

EXCLUSIVE BREASTFEEDING: UPDATE ON THE KNOWLEDGE AND PRACTICES OF CARE PROVIDERS AND MOTHERS IN THE MALUKU I AND LEMBA HEALTH ZONES.

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Abstract

Background

Exclusive breastfeeding (EBF) is the practice of feeding newborns and infants only breast milk over six months of age. A child who is not exclusively breastfed for the first 6 months of life is exposed to infectious diseases such as diarrhea and is at high risk of developing malnutrition. According to WHO and UNICEF recommendations, EBF should be practised by every woman with an infant under six months of age. The percentage of EBF practice in the Lemba health zone is low in contrast to Maluku I. This study aim to assess the current knowledge and practices regarding EBF among care providers and mothers in Maluku I and Lemba Health Zones.

Methods : A qualitative case study approach was used to highlight the knowledge and practice of cares providers and in-depth interviews were used to collect data, which were analyzed using Atlas-ti V7 software.

Results : The majority of our respondents had a superficial knowledge of EBF and knew the importance of this, but healthcare providers hadn't received appropriate training on EBF. A significant proportion of healthcare providers don't discuss EBF with women during medical appointments and visits. Culture, surroundings, spouse are all factors influencing the non-adherence of these women to the practice of EBF

Conclusion : Providers aren't well trained and don't talk enough to women about EBF; work, culture, advertising of artificial milk on the media and the entourage slow down women in Lemba from practicing EBF. This study will help to improve the health of breast-feeding children.

Keywords: Exclusive breastfeeding, Knowledge, Practices, Care providers, mothers.

Background

Exclusive breastfeeding is the practice of giving infants only breast milk, with no other liquids or foods except oral rehydration solution, vitamins, mineral supplements and medicines for the first six months of life¹. This is a cost-effective intervention that can prevent 13% of deaths in children under five if it achieves optimal coverage of 90%^{2,3}. It is a fact that only 43% of children under 6 months of age worldwide are exclusively breastfed. In Central Africa, this prevalence is estimated at 44%⁴, whereas the ideal would be to have at least 50% prevalence, the threshold set by the WHO. In the Democratic Republic of Congo (DRC), although EBF prevalence is estimated at around 54%, we note a disparity between provinces. In the provincial city of Kinshasa, only 35% of children under 6 months are exclusively breastfed⁵.

A child who is not exclusively breastfed for the first 6 months of life is exposed to infectious diseases such as diarrhea, and runs a high risk of developing malnutrition. Non-exclusive breastfeeding during the first 6 months of life is responsible for 1 to 4 million (or 12%) of deaths and 10% of the burden of disease in children under 5 years of age^{6,7}. Several factors are at the root of mothers' non-adherence to EBF: socio-cultural and demographic factors, factors linked to parental habits and behavior, environmental and customary factors⁸.

In addition to all of the above, there is also the aspect of health care providers' knowledge and training on EBF. Poor knowledge of the latter would lead to poor understanding when counseling women on adherence to EBF. Access to maternal health care, exposure to

breastfeeding counselling and early initiation of breastfeeding have a positive influence on EBF^{8,9}.

WHO and UNICEF have put in place several strategies to promote EBF for infants under six years of age, including the Baby-Friendly Hospital Initiative, which involves building facilities close to where mothers work, so that they are not far from their children and can feed them during their rest periods without having to make long journeys, raising awareness of the importance of EBF through the media and newspapers; training healthcare providers to promote EBF¹⁰, and securing the support and leadership of healthcare professionals is essential for the adoption of national legislation on the marketing of breast-milk substitutes^{11,12}.

Despite all the strategies put in place by WHO and UNICEF, and adopted by the National Nutrition Program, the rate of adherence to EBF remains below the threshold set by WHO. Only 35% of infants are exclusively breastfed up to the age of 6 months in Kinshasa according to MICS 2018¹³. We also note that there is a disparity in EBF uptake rates in the 35 health zones that make up the city-province of Kinshasa, there are zones with high uptake and zones with low uptake. The MALUKU I health zone has a high EBF take-up rate of 80%, but the Lemba zone has a low take-up rate of 39%, according to SNISS data for 2022. In order to improve the health of breast-feeding children, we felt it important to assess the knowledge and practices of healthcare providers and mothers on EBF in the MALUKU I and LEMBA health zones.

Methods

Type of study: Qualitative case study.

Study Setting

This study took place in the five maternity units of Maluku 1 and Lemba health zones over a 4 weeks period.

The Maluku 1 Health Zone is an urban-rural area with a population of around 285,409 and an average of 5,525 births per year. This zone is divided into 15 Health Areas, and includes a general reference hospital and 15 Reference Health Centers. The Lemba Health Zone is located in the commune of Lemba, which is one of the urban communes of the city of Kinshasa. It is also one of 35 ZS in the city of Kinshasa, with 14 AS and an estimated population of 263,724 in 2021, covering an area of 23.70 km².

Inclusion criteria

Providers working in the maternity ward in PNC and/or PONC were included in this study. With two years' experience in the PNC and/or PONC department, including mothers with at least one infant under six months of age present on the day of the survey.

Exclusion criteria

All health workers who were not in contact with pregnant or breastfeeding women were excluded from this study, as were women with infants over six months of age.

Sampling

Our statistical unit was made up of care providers and mothers with infants under six months of age. To select them, we carried out purposive sampling of the five maternity units, two in MALUKU and three in LEMBA, and then selected the health-care providers, including 1 doctor, 2 nurses (1 of whom worked at the PNC and the other at the PONC) and 1 midwife who worked in the maternity unit selected on the day of the survey.

As for the second group of respondents, we took 60 mothers who had attended PNC and given birth in the maternity units in our study, and who came with their babies for PONC.

Sample size

We conducted in-depth interviews with 20 care providers, including 5 doctors, 10 nurses and 5 midwives. For mothers, we conducted 60 interviews with mothers who had infants of different ages (15 mothers who had just given birth; 15 mothers of infants aged 1-2 months; 15 mothers of infants aged 3 months and 15 mothers of infants aged 5 months). Finally, a total of 60 mothers and 20 care providers were interviewed, while serving as our key informant interview guide.

Sampling technique

A reasoned sample of five maternity units in the two health zones:

In the urban area, three maternity units were chosen, and two in the rural area, to ensure that all socio-cultural classes were represented. For the interviews, care providers were selected by a reasoned choice, taking into account their availability and presence at the maternity hospital on the day of our survey.

The head nurse of the maternity unit assisted us in identifying and mobilizing the other care providers and mothers, and the individual interviews with the 60 mothers were chosen by convenience according to their availability and presence on the day of the survey.

Data collection technique

We used a qualitative approach, with in-depth interviews with care

providers. To deepen and enrich the information to be collected from care providers, we cross-referenced information from interviews with care providers and mothers of infants who had given us their point of view.

However, we proceeded as follows: in-depth interviews were conducted for at least 30 minutes each, using a semi-structured interview guide for care providers, and interviews with mothers of infants were conducted using an interview guide. The interviews were recorded on the Dictaphone and the note-taker collected the information.

The interview guides were translated into local Lingala, the language commonly spoken in Kinshasa. The following information was sought:

The socio-demographic and professional characteristics of the participants (Age, professional experience, marital status, profession, employment and place of employment, level of education).

Health care providers' and mothers' knowledge of EBF (Benefits of EBF, training received, duration of training, consequences of non-compliance for the child, mother, family and community).

On the practices of healthcare providers and mothers regarding the EBF (Is the EBF respected ; putting into practice knowledge learned during training sessions; obstacles to the practice of EBF etc).

Mothers' knowledge of EBF (benefits for the mother, child and community; consequences of non-compliance for the child, mother, family and community).

On mothers' EBF practices (How they comply with EBF, duration of EBF in infants, advice or information received, when they received it, source of information on EBF, related obstacles).

Data collection

Data collection was carried out from October 10 to November 10, 2022 by the principal investigator assisted by two note-takers (trainees from School of Public Health of the University of Kinshasa) were then trained for collecting qualitative data and a Dictaphone was made available.

We proceeded by identifying the interview participants (care providers according to their rotation and mothers of infants under six months of age according to the day of the PNC appointment). This identification was carried out in collaboration with the heads of nursing in urban areas, and with the Titular Nurses (TNs) in rural areas.

A pre-test of the methodology was organized after the note-takers had been trained, to validate the data collection instruments. This pre-test took place over one hour and thirty minutes, with three in-depth interviews at the Saint Gabriel hospital in Lemba.

At the end of this pre-test, the interview guide was corrected by deleting questions that would duplicate each other and lead to confusion. In-depth interviews were carried out, with a total of 88 interviews of around 30 minutes each with our participants. All these individual interviews were recorded on the Dictaphone, and the note-takers had collected the information. Each evening, we were comparing the information gathered by the note-takers with that

recorded, to ensure data quality and avoid any possible errors.

Statistical analysis

The interviews were reviewed and completed on the basis of the recordings by the principal researcher and the two note-takers to translate the Lingala interviews into French. The interviews were transcribed into French using MS Word. The data were analyzed using ATLAS I version 7.0. Interview transcripts were analyzed using an inductive approach. Recurring themes that emerged from the raw data were identified and summarized on the table. Major and minor themes were generated in sequence to provide caregivers' knowledge and experiences of exclusive breastfeeding of infants under six months of age. For the definition of concepts, we adopted the WHO guidelines on exclusive breastfeeding.

Ethical considerations

Prior to the start of our actual investigation, the protocol of this study was submitted for validation and an authorization N°ESP/CE/126/2023 and authorisation for research in the two health zones N° ESP/DIR/MK/872/NM/2022 were obtained from the ethics committee of School of Public Health of the University of Kinshasa. Then an informed consent form was read to each respondent. The interviewer obtained the respondent's approval for the survey. Respondents were informed that their participation was free, voluntary and without coercion. They were informed that they were free to continue or stop the interview at any time. To ensure confidentiality, data were collected anonymously, and names and addresses on the interview form were deleted immediately after data processing and analysis. The principal investigator kept the files and database accessible only to herself.

Results

The results of this qualitative study will be detailed in a report

Socio-demographic and professional characteristics of participants

A total of 20 care providers were interviewed, including 5 male general practitioners, 10 nurses and 5 midwives.

The longest-serving doctor had a 20-year career and the youngest had 3 years' service, with an average age of 12.8 years. For the nurses, the oldest had 25 years and the youngest 15 years on the ward, with an average of 13.9 years' professional experience, and for the midwives, the oldest 35 years and the youngest 17 years, with an average of 21 years.

A total of 60 mothers took part in the study, the oldest 36 years and the youngest 17 years, with an average age of 26.5 years. 47 women were married, 13 single. 35 were civil servants in state or private establishments, 25 were unemployed. Most mothers had no more than secondary education.

Knowledge of exclusive breastfeeding

The benefits of EBF were highlighted by most of our respondents. Caregivers pinpointed the importance of this practice, which is endowed with nutritional, immunological, growth and brain development values. Breast milk offers the perfect protein, carbohydrate, fat, vitamin and mineral content. It aids digestion and gives every child the best possible start in life. These words are supported by the majority of mothers who have highlighted the importance of breastfeeding. This is best illustrated by one care

provider: « ...It's the fact of breastfeeding the newborn from birth... starting with the first milk and giving him only that until 6 months without giving other things protects the children... »

On the other hand, 10 women out of 60, all from Lemba, did not recognize the benefits of EBF, pointing out that even cow's milk has the same virtues. One mother put it this way: « ... cow's milk is more nutritious than woman's milk, because the babies who take it are always fat and healthy... ».

On the importance of EBF, respondents indicated that it ensures optimal growth, development and health for infants. They also mentioned the benefits for mothers, families and communities. Breastfeeding leads to lower healthcare costs, healthier families and a more skilled workforce. One provider put it this way: « ...because of its nutritional values, breast milk brings antibodies to the infant, it contains vitamins and it promotes good growth in the child... »

More than $\frac{3}{4}$ of the mothers surveyed confirmed that the knowledge of the virtues of breast milk that the providers had informed them about, helped them to put it into practice, and their children have progressed well in terms of psycho-motor development. This is illustrated by the words of the mother of a 4-month-old infant: « ...my child doesn't get too sick and he's developing well, so the child is protected... ».

Paradoxically, $\frac{1}{4}$ of the mothers, almost all of whom live in Lemba, say that there is no difference between breast milk and artificial milk; all are equal in terms of infant nutrition. One mother recounts « ...my child has never taken breast milk, but look at it yourself! Is anything missing? Nothing at all... ».

Knowledge of the duration of EBF practice

The time for which infants should be breastfed was raised by participants, with providers pointing out that breast milk is the only complete food for the 0-6 month age group, according to WHO recommendations. One provider put it this way: « ...infants should be exclusively breastfed until 6 months of age, giving milk more than 3 times a day. No food or food group can replace breast milk... ». As for the mothers of the infants, 25 out of 60 women, including 20 in Lemba and 5 in Maluku, disagreed, saying that the duration depended on the mother's availability and the child's changing needs, and could be one or two months. One mother said « ... even at two weeks of age, the child can take something other than breast milk and will still be in good health... ».

Almost all the women were informed by the nursing staff that EBF must be practised until 6 months, but more than half 34/60 of whom 28 in Lemba and 6 in Maluku claim that they find it difficult to respect this period completely due to circumstances such as work, tiredness etc. This mother, who has a 3-month-old infant, confirms: « ...my child is already taking formula because I leave home early in the morning and don't get back until 6 p.m. ».

Consequences of non-compliance with the EBF

Health care providers told us that failure to respect the EBF had consequences for the health of the child, the mother and the family. Providers pointed to the use of milky products and other foods for infants under six months of age as the cause of many illnesses in children under six months. All the midwives told us that they had

spoken to women about this during PNC.

This is confirmed by a statement made by a midwife: « ...every time I'm with the women during weighing, I talk to them about illnesses linked to milky products in infants under six months... ».

The administration of pharmaceuticals to infants up to 6 months of age does not interfere with EBF. The majority of providers reported that giving drug solutions at the same time as breastfeeding compromised the exclusivity of breastfeeding. This was particularly true of providers with less than ten years' professional experience. One provider put it this way: « ...Despite the benefits of breastfeeding, the practice of giving water and other liquids to infants in the first few months is widespread in both rural and urban settings, and can have devastating consequences that the majority of mothers are unaware of... ».

The mothers of infants are the only ones to decide whether or not to comply with the EBF. The majority of our respondents claim to have been informed of the dangers (abdominal pain, digestive illnesses, diarrhoea and vomiting, excess weight...) to their children if the EBF is not respected. Despite this knowledge, more than half 32/60 of the women, 28 of whom are Lemba, do not respect it properly, as they admit that they sometimes give water, juice and other milks to their children. This is stated by a mother whose child is 2 months old « ... I give water and juice to my baby because he only sweats and cries because of thirst, and when he drinks his juice he calms down and sleeps soundly... ».

This contrasts with the comments of the providers, who stressed that failure to comply with the EBF exposed infants to diarrhoea, malnutrition and other illnesses, and even to their refusal of breast milk. Some mothers, especially those with jobs, argued that mixed breastfeeding or formula milk alone confers better protection, as formula milk contains pharmaceuticals. A minority of young mothers preferred to give formula, unaware of its composition. As one provider put it: « ...it can cause digestive diseases in the child and a drop in immunity... repeated pregnancies in the mother... a drop in the family's finances... ».

Training and strategy in place to support EBF

The majority of providers mentioned that they had received no training on EBF up to that point.

One provider stated that: « ... no training as such, only training learned in college... ». Only the midwives have been trained in mobilizing women to practice EBF and it's been over 10 years since they received this training.

Almost all health care providers stated that no strategy had been put in place to improve providers' knowledge of EBF. The National Nutrition Program, which is supposed to support health zones by providing documentation and training for agents, has not yet proposed any strategies or interventions in this direction. As one provider put it: « ... the zone has no strategy for this, we just manage to raise awareness among mothers so that they adhere to this practice... ». When describing the intervention carried out in the community, most respondents reiterated that there had been no organized intervention to improve mothers' knowledge of EBF. Especially in the health zone, where communities lack financial

resources. One provider said: « ...apart from raising awareness of the benefits of breast milk during PNC, no other activities have been carried out... ».

As for the mothers, they reassure us that they have never seen health workers come by to mobilize women to practice EBF. One mother noted: « ... if we had to organize awareness campaigns in the avenues and neighborhoods, and organize training on the benefits of EBF, many women would be able to respect the practice... ».

EBF practices

Most healthcare providers report that it varies from 25% to 50% in Lemba and 60% to 90% in Maluku. Health-care staff also sometimes provide less and less information or advice to women who come to PNC or PONC, at a frequency of 30 to 50% in the two health zones.

As for mothers of infants, it was noted that the practice of EBF is lower among mothers in Lemba than in MALUKU I, with an estimated 40% in Lemba and 80% in Maluku. The majority of women surveyed in Lemba told us that they found it difficult to practice EBF because of work, lack of spousal support and the habit of using artificial milk. Mothers in Maluku, on the other hand, tell us that due to lack of work, they stay at home and have plenty of time to breastfeed their children without worry. Others, who run their own small businesses, take their children with them and breastfeed them. As one mother from Lemba put it: « ...my child stays at home with my little sister, who prepares a bottle for him because I have to work and leave early... ».

A mother from Maluku told us: « ...as I'm at home without much to do, I feed my baby with breast milk, and I'll continue to do so when I start selling my wares... ».

Strategies put in place to ensure good practice of EBF

Awareness-raising and social mobilization have the potential to raise the practice of EBF. Mothers pointed out that during PNCs, PONSs and, in rare cases, community relays promote the practice of EBF among women with infants. This situation was supported by healthcare providers, who highlighted the impact of two recent consultations on EBF. One healthcare provider stated that: « ... sometimes the community relays are paid to tell the mothers to come with the children to the PONC and there we give education on EBF... ». As for mothers, awareness of EBF is low, and more women in Lemba 28/34 do not put it into practice than in Maluku I; as this woman confirms: « ...they only talk about breast-feeding children up to 6 months without mixing, but I don't put this advice into practice, as the child needs water and other things to satisfy itself even at 1 month of age... ».

Failure to communicate to mothers about the practice of EBF and misinformation

A minority of providers indicated that they did not deal with this subject during their two-week consultations with women, because they have a well-defined agenda and program regarding the subjects selected for education, information and communication with women during the PNC and PONC.

Certain topics that are overlooked in EBF during PNC are brought up during PONC, enabling the mothers who attend this service to be empowered and to take advantage of EBF. With regard to delayed

milk supply, the providers mentioned the fact that eating high-protein foods increases milk production, and putting the baby to the breast encourages milk supply. But sometimes they forget to communicate all this to the women.

One provider commented: « ...I advise her to look at her nutrition and eat well to increase milk production...but often we give the solutions to the children to avoid hypoglycemia... ».

Almost all the women we spoke to confirmed that they didn't want their babies to be left hungry after delivery. If the milk doesn't come in quickly enough, they give the baby sugar water or artificial milk, with or without the advice of the health care providers.

This is confirmed by this woman's statement « ...I had given milk from the second day after giving birth because my breasts were not secreting... ».

Factors and obstacles hindering the practice of EBF

The weight of culture, the mother's work, the delay in milking, the environment, malformative diseases in the child, etc. are among the factors that compromise the practice of EBF. The participants noted the use of mixed feeding, adding water and other foods before the age of six months. These comments were supported by the mothers, who stated that this reality had a negative influence on EBF. Although it concerned a certain social class, the lucrative maternal occupation had an impact on the EBF.

Parenteral administration of 10% glucose serum or sugar water during the first 24 hours after birth was an obstacle to EBF. Providers highlighted combining a parenteral solution with suckling to stimulate lactation. One provider said: « ...I give him 10% glucose serum parenterally, orally or sugar water... ».

Bilateral breast engorgement for three days is not an obstacle to EBF. Health-care providers have pointed out that the best form of prevention is frequent, effective breastfeeding, with no limit to the number or duration of feedings. Sometimes the mother has to extract the milk either by massage or breast pumping. As one care provider put it: « ... I ask her to squeeze her breasts to put the milk in the bottle and then give it to the child... ».

The use of formula for infants varies according to the situation, including maternal death, fetal malformation, difficulties in initiating breastfeeding and medical contraindications to breastfeeding. One care provider stated that: « ... when the child is born with fetal distress, with malformations... ».

All the healthcare providers we interviewed told us that practicing EBF in the environments where they work is not an easy thing to do. Due to a number of factors, women often find themselves faced with grandparents who impose themselves and even dictate what to give their grandchildren, while customs and climate mean that infants benefit from water from the very first month of life.

With regard to the obstacles identified to EBF, respondents identified the following factors: the mother's high level of education (32/60), the influence of socio-cultural norms and maternal occupation (14/60), misinformation (14/60). One provider put it this way: « ... the behavior of mothers and grandparents who oppose this practice... working mothers prefer formula because of lack of time... mothers who have received bad information are prone to bad

practices... ».

The majority of mothers, and more precisely those from Lemba, found the practice tiring (40/60), associated non-compliance with refusal of the baby (14/60), and equated non-adherence with lack of time and aesthetic preoccupation (6/60). To explain the mothers' non-adherence, most reported giving water to the infant for reasons of warmth. One mother put it this way: « ... I give water to the baby when he cries and when it's very hot... the child sometimes refuses to suck... ».

In short, the practice of EBF is not well respected for a number of reasons: healthcare providers themselves order mothers to give something other than breast milk, and sometimes the mothers themselves give things like sugar water, fruit juice, water, glucose serum, etc. to the children. Health-care providers have pinpointed a number of circumstances that motivate them not to comply with the EBF: fetal malformations, delayed milk supply for more than 48 hours, cultural weight, working mothers, etc. The only strategy implemented to promote EBF was community awareness-raising.

Discussion

The main objective of this study was to understand the influence of health care providers on women's adherence to EBF for infants under 6 months of age in the MALUKU I and LEMBA health zones. The knowledge and practices identified in the interviews and analysis were grouped into three themes, namely:

Knowledge of EBF

On the whole, we were able to give good answers to questions about providers' knowledge of EBF; the majority of our respondents had highlighted the benefits of this practice. Among other things, the nutritional, immunological, growth and cerebral development functions were mostly mentioned. These advantages stem from the fact that the mother's milk constitutes a complete diet ensuring the child's well-being. As for mothers, more than half know the importance of breast milk for their children and make an effort to breastfeed for the first six months of life. This knowledge of the benefits and role of milk encourages strong support for EBF in Maluku 1. The same is true of studies carried out in Egypt and Tanzania^{14,15}. Despite their knowledge of the importance of EBF, the majority of women in Lemba do not adhere to this practice because of their professional occupations, and they are influenced by the media, which makes more propaganda about the milky product and artificial milk. This observation shows that TV commercials for artificial milk have a negative impact on women's adherence to EBF. Our results are similar to those found by E. Sokol, V. Aguayo, and D. Clark in West Africa¹².

Our study shows that it makes sense to start breastfeeding early and continue it alone for the first six months of an infant's life. Starting early with the first milk, which is heavy and yellow, has several advantages due to its composition. Colostrum helps to eliminate meconium and helps the baby to free himself from the liquid that accumulates in his belly. Compliance with these steps and the time required improves the practice of EBF, enabling the child to reap the benefits. In the present study, the respondents (Health care providers) cited the WHO recommendations on EBF, the

importance of the practice for the mother-child couple and the specific advice given to mothers as interactive factors in the practice of EBF. On the other hand, Szucs' study in Nigeria ¹⁶ reported that poor knowledge on the part of providers had a negative impact on mothers and on EBF.

Our study shows that factors such as the mother's level of knowledge, the mother's occupation, the dictates of society, myths and poor promotion of the practice of EBF, have the potential to hinder the practice of EBF.

The study shows that a mother with a high level of education who works has no time to breastfeed her child at home, so bottle-feeding takes its place. This is why the rate of mothers practicing EBF in Lemba is low, because 55% of the women surveyed in Lemba have a university degree and work. Unlike women in Maluku 1, where education is low and most are housewives, they have the time to stay with their children and give them breast milk at a normal time, which justifies the higher uptake of EBF in this part of the city. The conclusion of a study carried out in Cameroon ¹⁷ supported our results, but also emphasized that urban residence had a negative impact on EBF, while rural residence had a positive impact on it.

EBF practice

The results of our study showed that the practice of EBF is adopted by the majority of mothers in Maluku 1 and a minority in Lemba. Unfortunately, many mothers are tempted to supplement their mother's milk or to mix it, for a variety of reasons: the mother's work, which requires long periods of separation from her child, forcing her to bottle-feed during her absence in order to prevent her child from starving; the climate and heat, which mean that the child must be thirsty, and must be given water to avoid dehydration; the environment and culture, which encourage women to feed their infants early on with local foods; malformative and contagious diseases, which give access to artificial breastfeeding. Our results are similar to those found by M. Youssouf in Mali ¹⁸. The latter found that EBF was not a common practice, with 97% of children being breastfed, of which only 33% exclusively as a result of the above-mentioned factors. This is supported by Nlend's study in Cameroon ¹⁷, which showed that 17% of mothers practiced EBF.

When the milk supply is delayed, or when the woman finds that she doesn't have enough milk to feed her child to the end of the EBF, our study showed that the respondents mentioned that a protein diet could stimulate lactation and guarantee the EBF. In the event of a problem with the mother's breasts, extracting milk or even massaging the breast can relieve engorgement and ensure EBF. Providers also mentioned repeated and effective breastfeeding as a possible solution to engorgement. All these strategies proposed to mothers by health care providers have a single aim, which is to promote EBF. This corroborates the conclusion of a study carried out in Lubumbashi, DRC ¹⁹, which states that strategies based essentially on nutrition education for mothers are needed to promote EBF.

Limitations

Aware of the possible limitations faced by the qualitative approach in research and due to the qualitative nature of this study,

generalizability is low. As the results of this study are specific to the limited context, the qualitative findings cannot be generalized to all health facilities or to the entire population of Kinshasa in general, and of Maluku 1 and Lemba in particular.

Conclusion

Breast-feeding is the most widespread mode of nutrition in the Maluku 1 health zone than in Lemba. This rate is correct and deserves to be preserved in Maluku 1, unlike Lemba, where the rate is lower than our benchmark and deserves to be improved. This low EBF rate in Lemba seems to be influenced by the high level of education, the mothers' occupation, and the advertising of artificial milk on TV and social networks.

Competing interests

The authors declare that they have no financial or personal relationships that could have inappropriately influenced them in the writing of this work.

Authors' contribution

The work was conceived by TDU, who carried out bibliographic research; DUT and SKK drafted the manuscript, edited and approved the final manuscript; PMB supervised the work; TDU collected the data.

Conflicts of interest

The researchers declare that there are no conflicts of interest.

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