding during the first six months of a child's life.

Of the 310 women interviewed, 73 (23.5%) practiced exclusive breastfeeding for 6 months and 237 (76.5%) introduced other foods into the child's diet at an age below 6months.

EBF was significantly associated only with the mother's profession: being a housewife was associated with increased odds (odds ratio [OR] 2.18; 95% Confidence Interval [CI] 1.25-3.81; P=0.005).

Other factors such as maternal age, matrimonial status, parity, place or mode of delivery, infant gender or birth weight, experience with BF or encountered difficulties were not associated with EBF up to six months (table II).

DISCUSSION

The rate of exclusive breastfeeding for 6 months from our study was 23.5%. This is similar to that of the 2004 Demographic Health Survey (DHS) in Cameroon which was 24% **[13]**, but higher than that of the 2011 multiple cluster Demographic Health Surveys which stood at 20%**[5]**. Other studies in Cameroon showed rates of 17.3%**[12]**, and 20% **[14]** . The particularity of our population was that it consisted of mothers attending a mother and child care referral centre where more emphasis is placed on the practice of breastfeeding and all of these mothers gave birth in a health facility. Other studies in Nigeria showed rates of 16.4% **[10]**, and 37.3% **[15]**. There is a wide variation in these rates worldwide, with 64.8% in Pakistan**[16]**, 20-25% in Bolivia **[17]**, 7.8% in India **[18]**, and 2% in Mexico **[19]**.

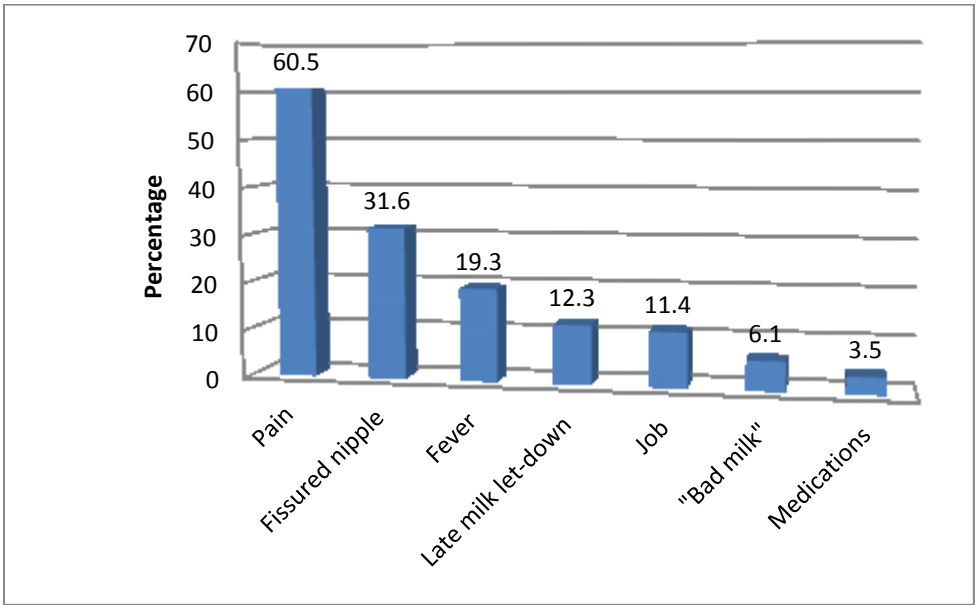

FIGURE 3: DIFFICULTIES ENCOUNTERED DURING BREASTFEEDING

TABLE II: MATERNAL FACTORS ASSOCIATED WITH EBF FOR 6 MONTHS

Mode of feeding / Factors	EBF*		NEBF**		OR [CI 95%]	*P*-value
	N=73	(%)	N=237	(%)		
Mother's age						0.887
≤ 20 years	4	25	12	75	1.09 [0.29-3.79]	
>20 years	69	23.5	225	76.5		
Matrimonial situation						0.864
Single	12	22.6	41	77.3	0.94 [0.44-1.99]	
Married	61	23.7	196	76.2		
Profession/Activity						0.005
House wife	29	34.5	55	65.5	2.18 [1.25-3.81]	
Out of home	44	19.5	182	80.5	1.000	
Level of education						0.021
University	23	17.2	111	82.8	0.52 [0.30-0.91]	
Below university level	50	28.5	126	71.5	1.000	
Parity						0.463
Primipara	33	27.3	88	72.7	1.39 [0.82-2.37]	
Multipara	40	22.1	149	78.9		

* Exclusive breastfeeding ** non-exclusive breastfeeding

These variations in different settings could be explained by cultural and perception differences on breastfeeding.

At birth, 84.8% of the mothers had their children exclusively breastfed. This rate is higher than the 31% observed in Nigeria **[20]**. After 4 months, more than half of them had introduced other foods. The weaning age from our study was comparable to the 3.25 months observed in Yaounde **[21]**. The similarity in the weaning age in the two studies corresponds to the end of maternity break of the working class in our country. Mothers who did not exclusively breastfeed until 6 months gave as major reasons: the resumption of work / study and non-satiation of the child. In our study the main reasons put forward by the mothers who opted to breastfeed exclusively for 6 months were: medical advice (49.3%) and for the baby's health (42.5%). This demonstrates the need for informing and educating pregnant women on the importance and benefits of breastfeeding.

In this study only 14.2% of the mothers gave other foodstuffs to their babies before their first breastfeed, contrary to 62% observed in 2004 **[13, 14]**, and 77% in 2011**[5]**. A likely reason for this is that, the hospital encourages good breastfeeding practices for all mothers who give birth there. Other studies in Ethiopia, Nepal and in Bolivia noted similar rates of 13%, 14% and 17% respectively **[11, 17, 22]**. Breast milk substitutes were the main foodstuffs given in 70.5% of the mothers before the first breastfeed. Other foods apart from breast milk noted by other authors were, breastmilk substitutes (61.3%), tea (30.6%), honey (1.1%) **[17]**; breastmilk substitutes 6.2%, sugar water 5.9% and cow milk in 2.8% **[22]**. This is an indication that foodstuffs given to newborns before their first breastfeed vary from region to region. The introduction of other foods before the first breastfeed has also been shown to correlate with increased neonatal morbidity and mortality **[23]**, although this was not investigated in this study.

In Nigeria, the major constraints to exclusive breastfeeding were, the perception that babies continued to be hungry after breastfeeding (29%), maternal health problems (26%), fear of babies becoming addicted to breast milk (26%), pressure from mother-in-law (25%), pains in the breast (25%), and the need to return to work (24%) **[24]**.

Exercising a home activity (housewife) unlike an outdoor profession or activity was significantly associated with the practice of EBF up to 6 months. This could be explained by the fact that housewives at home are constantly with their babies and are more likely susceptible to breastfeed them for as long as 6 months. Moreover, the main reason put forward by mothers for not practicing exclusive breastfeeding was the resumption of work or school. A similar finding was noted in a study in Guatemala **[25]**.

Having a higher level of education was negatively associated with EBF. Mothers who had a high level of education were mainly those who worked out of the home. However Nlend et al did not find a statistically significant correlation between the duration of exclusive breastfeeding, with the profession of the couple or the mother's level of education **[12]**. In other studies, the mother's age, parity and urban residence **[26]**, parity and the mother's profession negatively influenced exclusive breastfeeding for 6 months **[14]**.

Contrarily, in Nigeria, and in Ethiopia, having a higher level of education positively correlated with the practice of exclusive breastfeeding **[11, 27]**. The explanation might be that mothers with a high level of education have a better knowledge on the advantages of breast milk.

Other authors observed that maternal factors as place of residence **[28]**; marital status and wealth index **[11]**; and parity and maternal age**[29-31]**, influenced exclusive breastfeeding for up to six months.

From our study neither factors related to childbirth (place of birth, mode of delivery), nor those related to the child (sex, birth weight) significantly influenced the practice of exclusive breastfeeding to 6 months. Some studies indicated that the place of birth **[27, 28]**, mode of delivery**[22]**, sex **[10, 16]** and weight of the child, had a statistically significant influence .

Factors associated with breastfeeding, i.e. breastfeeding experience, the time when breastfeeding was chosen, the difficulties encountered and the father's opinion on the subject had no statistically significant influence on the practice of EBF. Other studies noted that the father's opinion **[32]**, difficulties encountered during breastfeeding **[29, 33]** , and the choice of breastfeeding before birth **[28]**, had a significant influence on EBF.

CONCLUSION

Although most mothers attending the Yaounde Gynaeco-Obstetric and Pediatric Hospital practice breastfeeding, the rate of exclusive breastfeeding for 6 months is still very low. Housewives were more likely to breast feed for six months, while women with a university education were less likely to breast feed for six months. Mothers working out of home should be given enough breastfeeding support and sensitization because from the study they are less likely to exclusively breastfeed for 6 months. Sensitization of mothers during vaccination sessions and pediatric consultations through health talks should be reinforced.

DECLARATION OF CONFLICTING INTERESTS

No conflicts of interest

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