



Knowledge of breast feeding practices for infants from 0 to 6 months in the commune of Yopougon (Abidjan, Cote Divoire)

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Abstract

To get breastfeeding mothers to adhere to the practice of exclusive breastfeeding of infants from 0 to 6 months, it is necessary to understand the difficulties underlying this practice. This study aims to identify the difficulties related to the practice of exclusive breastfeeding of infants from birth to 6 months because of sustainable solutions for its implementation. During a survey, it was a descriptive and analytical cross-sectional study that took place on a sample of 200 women. The locality of the survey is the commune of Yopougon and the period indicated extends from October 07, 2020 to February 07, 2021. After investigation, it appears that the difficulties relating to the decline in exclusive breastfeeding are linked to the insufficient production of breast milk, fatigue, the daily occupation of the mother, pain and cracks in the nipple, stress, the precarious state of health of the mother and the atrophy of the udders. The provision of a sustainable joint solution in the form of recommendations relating to the difficulties listed will make it possible to achieve the millennium objective of the WHO and UNICEF which is to exclusively breastfeed infants from 0 to 6 months.

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Introduction

Each year, malnutrition is implicated in nearly 40 % of the 11 million deaths of children under five years old in developing countries, and it is estimated that 1.5 million of these deaths could be prevented by the practice of immediate and exclusive breastfeeding during the neonatal period (UNICEF, 2007; Mahamadou *et al.*, 2014). Indeed, breast milk plays a key role in protecting newborns against infections and diseases (Mahamadou *et al.*, 2014). Breast milk combines the qualities of the lowest cost, highest quality and most attractive presentation (Mahaman, 2012). Breastfeeding has benefits for family income and the nation's economy.

According to UNICEF, exclusive breastfeeding consists of breastfeeding the child within one hour of birth, giving him all the colostrum, rich in vitamins A and anti-infective factors (immunoglobulins), breastfeeding him at asks day and night and giving him only breast milk during the first 6 months unless prescribed by a doctor. Since 2001, the World Health Organization has recommended exclusive breastfeeding for up to six months and partial breastfeeding for up to two years (WHO, 2013).

In Africa, breastfeeding is practiced in 97 to 99 % of cases at the birth of the newborn. However, exclusivity is still not respected during the first 4 to 6 months of life (Traoré, 2001).

In Côte d'Ivoire, according to a study conducted, the rate of exclusive breastfeeding generally experienced a gradual decrease ranging from 46.67 % at 1 month to 16.67 % at 6 months (Coulibaly *et al.*, 2014).

Despite the benefits of exclusive breastfeeding and the recommendation made by the World Health Organization, its practice by mothers remains insufficient. The purpose of this work is to characterize the socio-demographic state of the survey, list the various difficulties of the practice of exclusive breastfeeding and provide lasting solutions in order to contribute to raising the rate of adherence to the practice of exclusive breastfeeding and its

continuation up to six months.

Material and methods

Type, period and study area

This was a descriptive and analytical cross-sectional study that took place from October 2020 to April 2021 in the municipality of Yopougon. Yopougon is the largest municipality in the Autonomous District of Abidjan and is located in the south of Côte d'Ivoire.

Yopougon, nicknamed Yop City, is one of the 15 communes in the district of Abidjan. With a population counted at 1,071,543 habitants in 2014, Yopougon is the largest municipality, not only in the Ivorian economic capital but also in the country. The commune of Yopougon is located between the Banco forest and the Ébrié lagoon, to the west in the district of Abidjan, Yopougon covers an area of 153.06 km² and is bounded to the north by the communes of Abobo and 'Anyama; to the south by the Ébrié lagoon; to the east by Attécoubé and to the west by Songon.

Sociodemographic characteristics of the population studied

The target population consisted of rural women from the municipality of Yopougon in a low-income neighborhood. Our data collection tool is a questionnaire that takes into account the locality, the marital status and the level of education of the mother, the day of the first breastfeeding, the difficulties of practicing exclusive breastfeeding, Association of plants as a solution to the difficulties of the practice of exclusive breastfeeding, Period of improvement in milk production. A total of 200 primiparous women were selected. In this study, only women aged over 20 are concerned (Ogunlesi, 2009). The sampling was constituted according to the theoretical model of Lutter of the year 2000.

Statistical analyzes

The survey sheets were analyzed using an Excel spreadsheet. The quantitative data collected were subjected to descriptive analysis. The experiments carried out made it possible to collect quantitative data. A NEWMAN-KEULS test with a classification criterion at the 5 % threshold was carried out to

assess the significant difference in the means. The test was performed using Statistical version 7.1 software.

Results and discussion

According to the results (Table 1) of our interview, most of the mothers were educated (90.47 %). This predominance of educated women in our study could be explained by the fact that the study took place in a locality of the city of Abidjan where the rate of schooling of young girls is high overall (National Statistical Institute, 2007). This predominance of educated women was also mentioned by Zengbé in 2012 (70.2 %).

The analysis of occupations allowed us to observe that most mothers worked in the informal sector or were

housewives. This observation would be linked to the under-qualification of women, in relation to their low level of education.

The proportion of women in a couple (78.16 %) is relatively high. This result is in line with that of Zengbé in 2012 (73.7 %). According to the study, the respondents were faced with several difficulties, in particular the mother's illness (3.52 %), fatigue (7.74 %), daily occupation (3.52 %), stress (2.11 %), nipple pain and cracks (3.52 %), udder atrophy (1.40 %) and insufficient breast milk production (38.02 %). Concerning, the pain and cracks of the nipple, they generally occur in the first days of the setting breast of the infant. This is commonly referred to as early days problems.

Table 1. Characteristics of the practice of exclusive breastfeeding for infants from 0 to 6 months.

Variables (n=200)	Proportions (%)
Marital status	
As a couple	78.16
Level of education	
School-based	90.47
Exclusive breastfeeding	51
Difficulties in practicing exclusive breastfeeding	
mother's illness	3.52
Fatigue	7.74
Stress	2.11
Daily occupation	3.52
Insufficient milk production	38.02
Nipple pain and cracking	3.52
Udder atrophy	1.40
First breastfeeding	
1 hour –3 days	54.22
Use of food plants as lactogenic remedies	65.50
Beyond two plants	34.50
Period of improvement in milk production	
24 hours	50.70

They are associated with ailments such as engorgement and mastitis. With regard to insufficient milk production, it has been identified as one of the main difficulties in the practice of exclusive breastfeeding according to the studies the authors (Kouassi, 2014; Tchenar, 2017). This difficulty has

largely led women to want to abandon exclusive breastfeeding and to submit their infant to non-exclusive breastfeeding which could be composed of mixed or artificial breastfeeding which could thus cause infections and affections in infants. Indeed, mixed feeding or mixed feeding, therefore, means

that he receives both breast milk and another food or liquid, in particular water, non-human milk, or infant formula before the age of 6 months (Forero *et al.*, 2018; Koné, 2020). This practice, which is widespread in many countries, can however entail a risk for the infant's health because it increases the risk of diarrhea and infectious diseases. Mixed feeding, particularly which consists of providing solid or liquid food consisting of water or juice in addition to breast milk, can contain pathogens (Tchémar, 2017).

According to the results of this survey, mothers in low-income neighborhoods do not breastfeed until six months because of a low level of education, because they are very busy with daily tasks in order to ensure their daily. If the tasks carried out are far from the places of residence, this will influence the good practice of breastfeeding because they will not have the time required to breastfeed their infant permanently.

In rural areas, women are overwhelmed by arduous activities (work in the field) to ensure the development of the family, which leads them to abandon exclusive breastfeeding very early for a lack of availability and support to feed the infant. (Kamudoni *et al.*, 2010).

In both rich and poor countries, the main reason given by mothers to justify the introduction of water or other solid or liquid foods than breast milk is insufficient milk production, (Sibeko, 2005). These difficulties have also been identified by several studies in Africa and around the world (Kakuté, 2005).

If the mother is ill, she will not be able to breastfeed the infant properly, which will cause a decrease in the number of feedings leading to a decrease in the stimulation of prolactin which, in turn, could reduce the production of milk in the udders. All this can cause the mother to abandon exclusive breastfeeding of the infant in favor of formula or mixed milk. The phenomenon of cases of illness would decrease the number of feedings. Indeed, insufficient production

of breast milk in nursing mothers is the main difficulty recorded (38.02 %). These results are in agreement with those of Zengbé, 2012 who noticed that insufficient milk production was one of the major difficulties encountered by breastfeeding women. 51 % of respondents were able to overcome the difficulties associated with the practice of exclusive breastfeeding by using food plants. The rate of 51 % recorded in our survey study corroborates that of the work of Mouroufié *et al.* (2019) carried out in health centers in Abidjan. Studies have shown that exclusive breastfeeding is the most commonly practiced by more than 54 % of mothers. In fact, this vision is widely shared in debates on infant and young child development around the world. Indeed, breast milk is recognized as the optimal diet for infants under six months in that it reduces growth retardation and ensures harmonious physical and mental development (WHO, 1989). In African countries, interventions to improve maternal nutritional status and breastfeeding rates are needed to optimize health outcomes for infants (Ericksen, 2017). The use of food plants is important because it has allowed in a reduced time of 24 hours, a proportion of 50.70 % of women overall to improve milk production according to our survey.

The high level of education is due to the strictness of the education policy in Abidjan and its surroundings. During the surveys, concerning the period when the infant was breastfed for the first time, 54.22 % of women submitted their infants between the first hour after delivery and the third day. This first feeding consists mainly of primitive milk called colostrum. Indeed, colostrum is primitive milk secreted during the first 3 to 5 days of lactation (Tchenar, 2017). The children whose mothers were surveyed received colostrum because all the women breastfed their infants before the third day. At birth, colostrum meets the essential needs of the infant. It provides nutrients to qualitatively and quantitatively cover the infant's needs. It also provides antibodies that allow the child's body to fight against ailments and infections. The results for the period from the first hour to three

days after the infant is put to the breast after delivery is 53 %. This indicates that more than half of the infants were able to benefit from colostrum whose flow was restricted after three days postpartum.

Fatigue, stress, atrophy of the nipples, nipple pain, illness of the mother, daily occupation and insufficient milk production will cause a reduction in the number of feedings, this reduction will cause the inhibition of milk production in the udders of the nursing mother. Milk production is a reflex mechanism. This mechanism involves the sensory organs of the nipple. Sucking mechanically stimulates the sensory receptors of the nipples. Sucking, therefore, causes excitations which are conveyed in the form of nerve impulses to the hypothalamus through the neurons. After the excitation of neurons, the lactotroph cells of the anterior pituitary secrete prolactin. Prolactin stimulates milk secretion by the sensory receptors of the acinar cells of the mammary glands. It mainly allows the initiation and maintenance of lactation.

The secretory cells of the acini elaborate milk from the constituents drawn from the blood of the vessels which surround them. The elaboration of milk constituents followed by secretion and excretion in the lumen of the acinus are continuous phenomena. However, milk ejection only occurs during feedings. It results from the activity of the contractile cells enclosing the acinus. Because these cells contract and drive the milk towards the excretory and galactophore ducts to the nipple.

The impediment of breastfeeding leads to reduced milk production. Indeed, lactation is maintained by a neurohormonal reflex. Stimulation of the nipple or teat provokes an excitation that travels to the pituitary gland: this is the ascending and nervous way of the reflex. On the other hand, the posterior pituitary releases oxytocin. Prolactin and oxytocin travel through the bloodstream and within seconds reach the udder. Prolactin acts on the cells of the acini and maintains the secretion of milk. However, oxytocin acts on contractile cells and causes milk

ejection. This is the downward hormonal pathway of the reflex. Synthesized by the posterior pituitary gland, oxytocin binds to the receptors of the muscle cells of the mammary glands. These receptors coupled to a G protein activate phosphorylases C leading to an increase in the intracellular calcium concentration. The released calcium ions will promote the interaction between actin and myosin proteins, which is the basis of contraction. The whole reaction is an action of the hypothalamus-pituitary complex on lactation (Adepo, 2013). The production of breast milk, therefore, responds to the principle of supply and demand. Because the amount of breast milk produced by the mother is directly related to the demand of the infant. Certain events or physiological problems such as the stress and fatigue of the nursing mother can disturb this balance of supply and demand, i.e. the more the child reaches the average number of feedings, the more prolactin is stimulated to induce the production of breast milk proportional to the demand which is equivalent to the number of feedings demanded by the infant. Stress is a physiological condition that promotes the secretion of cortisol, a hormone that inhibits the secretion of prolactin. This considerable drop in the secretion of prolactin slows down the production of breast milk. All the difficulties recorded must be taken into account in the search for durable solutions. The solutions that will be listed must make it possible to achieve the objective of the World Health Organization of exclusive breastfeeding of infants from 0 to 6 months. Indeed, WHO and UNICEF. Indeed, WHO and UNICEF recommend exclusive breastfeeding for up to 6 months. Thus, the WHO and UNICEF promote breastfeeding with the dissemination of the “10 conditions for the success of breastfeeding”, as part of the “Baby-Friendly Hospital” Initiative (IHAB). Furthermore, the crucial role of breastfeeding is central to the global strategy for infant and young child feeding (UNICEF, 2006). Cote d'Ivoire, in its National Strategy for Infant and Young Child Feeding, has defined the Baby-Friendly Hospital Initiative (IHAB) as an essential component of the promotion of exclusive breastfeeding.

Conclusion

Our results have identified the difficulties that compromise the practice of exclusive breastfeeding of infants from 0 to 6 months. These are the state of health of the mother, the daily occupation, the fatigue of the mother, the stress and the insufficient production of breast milk. The main difficulty identified is the lack of milk production. To deal with the main difficulty listed, the women subject to our survey used for the most part food plants. Taking into account all the difficulties recorded will make it possible to achieve the millennium objective which is to exclusively breastfeed infants from 0 to 6 months in order to improve mother-child health. However, a study of the nature of the food plants used would be necessary in order to assess the contribution of the species and families of plants in the fight against the drying up of milk in the udders. Our study was intended to contribute to the development of a new approach to the problems of breastfeeding for a better practice of exclusive breastfeeding.

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