

# Infant Feeding Perceptions and Barriers to Exclusive Breastfeeding in Urban and Rural Cameroon

Lem Ngongalah<sup>1,\*</sup>, Ngwa Niba Rawlings<sup>1</sup>, Wepngong Emerson<sup>1,2</sup>, Oluwaniyi Titilope<sup>3</sup> and Mumah Sharon<sup>1</sup>

<sup>1</sup>Department of Public Health, Collaboration for Research Excellence in Africa (CORE Africa), Cameroon

<sup>2</sup>Mboppi Baptist Hospital, Douala, Cameroon

<sup>3</sup>Nottingham Medical Hospital, UK

**Abstract:** Background: Child malnutrition is highest in Sub-Saharan Africa. Over 45% of children in Cameroon die each year from malnutrition-related causes, most of which are preventable. Exclusive breastfeeding is a well-acknowledged and cost-effective intervention against malnutrition-related illnesses in children. However, the practice remains low in Cameroon. This study explored perceptions of mothers, care givers and key informants on infant feeding in Cameroon, and barriers to exclusive breastfeeding.

**Methods:** A qualitative methodology was used, comprising key informant interviews and focus group discussions with nursing mothers, grandmothers and health workers; in one urban and one rural area in Cameroon. Participants were selected using convenience, purposive and snowball sampling methods. Data were analysed using thematic analysis.

**Results:** Cameroonian mothers were supportive of breastfeeding. However, knowledge of exclusive breastfeeding and its benefits was poor. Mothers expressed doubts about its feasibility and showed concerns about satisfying their babies' feeding and health needs. Barriers included factors which either affected women's abilities to breastfeed or their babies' satisfaction, family influences, other responsibilities, cultural and societal factors, and lack of support from the healthcare system.

**Conclusions:** This study highlighted a sizeable gap between mothers' lived experiences and infant feeding recommendations. Living in rural areas was an added disadvantage. Developing effective strategies to increase exclusive breastfeeding rates requires that mothers' needs be understood and that influencing factors be addressed. Supportive environments are also required to promote and protect the rights and abilities of mothers to breastfeed exclusively.

**Keywords:** Breastfeeding, exclusive breastfeeding, EBF, infant feeding, perceptions, barriers, mothers, developing countries, Cameroon.

## 1. INTRODUCTION

Nearly half of under-five deaths worldwide are attributable to poor nutrition [1]. Over 45% of child deaths in Cameroon are linked to malnutrition, mostly from severity of disease [2]. Breastfeeding has for decades been identified as the single most beneficial and cost-effective intervention against infant mortality [3, 4]. The WHO recommends that babies be breastfed from birth, that infants be breastfed exclusively for the first six months of life, and that complementary foods be introduced from six months of age, with continued breastfeeding up to two years [5, 6]. Exclusive breastfeeding (EBF) is especially important for developing countries, where child malnutrition is on the rise and childhood diseases such as diarrhoea, pneumonia and measles are very common. EBF confers immunity against these illnesses, decreases

children's risk of becoming overweight or obese and improves cognitive development [7, 8].

Breastfeeding is considered a norm in Cameroon. However, differences exist in the time of initiation, duration of breastfeeding and exclusivity. About 80% of new-borns in Cameroon are not breastfed within an hour of birth, and over 70% of infants aged below six months are not breastfed exclusively [9]. More than one-third of infants between six to nine months of age stop receiving breast milk and are introduced to other foods [9].

While existing studies have described infant feeding practices in Cameroon, none have explored the underlying factors that influence a mother's infant feeding choices, as well as the challenges mothers face. Studies have also solely reported on women in urban areas, without considering the experiences of mothers living in rural areas. This study, therefore, aims to explore the perceptions of mothers, caregivers and key informants on infant feeding in urban and rural Cameroon; and barriers to EBF.

\*Address correspondence to this author at the Collaboration for Research Excellence in Africa (CORE Africa), Cameroon; Tel: +237 677 885 764; Fax: +237 200 106 410; E-mail: l.ngongalah@coreafrica.org

## 2. METHODS

### 2.1. Study Design and Participant Selection

This was a qualitative study with women living in two localities in the North West Region of Cameroon – Bamenda and Bafut. Nursing mothers with children under six months of age were primarily targeted for the study, due to their direct and recent breastfeeding experiences. Secondary targets included grandmothers and health workers (HWs) (nurses and midwives); due to their role in influencing the infant feeding decisions of breastfeeding mothers. Key informants included officials at the Ministry of Public Health, Health district officers, Doctors, and community elders; and were purposely selected to obtain first-hand knowledge on infant feeding practices in both study areas. Participants were recruited through purposive and snowball sampling methods, by means of direct contact, announcements at social gatherings and key informant referrals.

### 2.2. Key Informant Interviews

Three interviews were conducted face-to-face and two over the phone. Interviews were conducted by the lead researcher and all responses were recorded.

### 2.3. Focus Group Discussions

The focus group discussions (FGDs) were led by the lead researcher (NL) and facilitated by a second researcher (NR) who also recorded non-verbal communications. Relevant background information was obtained from each mother. The FGDs were held in quiet and easily accessible areas which included private homes, churchyards, and community halls. The settings were informal, with chairs arranged in a circular pattern, to create a relaxed and comfortable atmosphere.

Each session started with a brief introduction, where the researcher was presented and the purpose of the study explained. Participants were given the opportunity to ask questions before signing the consent forms. The discussions started with general questions on breastfeeding, to identify common practices in the local area. Questions also explored participants' knowledge of EBF and their perceptions on the benefits of and barriers to EBF. Open-ended questions were used to encourage discussion and prompts were included to enable follow-up on key topics. All discussions were audio-recorded, and field notes were taken. The discussions lasted about an hour each, at

the end of which participants were compensated with light snacks and baby gift items.

### 2.4. Data Analysis

The data were analysed using thematic analysis. Audio recordings were transcribed verbatim and three authors (LN, NR and EW) verified the transcripts with field notes to ensure accuracy. Participant responses were then coded, noting the context and frequency of their responses. Codes included any words or phrases that were relevant to the study objectives. Similar codes were then collated into themes and patterns were highlighted. Quotations illustrating key points were selected for inclusion in the report. Two authors (EW and TO) independently checked the transcripts and themes to assess the validity of the data.

### 2.5. Ethical Approval and Consent

The study received ethical clearance from the Regional delegation in Bamenda and the local health committee in Bafut. Written (or verbal) informed consent was obtained from every participant prior to the FGDs.

## 3. RESULTS

### 3.1. Description of Study Participants

A total of eight FGDs were conducted, four in each study area. Four FGDs included mothers, two included grandmothers and two included HWs. A total of 64 participants attended - 30 in the urban area and 34 in the rural. Participants included 31 mothers ( $n=14$  urban,  $n=17$  rural), 17 grandmothers ( $n=7$  urban,  $n=10$  rural) and 16 HWs ( $n=9$  urban,  $n=7$  rural). Demographic details of the study participants are shown in Table 1. 79% of mothers who were contacted agreed to participate in the urban area and 92% in the rural. In grandmothers, this was 82% and 94% respectively. Reasons for non-participation included illness, going to work/meetings or other personal/family responsibilities. All HWs (100%) who were contacted attended the focus groups in both areas.

### 3.2. Perceptions on Infant Feeding

#### 3.2.1. Breastfeeding Initiation and Colostrum

The mothers showed a high level of support for breastfeeding and most indicated breastfeeding as a normal expectation of motherhood. There was a general consensus that breastmilk is good for the baby. However, opinions differed on the time of breastfeeding initiation and colostrum. Urban mothers felt that

**Table 1: Demographic Characteristics of Study Participants**

Characteristic	Urban n=30	Rural n=34
<b>Age n(%)</b>		
18-25	11 (36.7)	15 (44.1)
26-35	16 (53.3)	17 (50.0)
36-45	3 (10.0)	2 (5.9)
<b>Number of children n(%)</b>		
1-3	8 (26.7)	5 (14.7)
4-6	19 (63.3)	23 (67.6)
7+	3 (10)	6 (17.6)
<b>Age of youngest child n(%)</b>		
0-3 months	10 (33.3)	7 (20.6)
3-6 months	20 (66.7)	27 (79.4)
<b>Marital status n(%)</b>		
Not married	12 (40.0)	17 (50.0)
Married	18 (60.0)	17 (50.0)
<b>Education n(%)</b>		
Never attended school	0 (0.0)	2 (5.9)
Primary education	9 (30)	22 (64.7)
College/University	21 (70.0)	10 (29.4)
<b>Employment status n(%)</b>		
Employed	12 (40)	20 (58.8)
Unemployed	18 (60)	14 (41.2)
<b>Place of delivery n(%)</b>		
Health facility	30 (100.0)	31 (91.2)
At home	0 (0.0)	3 (8.8)
<b>Grandmothers (n=17)</b>		
<b>Age</b>		
45-60	2 (28.6)	4 (40)
60+	5 (71.4)	6 (60)
<b>HWs (n=16)</b>		
<b>Duration of service</b>		
1-3 years	4 (44.4)	1 (14.3)
3-5 years	2 (22.2)	4 (57.1)
5+ years	3 (33.3)	2 (28.6)

colostrum is good for the baby and that breastfeeding should be initiated immediately after birth. While some rural mothers shared the same views, others referred to colostrum as “bad milk” due to its colour and believed it should be discarded. They also believed that a baby should be put to the breast after at least an hour, to allow the mother to bathe and rest. Feeding a new-born anything other than breastmilk was uncommon amongst mothers from the urban area. Meanwhile, some rural mothers said they gave their babies water to “wet their mouths” or to “keep their throats from getting dry”.

### 3.2.2. EBF

More than half of the women were unable to correctly describe what EBF means. Most mothers believed that as long as they had not introduced any solid foods to their babies, they were breastfeeding exclusively – even if they gave water and other liquid foods. This notion was common in both the urban and rural areas.

Urban mothers were aware of the recommendation to breastfeed exclusively for six months, although several believed that the appropriate age for complementary foods is from three months. A few mothers knew that EBF could enhance growth and protect the baby from illness. However, most women were not aware that EBF also had benefits for the mother. Awareness of the recommendation to breastfeed exclusively was less common amongst the rural mothers – three women had never heard of it. A majority of those who were aware of this recommendation expressed doubts about its feasibility and effectiveness.

### 3.2.3. Supplementary Feeding

Water was indicated as the most common breastmilk supplement given to babies, due to the widely held belief that babies needed to drink water from a tender age for a healthy growth. It was also believed that babies needed water to quench their thirst and that water helps to sooth them when they cry. Other common breastmilk supplements mentioned were “pap”(corn porridge), *Cerelac* (a type of instant baby cereal), fruit juice, bananas, egg yolk, ground liver, and other blended foods. Mothers believed that children needed to practice eating soft foods at a young age before they could start eating solid foods.

## 3.3. Barriers to EBF

The barriers to EBF have clustered into five themes: 1) mother-baby factors; 2) family influences; 3) other responsibilities; 4) the community/society and 5) the healthcare system.

### 3.3.1. Mother-Baby Factors

This theme included factors which either affected a mother’s ability to breastfeed or the baby’s satisfaction. Quotes describing these factors are presented in Table 2.

#### a. Perception of Insufficient Milk Supply

Mothers felt that they were unable to produce as much milk as their baby needed due to the fact that

**Table 2: Quotes Representing Mother-Baby Factors which were Barriers to EBF**

Quote	Participant (age)
"At first I thought maybe it was a problem with my breast, but the Doctor said no, it's normal (...) Since she refuses breastmilk but takes bottle milk and other foods, I give her what she likes."	Urban mother (33)
"...it's like they know the difference because sometimes even if you squeeze the milk into a bottle and give them, when they taste it they start crying. But if you give the normal bottle milk they take with no problem"	Urban mother (38)
"You could sit in church, in the market or somewhere with people and your dress just becomes wet around the nipples. It's very embarrassing especially if there are men there"	Rural mother (39)
"Sometimes you're hungry but you can't eat because you don't have appetite for anything. Especially when you're sick. But you still have to breastfeed. It's like someone is pulling your heart out of your chest"	Urban mother (38)
"There are times when we don't have enough food in the house or I'm waiting for my husband to bring what we'll cook from the farm. For that day I'll only have to give the child something else"	Rural mother (28)

their babies still continued crying after breastfeeding, which to them signified hunger. This led to the belief that breastmilk on its own was not enough to satisfy a baby's hunger and therefore did not suffice to keep a baby healthy. Some mothers believed that breastmilk only helped to quench a baby's thirst, which was why babies became hungry again a short while after breastfeeding.

#### b. Baby Rejecting Breastmilk

Several mothers described that their babies started refusing to take breastmilk, usually around the age of 3 months. For some mothers, this was as early as one month after birth. They interpreted this to mean that their babies wanted something else.

#### c. Pain, Illness and Discomfort

Pain during breastfeeding and resulting sore nipples was a major problem. Mothers related this to the fact that their babies sometimes had to suck too hard "*because the milk wasn't flowing well enough*". Some mothers experienced discomfort and embarrassment from leaking breasts, especially in public places. Mothers who had an operation or suffered from ill health such as back or waist pain said it was very difficult to find a good position in which to put the baby, such that breastfeeding did not feel stressful.

#### d. Hunger

Mothers explained that breastfeeding made them feel dizzy, ill or nauseous when they had either not eaten well, or not eaten at all. Some women recounted how their babies needed to eat many times a day, and they were unable to keep up, due to lack of appetite.

### **3.3.2. Family Influences**

Family members who influenced women's infant feeding practices included grandmothers, mothers-in-

law, husbands/partners, siblings, and other family members e.g. aunties. Quotes extracted from this theme are shown in Table 3.

#### a. Pressure from Grandmothers and Mothers-in-Law

Grandmothers and mothers-in-law were identified as essential figures in mothers' decisions to breastfeed exclusively. Grandmothers especially were noted for putting pressure on new mothers to supplement their babies' feeding with other foods, in order to make the babies grow "fat". This was driven by the fact that being fat was seen as an indication of good health. The women said it was difficult to breastfeed exclusively when their mothers or grandmothers were around. However, as they needed extra help especially when they just had a baby, it was difficult or impossible not to have grandmothers around.

The above factors were echoed during the FGDs with grandmothers. Although all grandmothers were in support of breastfeeding, most were unsupportive of the recommendation to breastfeed exclusively for six months. Several grandmothers recounted how their personal involvement and support had helped their daughters to breastfeed for a number of months but argued that breastmilk alone "*could never be sufficient*" for a baby. Grandmothers generally agreed that introducing other foods to babies alongside breast milk would enable them to grow better and faster.

The second issue raised about grandmothers was that they often put pressure on breastfeeding mothers to give traditional medicines to their babies, for protection against illnesses and spiritual attacks. Women said it was difficult to refuse to give these medicines to their babies, especially when their grandmothers had emphasized on the need for them. Some mothers who were against the use of traditional medicines said this placed them in a difficult position

**Table 3: Quotes Describing the Influence of Family Members on Mothers' EBF Practices**

Quote (Responses from grandmothers)	Participant (age)
"Babies cannot feed on breastmilk alone. For the first few months it's okay because the baby cannot even eat anything. But after...3 months, it's like giving water to a hungry man...especially boys, they need real food to make them strong."	Rural grandmother (64)
"Breastfeeding is a normal thing that mothers have been doing for years and we support our daughters to do it. But this EBF thing is a new practice introduced by the Western culture and this culture is responsible for the many diseases we see today, which did not exist in the olden days"	Rural grandmother (61)
"I have 10 children and I did not breastfeed any of them exclusively and they are all healthy. Nowadays, people just follow what others do for the sake of it, so when my daughter talks about EBF, I just let her go on with it. But when the baby is with me, I feed her properly"	Urban grandmother (68)
"...mothers should not just listen to what other people around have to say because they themselves might just have heard it too from someone around. They need to listen to what the doctors and nurses say and follow that"	Rural mother, aged (67)
"Traditional medicine is very effective. Sometimes you see a baby cannot sleep at night and is only crying; it's spiritual attack. When you use traditional medicine, all that will stop. It also cures things like stomach ache and fever"	Rural grandmother (65)
"Traditional medicine is natural and can cure any sickness. Even the doctors say it. That's why you see when somebody has stayed in the hospital for long and is not getting better they turn to traditional medicine. Women just refuse to use it just because they did not buy it from a pharmacy and it does not have an English name"	Rural grandmother (70)
<b>Concern over partners' needs</b>	
"...two to three months for me. If not my husband will start getting angry about any little thing around the house. But I understand him because it's not easy."	Rural mother (30)
"I like to breastfeed the way the Doctor says, but my husband also likes to spend time with the baby and feed him on his own, so that the child will grow to like his father"	Urban mother (34)
"For me my husband hates when I insist that I want to breastfeed, especially when he sees that I'm sick or tired. He feels like I'm telling him that he cannot take care of the child if I'm not there"	Urban mother (35)
"Six months is too much. Soon your breasts will become like slippers"	Urban mother (26)
<b>Influence of other family members</b>	
"My elder sister was surprised that I was still breastfeeding my son at 5 months. She told me that if I continue, he'll grow up to be stubborn"	Urban mother (27)
"My aunty will shout at my daughter when she starts crying and coming towards me because she knows she wants breastmilk. I feel bad but what can I do?"	Urban mother (29)

within the family because if anything ever happened to the baby, they would be blamed and called bad mothers.

#### b. Concern over Husband's or Partner's Needs

There was a common belief that sexual activity during breastfeeding could "*spoil the milk and spoil the child*". As such, breastfeeding mothers were unable to engage in any sexual activity, which sometimes resulted in conflicts with their partners. The mothers complained of being unable to balance between the child's needs and their partner's. Other women reported that their husbands did not support EBF for a long duration because they felt left out and were worried that their child would grow up not to like them. Younger mothers feared that breastfeeding for too long would cause their breasts to sag and look "*flabby*", making them appear unattractive to their spouses.

#### c. Lack of Family Support

Women reported that family members only considered breastfeeding a necessity when a child was still very young, usually within the first 3 months. From 4 months onwards, mothers were expected to wean their babies and start feeding them with other foods. When this didn't happen, family members made comments such as "*you're spoiling that child*" or "*he's too old to still be breastfeeding*".

#### **3.3.3. Other Responsibilities**

Mothers cited other responsibilities which were challenging to keep up with, in addition to breastfeeding. These included school and work. Quotes reported under this theme are shown in Table 4.

#### a. Work/School

Working and schooling mothers complained that breastfeeding was time-consuming and they faced

**Table 4: Quotes Showing Influences of other Responsibilities on EBF**

Quote	Participant (age)
"How am I supposed to store my breastmilk in the fridge with this electricity that goes on and off every minute?"	Urban mother (39)
"My baby sitter is an 'eye-servant'. She does all the right things when I'm around but when I'm out, she can feed the baby with dirty hands or even leave the milk standing uncovered for hours and then give it again to the baby"	Urban mother (39)
"If I stay at home for six months without doing anything just because I want to breastfeed, what will my family eat? Everybody will just call me a lazy mother"	Rural mother (38)
"As soon as my baby reaches 3 months, I'm going back to work. That's why my manager likes me because I don't always stay at home for long. I did the same with my other two children and my mother takes care of them when I'm not at home"	Urban mother (35)

difficulties integrating it into their work/school schedules. Most of these women chose bottle-feeding because it gave them more freedom to carry out their day-to-day activities, such as doing house chores or going to school, work, the market or farm. They added that bottle-feeding also enabled them to get assistance from other members of the household in feeding their babies. Some mothers said they tried to express their breast milk and store for the baby to be fed while they were away, but this was difficult because they lacked appropriate means for storage had concerns over the hygienic conditions of the milk in their absence. Self-employed mothers such as those involved in farming and marketing said they were unable to take their babies along with them because they either had to walk long distances to their farms or sit under the hot sun for long hours. Leaving the baby at home was, therefore, the preferred option, during which time they were fed with other food items.

#### b. Short and Unpaid Maternity Leave

Working mothers reported that the amount of time they were granted as maternity leave was usually not long enough to allow them to breastfeed exclusively for six months. However, they stated that even if these breaks were long enough, they would rather go to work than stay at home for that long without any form of support, as most of them were not entitled to paid maternity leave. A few women said they were allowed to bring their babies to work with a babysitter to look after them, which made it possible for them to take

breastfeeding breaks as and when needed. However, breastfeeding breaks were unpaid and sometimes caused clashes with employers.

#### **3.3.4. Community/Society**

Two major factors emerged here: challenges with breastfeeding in public and culture. Quotes extracted from this theme are presented in Table 5.

##### a. Disapproval of Public Breastfeeding

Women faced difficulties finding places within their communities where they could breastfeed comfortably, due to the social disapproval of public breastfeeding, especially in areas like workplaces, markets, and schools. As a result, they had to find spaces in places such as toilets or car parks, which were very uncomfortable.

Women also felt uncomfortable breastfeeding around men, due to their visualisation of women's breasts in a sexual context. Many breastfeeding mothers reported feeling isolated from the rest of the community and thus reluctant to breastfeed in public.

##### b. Culture and Tradition

Traditional beliefs, myths and misconceptions surrounding breastfeeding were identified as prominent factors which influenced women's infant feeding decisions. In one culture, breastmilk was seen as an unbalanced diet which on its own could not enable a child to grow properly. As such, family members

**Table 5: Quotes Showing Influences of the Community/Society on EBF**

Quote	Participant (age)
"It's a normal thing but when you do it people stare at you like you're doing something strange. Especially men. Sometimes, some people will even ask you why you are breastfeeding in public"	Urban mother (31)
"I cannot breastfeed in public. I don't know how some people do it but I can never"	Urban mother (26)
"Culture is culture. We did not make it. We grew up to it, so we have to respect it"	Rural mother, aged 33

**Table 6: Quotes Showing the Influence of Health Workers on EBF**

Quote	Participant (age)
<b>Responses from mothers</b>	
"Today, this one will say breastfeed for six months, tomorrow that one will say breastfeed for 4 months. Most of the time they won't even tell you that you should not give water"	Urban mother (37)
"One nurse told me that if I cannot breastfeed I should just give the bottle milk because it's not very different from breastmilk but I should just make sure it's not too thick"	Urban mother (26)
"The nurse advised me to stop breastfeeding at 3 months, because the baby had started showing signs of needing heavier food"	Rural mother (33)
"Nobody ever showed me how to breastfeed my baby. It was not as easy as I thought it was, but with time I learned. I think if a nurse could come and spend just like five or ten minutes with me talking about breastfeeding, it could help me to open up"	Urban mother (28)
"Even when I told my nurse that I was finding it hard to breastfeed my child she was surprised, like how can a woman not breastfeed her own baby? I did not just want to continue to explain why..."	Rural mother (29)
<b>Responses from nurses and midwives</b>	
"Most of them are usually not open with us. When we talk to them, it's like yes, they are doing what we advised...but soon, when they come back with a child who is not well and you ask them what the child ate, that's when they will tell you that they have been feeding the child with many other foods because breastmilk was not enough"	Urban Nurse
"Do you have children? I cannot tell you how many times I have heard this question. Some mothers believe you cannot tell them what to do with their babies when you haven't experienced motherhood"	Urban Nurse
"These are the things we hear every day. If somebody already believes what's in her head, then whatever you tell them you're just wasting your time. Especially the older women because they believe some of us are too young to advise them"	Rural Nurse
"As a health practitioner, I think it's the best thing for babies. But as a mother, I would tell you it's not easy. That's why I understand when some of my patients tell me they are no longer breastfeeding exclusively because I've tried it myself"	Urban midwife

usually brought food items over, which were supposed to be fed to the baby, and it was disrespectful not to do so. Several cultures also believed in using traditional medicines "to protect children from common childhood diseases or spiritual attacks". Several mothers – especially in the rural area agreed that traditional medicines were "necessary" and "very effective". Some urban mothers were not in support of these traditions.

### 3.3.5. The Healthcare System

The mothers in this study implied in their responses that health professionals usually either did not provide as much support as they needed with breastfeeding or lacked consideration for their individual needs. Table 6 shows quoted responses that describe these factors.

#### a. Conflicting Advice from Health Personnel

Mothers reported having been advised to breastfeed exclusively "if they could", which to them, did not highlight the importance of EBF. As such, whenever they felt like they could not breastfeed exclusively, they used other feeding methods. Other women reported having received conflicting pieces of advice. Some women reported having seen formula

milk adverts pasted around hospital walls, containing inscriptions like "as good as breastmilk".

#### b. Lack of Support from Health Personnel

A frequently mentioned barrier to EBF was the approach some doctors and nurses had towards their patients. The mothers reported that because health practitioners had the notion that breastfeeding is "easy" and "something every mother should be able to do", they were often reproached for asking "silly questions" and made to feel embarrassed when they expressed difficulty with breastfeeding. The mothers added that nurses were always too busy and never spent enough time with them either to teach them how to breastfeed or just to discuss the challenges they were facing.

In the FGDs with HWs, nurses expressed concerns over their heavy workloads and mentioned inadequate staffing as a factor that limited their ability to spend time with mothers, advising them on how to feed their babies or providing additional support with breastfeeding. However, they emphasized that they often provided all the "necessary information", but realized that speaking to mothers was usually not enough to make them comply with the guidelines.

Nurses identified the perception that breastmilk alone was not sufficient for the baby as the main barrier to EBF. They mentioned that most mothers felt that their babies got thirsty sometimes and needed water and that at other times, the baby just needed something heavier to eat because breastmilk was “too light”. They also identified potential conflicts between the advice they gave and the opinions of relatives, which often put nursing mothers in a difficult situation.

Although all nurses were aware of the recommendation to breastfeed exclusively for the first six months, some had limited knowledge of its benefits. When asked to define EBF, a few nurses mentioned that it was okay to give water or other liquids like juice, if needed. Several nurses also did not think breastfeeding should continue beyond six months, which is in contrast to the complementary feeding guidelines. Though in support of EBF, some nurses expressed doubts about its feasibility and shared the challenges they had experienced with the practice as mothers. Quoted responses from nurses and midwives are also shown in Table 6.

### c. Lack of Training and Non-Acknowledgment of Breastfeeding Policy

According to the key informants interviewed, one major problem at the level of the healthcare system is the fact that, although most hospitals in Cameroon have a written hospital policy on breastfeeding, very few health care staff are aware of this policy. In addition, very few hospitals train their staff on breastfeeding, which translates into mothers not receiving the appropriate amounts of support. These facts echo the findings from the FGDs with nurses and midwives, which showed that very few nurses were aware of a written policy in their institution that supports EBF and only two indicated ever having received in-service training on IYCF practices.

## **4. DISCUSSION**

This study was conducted to identify women's knowledge and perceptions of infant feeding in Cameroon; and the factors that influence EBF. The results revealed the multi-dimensional challenges faced by nursing mothers. A majority of the mothers understood the benefits of breastfeeding and aspired to breastfeed longer than they actually did. However, this knowledge alone was not sufficient to enable them to breastfeed longer. Most mothers breastfed simply because it's a long-standing culture. There was a limited understanding of the correct practice of EBF

and its benefits. Awareness and understanding of EBF also differed by geographical location, suggesting that women in rural areas may be receiving even less information and support as those in urban areas.

The barriers to EBF identified in this study are consistent with findings from other developing countries. In one Nigerian study, for example, mothers considered EBF essential but demanding, especially when it had to be incorporated into daily activities [10]. With the changing roles of women in today's society, balancing between motherhood and real life brings a tough challenge. In Ghana, women also complained of insufficient milk supply, babies still feeling hungry and painful nipples after breastfeeding [11]. Culture and tradition were also identified as another big factor in Ghana, where women said new-born babies are usually given water at birth, under the notion that they are emerging from a cool to a hot environment [11]. Unsupportive work environments were reported in Ethiopia [12].

The health sector, as shown in this study, has an essential role to play in supporting women to breastfeed exclusively. Breastfeeding is both a health and a societal issue, and health practitioners working with mothers need to view breastfeeding within that context. Health facilities need to ensure that workers receive appropriate training and that they provide support and advice in accordance with hospital and breastfeeding policies. Using a patient- and family-centred approach when working with breastfeeding mothers by collaborating with them and considering the context of their personal lives and families could provide the right amounts of support mothers need to breastfeed exclusively. On the other hand, using phrases such as “*breastfeeding is easy*” rather than referring to it as a skill that needs to be learned hinders mothers - especially first-time ones, from expressing their difficulties. In addition to the right amounts of support, appropriate IYCF requires an enabling environment and a society that promotes breastfeeding. Cameroon's national Breastfeeding policy does not address all the provisions on maternity protection. Although employers are recommended to give maternity leave to working mothers, there is no enforcing law that goes with this recommendation [13]. These factors do not provide an enabling environment that supports or promotes EBF.

Personal enablers of EBF success such as confidence and self-efficacy can be achieved using peer educators and breastfeeding support groups, as has been shown in various developing countries [14].

## 5. LIMITATIONS OF THE STUDY

The findings of this study cannot be generalised to the whole population due to the relatively small sample size. As mostly convenient sampling was used, the study is subject to sampling bias. The collection of data using FGDs may also introduce social desirability bias.

## 6. CONCLUSION

This study revealed a sizeable gap between women's lived experiences and EBF recommendations. Mothers' infant feeding choices are not based solely on research evidence showing what works or what is recommended. These decisions are rather embedded in real life situations and are directly or indirectly influenced by several factors and individuals. Enabling women to breastfeed exclusively requires that these factors be taken into consideration when designing breastfeeding promotion programs or interventions.

Addressing poor infant feeding and enabling optimal infant feeding practices will help decrease susceptibility to childhood infections and infant mortality in developing countries. EBF interventions should, therefore, be considered a priority for women in these countries.

## DECLARATIONS

### Competing Interests

The authors declare no conflicts of interest.

## AUTHORS' CONTRIBUTIONS

Lem Ngongalah conceived the study. Lem Ngongalah and Rawlings Niba participated in the design of the study. Lem Ngongalah and Rawlings Niba carried out the data collection. Lem Ngongalah drafted the manuscript. Lem Ngongalah, Rawlings Niba, Emerson Wepngong, Titilope Oluwaniyi and Sharon Mumah participated in data analysis. All authors read and approved of the final manuscript.

## ACKNOWLEDGEMENTS

We would like to acknowledge all the women from Bamenda and Bafut as well as all key informants who participated in the study. We would also like to acknowledge Miss Elna Sirri and Mrs. Njofor Helen for assembling the women and translating questions for

some participants.

## REFERENCES

- [1] WHO Ua. Joint child malnutrition estimates - Levels and trends (2017 edition) 2017 [cited 2018 Aug 13]: Available from: <http://worldbreastfeedingtrends.org/GenerateReports/report/WBTi-Cameroon-2013.pdf>.
- [2] UNICEF. Nutrition in Cameroon 2016 [cited 2018 Aug 19]: Available from: <https://www.unicef.org/cameroon/english/nutrition.html>.
- [3] Lassi ZS, Mallick D, Das JK, Mal L, Salam RA, Bhutta ZA. Essential interventions for child health. *Reproductive Health* 2014; 11(1): S4. <https://doi.org/10.1186/1742-4755-11-S1-S4>
- [4] Rollins NC, Bhandari N, Hajeebhoy N, Horton S, Lutter CK, Martines JC, *et al.* Why invest, and what it will take to improve breastfeeding practices? *The Lancet* 2016; 387(10017): 491-504. [https://doi.org/10.1016/S0140-6736\(15\)01044-2](https://doi.org/10.1016/S0140-6736(15)01044-2)
- [5] Organization WH. Report of the expert consultation of the optimal duration of exclusive breastfeeding, Geneva, Switzerland, 28-30 March 2001. 2001.
- [6] Organisation WH. Exclusive breastfeeding for optimal growth, development and health of infants 2017 [cited 2018 Aug 15]: Available from: [http://www.who.int/elena/titles/exclusive\\_breastfeeding/en/](http://www.who.int/elena/titles/exclusive_breastfeeding/en/).
- [7] WHO, Mathers C. Global strategy for women's, children's and adolescents' health (2016-2030). Organization. 2017;2016(9).
- [8] Kramer MS, Aboud F, Mironova E, Vanilovich I, Platt RW, Matush L, *et al.* Breastfeeding and child cognitive development: new evidence from a large randomized trial. *Archives of General Psychiatry* 2008; 65(5): 578-84. <https://doi.org/10.1001/archpsyc.65.5.578>
- [9] Bank W. Nutrition at a glance 2016 [cited 2018 Aug 13]: Available from: <http://siteresources.worldbank.org/NUTRITION/Resources/281846-1271963823772/cameroon1711screen.pdf>.
- [10] Agunbiade OM, Ogunleye OV. Constraints to exclusive breastfeeding practice among breastfeeding mothers in Southwest Nigeria: implications for scaling up. *International Breastfeeding Journal* 2012; 7(1): 5. <https://doi.org/10.1186/1746-4358-7-5>
- [11] Otoo GE, Lartey AA, Pérez-Escamilla R. Perceived incentives and barriers to exclusive breastfeeding among periurban Ghanaian women. *Journal of Human Lactation* 2009; 25(1): 34-41. <https://doi.org/10.1177/0890334408325072>
- [12] Setegn T, Belachew T, Gerbaba M, Deribe K, Deribew A, Biadgilign S. Factors associated with exclusive breastfeeding practices among mothers in Goba district, south east Ethiopia: a cross-sectional study. *International Breastfeeding Journal* 2012; 7(1): 17. <https://doi.org/10.1186/1746-4358-7-17>
- [13] IBFA. The World Breastfeeding Trends Initiative (WBTi) 2012 [cited 2018 Aug 20]: Available from: <http://worldbreastfeedingtrends.org/GenerateReports/report/WBTi-Cameroon-2013.pdf>.
- [14] Imdad A, Yakoob MY, Bhutta ZA. Effect of breastfeeding promotion interventions on breastfeeding rates, with special focus on developing countries. *BMC Public Health* 2011; 11(3): S24. <https://doi.org/10.1186/1471-2458-11-S3-S24>