

EXCLUSIVE BREASTFEEDING AND FACTORS ASSOCIATED WITH ITS OPTION OR ABANDONMENT BY ALGERIAN

Messaouda BENHAMZA

Research laboratory of
Environment and Health
Djillali Liabes
Sidi-Belabbes University
ALGERIA

Malika BENDAHMANE

Djillali Liabes
Sidi-Belabbes University
ALGERIA

&

Abdelkrim BERROUKCHE

Saida University
ALGERI

ABSTRACT

Breast milk is a complete, balanced, economical and sterile food. It is natural and ideal for the first months of the infant's life and perfectly adapted to the immaturity of the newborn. Accordingly, this paper aims at identifying socioeconomic and demographic characteristics of women in post-partum, their breastfeeding project and its duration to hospital discharge as well as listing the main factors associated with the decision of whether or not to breastfeeding. This study had been carried out at Maternity Hospital Center (MHC) of Naama province which is located in the South-West of Algeria. A cross-sectional survey of breastfeeding women was underwent using a direct interview and a semi-structured questionnaire including two parts. First, the researchers try to make an assessment about the reasons for choosing breastfeeding and factors influencing the choice of this feeding mode. Secondly, a comparative study of the socio-demographic and obstetric-medical characteristics of mothers feeding their newborns exclusively with breastfeeding mode or bottle-feeding has been tackled. This study revealed, on one hand, a lack of information in the health care centers on breastfeeding modes. On another hand, there seem to be insufficient knowledge on the techniques of breastfeeding practice in young mothers. This research, indeed, endeavours to encourage women to be more aware of the benefits and the superiority of breastfeeding.

Keywords: Milk, Newborn, Breastfeeding, Mothers, Bottle-feeding.

INTRODUCTION

Breastfeeding is a main part of the reproduction. It is a cultural and social heritage left by our grandmothers. The enthusiasm for breastfeeding is attracted by the beneficial effects of milk. In fact, breast milk is the natural food for the first months of infant life. Its benefits are considerable illustrated by complete, balanced, specific and sterile economic food. It is provided, at a physiological temperature, directly to the mouth of the child. Breast milk is beneficial to the child up to the age of 2 years. No industry has produced such a perfect milk for its constituents and its adaptation to the needs of the infant [1, 2]. Breast milk, through its high nutritional composition, could be adapted to the infant's immaturity, unlike artificial milk. It combines three qualities namely; the lowest cost price, the highest quality and a close psych affective relationship for the development of the child [1]. It provides water, protein,

lipid and carbohydrate intakes as well as minerals and vitamins. It is essential for both infant and maternal health. Health officials have recognized the interests of improving nutritional practices for infants. World Health Organization (WHO) has initiated promotion work by formulating a clear and universal policy, including the Innocent Declaration in August 1990, a joint statement with United Nations Children's Fund (UNICEF) quoted below [4].

"To ensure optimal health and nutrition for mothers and children around the world, every woman should be able to feed her child exclusively to the mother's breast milk from birth to the age of 4 to 6 months. Thereafter, children should continue to be breast-fed, while receiving appropriate and adequate supplemental feeding until the age of 2 years and more". [3]. In 1992, WHO and UNICEF launched the initiative of "Infant Friendly Hospital" to encourage, support professionals and to promote breastfeeding. Establishments, with this label, were committed to respect ten conditions for the breastfeeding success and to preserve and strengthen it. According to WHO and UNICEF statistics, analysis of the epidemiological profile of breastfeeding in the world reveals a prevalence of this practice at birth that varies considerably from one country to another [5]. The highest rate was reported by the European Nordic countries as 99 % in Norway and 95 % in Denmark [5].

According to the preliminary report of the national survey 2006, conducted in Algeria, nearly 50 % of the children born during the last two years before the survey were breast-fed immediately after the birth. The prevalence changes from one region to another, so it rises from 64.1 % in the South to 54.2 % in the West and 51.0 % in the East, reaching 39.4 % in the Center. Breastfeeding, in the first hour after birth, is inversely proportional to maternal education level, so it varies from 35.8 % for mothers with high level to 53.3 % for mothers with primary school level and 55.9 % for out-of school mothers [6]. Based on these data, prospective study was performed on the breastfeeding at Saida maternity. This study aimed to identify the socio-economic and demographic characteristics of women admitted after childbirth, to identify their breastfeeding project and duration at maternity leave, to list the main factors associated with the decision to opt for breastfeeding or to abandon it by mothers.

METHOD

Population Study

This study included all women have being spent a stay at the Maternity Hospital Center (MHC) of Naama during period of January-march 2012. The targeted sample included 220 women aged 22 to 39 years old. The criteria for inclusion of patients were no pathology to pregnancy like diabetes and high blood pressure, children not admitted to intensive care, with no malformation and nursing mothers' residences not exceeding forty kilometers.

Experimental Design

Preparation of the Breastfeeding Mothers

Interviews with patients, after their consent and the help of physicians, were carried out using semi-structured questionnaires. Interview with breastfeeding mothers was held at Naàma's MHC during the time period from 12: 30 am to 14 pm 00. This schedule was imposed by the maternity medical staff for reasons of professional convenience.

Description of the Interview

This type of interview is between the structured interview and non-structured interview, without any rules, the model is the life story. A first explanatory interview, in the form of contact with women after childbirth, concerns the purposes of the investigation initiated and the need to answer a first questionnaire which consists of short questions on the civil status

(age, social and education levels...), the choice of breastfeeding, the reasons and motivations for this choice. The interview, at MHC, will run from 5 to 15 minutes where all patients' data will be recorded to begin a second semi-structured interview after a month which will be carried to the homes of the breastfeeding women followed by the delivery of a second questionnaire. Ethical approval was provided by the health research ethics committee of the University of Sidi-Bel-Abbes, located in Western Algeria.

Description of questionnaire

Questionnaire n°1

It was distributed, in MHC, to women after childbirth. It consists of short questions on the civil status (age, social and education levels ...), the choice of breastfeeding, the husband's opinion, reasons and motivations related to the choice of breastfeeding, the project and the duration of the breastfeeding project.

Questionnaire n°2

It was distributed at maternity leave, this questionnaire is intended for the two groups representing exclusive breastfeeding and artificial breastfeeding. It has two parts. The first includes questions related to the social, economic and demographic breastfeeding women, the breastfeeding project if it took place and its continuation or abandonment.

Statistical analysis

Analysis was performed using the Sigma-Plot (version 11.0) software. Their numbers and frequencies described whole patients and different variables.

RESULTS

Breastfeeding women's personal and medical characteristics are showed in table 1. Most breastfeeding women (56 %) belong to the age group 25 – 35 years. Among the breastfeeding women interviewed, 71.36 % had a moderate lifestyle. Educational level was low in breastfeeding women, and fluctuated between the proportions of 23.63 % for the primary and 42% for the middle school. The analysis of the study population showed that the majority of the breastfeeding women lived in urban area. Among these women, 74 % have professional activities, whereas 25% are unemployed. The study population consists of 74 % of women with a normal delivery guide. The present study also showed that multiparity found in 84 % of respondents. The female newborn was dominant with 58 %.

The breastfeeding project is summarized in Table 2. A sample of 179 women planned to naturally breastfeed their newborns when they left MHC, wherever 41 women decided to breastfeed theirs only with the bottle. The responses of women interviewed, about the duration of breastfeeding on leaving maternity, varied. Breastfeeding, as long as possible without specifying the duration, is the frequent response of 61 women. A sample of 17 women wanted to breastfeed for two years as advocated by the precepts of the Koran. A number of 31 women were undecided in their answers because they could not specify the mode duration of breastfeeding selected.

Table 1: Socio-demographic data and medical-obstetrical characteristics of breastfeeding women.

Variables	Breastfeeding women (N = 220)	Frequency (%)
Age (year)		
< 25	50	22.72
25 – 35	125	56.80
> 35	45	20.45
Quality of life		
High	17	07.72
Moderate	157	71.36
Poor	46	20.90
Level of education		
Primary	52	23.63
Middle school (college)	93	42.27
Secondary	19	08.63
University	13	05.91
Unschooling	43	19.55
Residence		
Urban	155	70.45
Rural	65	29.54
Occupation		
Employees (or worker)	56	25.45
Unemployed	164	74.54
Childbirth mode		
Normal delivery	163	74.09
Cesarean delivery	57	25.90
Parity		
Multipare	186	84.57
Primipare	34	15.42
Sex of the newborn		
Male	92	42.00
Female	128	58.00

Table 2: Breastfeeding project after leaving MHC

Variables	Breastfeeding women (N = 220)	Frequency (%)
Nature of the breastfeeding		
Breastfeeding	179	81.36
Artificial feeding	41	18.64
Duration of breastfeeding at home		
The longest time possible	61	27.72
Until no breast milk	44	20.00
Unknown depletion milk	31	14.09
Up to 6 months	26	11.81
Up to 2 years	17	26.38

The interview, with breastfeeding women, revealed 58.18 % having relied to families (mother, mother-in-law, husband and sister) to make decisions about the choice of

breastfeeding, while a minority (9.9 %) explained their choice from advice of the gynecologist (Figure 1). Other women motivate their choice based on advice of friends or media whereas 26.36 % of women said they had received no information. The breastfeeding women interviewed pronounced various reasons. The first is immune for the newborn. A second relates to the emotional value in the mother-newborn relationship that could lead this mode of the breastfeeding. Practicality and the economic cost of this mode of feeding that interest many women. Another reason, mentioned, was related to a desire to prolong a pregnancy period. A last reason, related to the exclusive breastfeeding decision, is the desire for an antecedent failure observed in the child's health as a result of artificial breastfeeding (Figure 1).

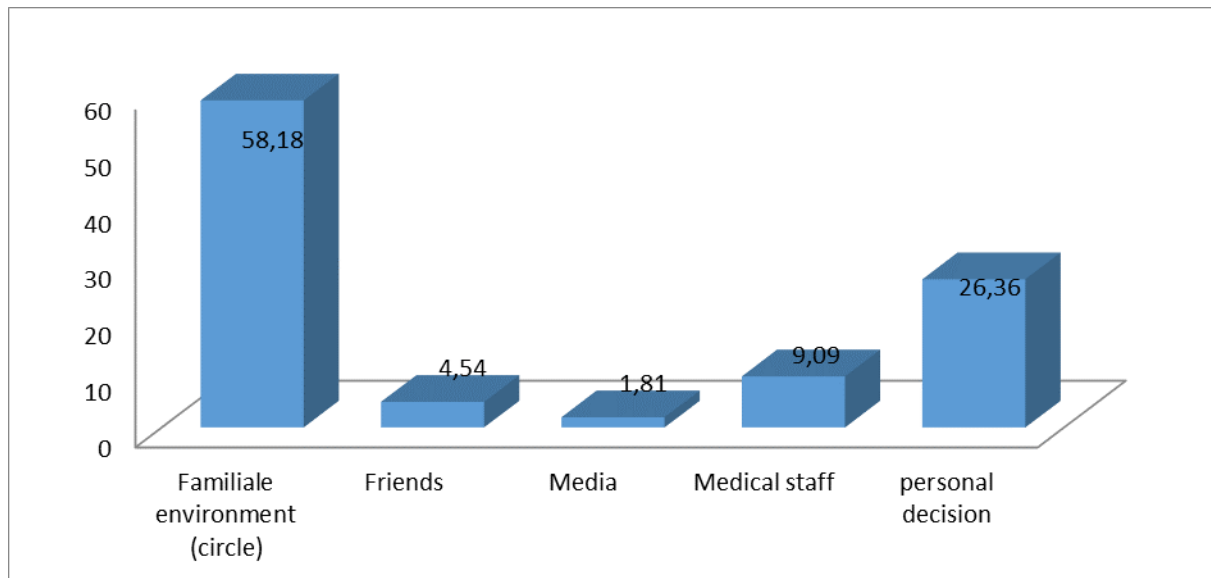


Figure 1: The factors influencing the choice of lactation (feeding) mode.

Among 220 breastfeeding women, it was reported that 179 mothers planning to breastfeed as long as possible. This sample was found split into five groups. A first group (44 women ~ 20%) still practicing exclusive breastfeeding to 6 months. A second group (54 women ~ 24.54 %) stopped breastfeeding after 3 months. In this group, 21 women opted for weaning while the 33 women followed a mixt breastfeeding. A third group (41 women ~ 18.63 %) stopped breastfeeding after a 2-month practice period. Among these patients, seven women had weaned and 34 chose to breastfeed for their newborn. The fourth group (27 women ~ 12.27 %) stopped breastfeeding after a period of 01 month-practice period to opt for weaning (five women) or mixed breastfeeding (22 women). A fifth group (13 women ~ 5.9 %) left breast-feeding during the first month of the newborn's age in favor of weaning (03 women) or mixed breastfeeding (10 women) (Figure 2).

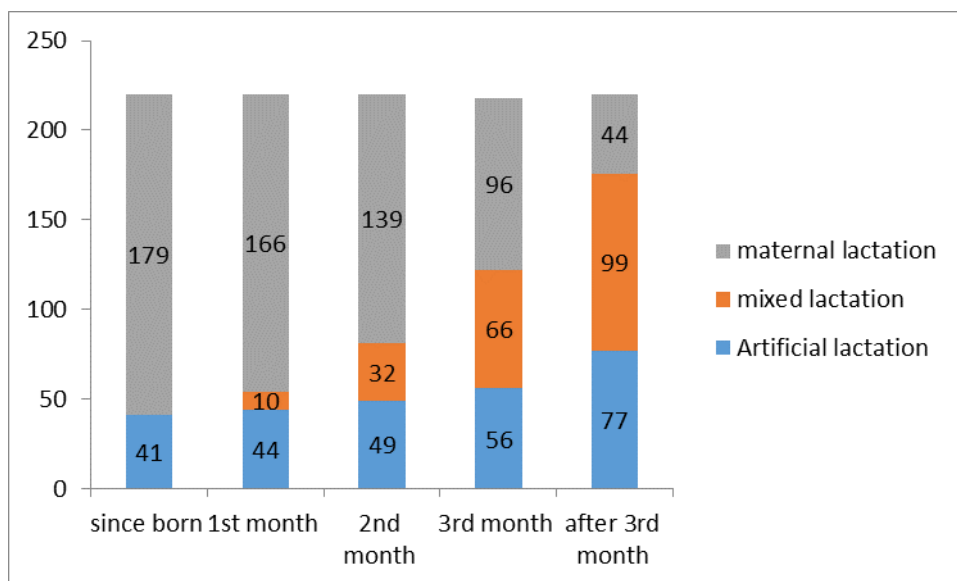


Figure 2: prevalence of maternal lactation (breast-feeding practices).

It appears from the analysis of semi-structured questionnaires, in 135 mothers interviewed, a number of 23 women suggests the reason for the interruption of breastfeeding is the decrease in milk production during breastfeeding their newborn, whereas 36 women stating on the reason that their newborn were always hungry (Figure 3). A group of 21 women based on the argument "return to work". Eleven women revealed the reason that the newborn did not claim the breast. Twelve women suggested the reason that the newborn did not grow. Ten women reported mammary complications. Finally, five women stopped breastfeeding on their doctor's advice and seventeen talked about their freedom.

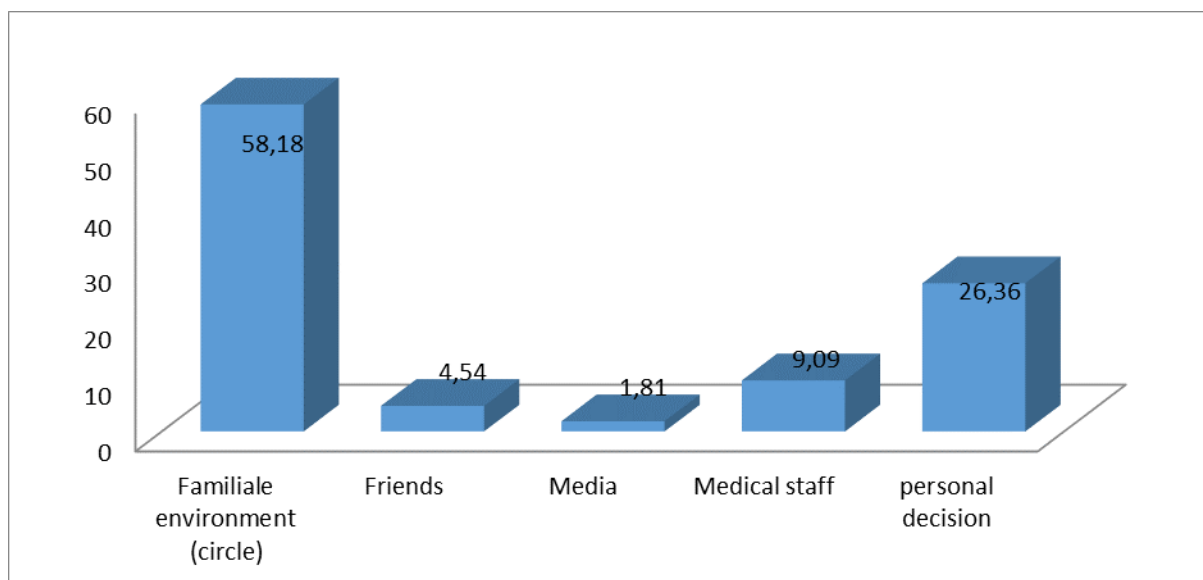


Figure 3: Reasons behind the interruption (discontinuity) of the breast-feeding.

DISCUSSION

Analysis of results showed that 179 women, at beginning, chose the breast-feeding mode. Otherwise, 31 women were undecided on the duration of breastfeeding and 41 women, since the first day, chose an artificial breast-feeding. Reasons for no accepting breastfeeding are

multiple. It could be mentioned a lack of knowledge of the breastfeeding practice, information on breast size that is proportional to the quantity of milk produced, the aesthetic risk involved in breastfeeding and the resumption of the professional activity. However, authors have treated this same topic in order to provide solutions. According to Kamina, 1984, the milk secretion is independent of the adipose tissue volume since a mammary gland has substantially the same size in all women [7]. To examine the reasons leading to an interruption of breastfeeding before the six months recommended by WHO and Unicef, Walburg *et al* (2007) followed 126 primiparous women up to six months post-lactation [8]. They state that the interruptions before three months are mainly due to difficulties with breastfeeding, whereas after three months the most stopping of breastfeeding are the result of the resumption of work.

Women's reasons and motivations related to the choice of breast-feeding, reveals that a large group of mothers explained their choice through the immune argument. Research carried out by Turck *et al.*, 2013, report that breastfeeding duration greater than 3 months, decreased the incidence and severity of gastrointestinal and respiratory infections [9].

Prolonged beyond 4 months, exclusive breastfeeding reduces allergic risk (asthma, eczema) during the first 2 to 3 years of life in infants at risk, with an allergic parent. Exclusive breastfeeding also contributes in the prevention of obesity during childhood and adolescence. Moreover, it has been shown that breastfeeding has protective and beneficial effects on breast cancer. Freund *et al.*, 2005, showed there is an increased breast cancer risk in three to four years after childbirth but the long-term risk for women who have given birth to at least one child remains lower than the breast cancer risk for nulliparous [10]. Breastfeeding reduces the invasive breast cancer risk, mainly when it is prolonged and even in patients with the BRCA1 mutation. Among the reasons, as cited by women who abandoned exclusive breastfeeding, is that the baby is always hungry. Most breastfed infants need to suck frequently, including at night. This makes it necessary for the child to be close to his mother 24 hours a day. However, there are inter-individual differences in the frequency, duration and regularity of feeding. Laurent *et al*, 2011, suggested that the newborn has more phases of calm sleep, waking and feeding episodes when he is close to his mother [11]. Newborns, sleeping with their mothers in maternity, have more feedings than when they are cradled in their room. Sixteen weeks later, exclusive breastfeeding rates were doubled [11].

Mothers, nursing at modified quality of sleep and daytime vigilance, are mothers instantly waking up at any time. Mother-infant proximity promotes breastfeeding and mother's sleep. The reduction in milk production is another reason mentioned in the abandonment of the exclusive breastfeeding project. Insufficient milk is the main cause of breastfeeding cessation.

French survey revealed, in women stopping breastfeeding before nine weeks, a milk deficiency was the main factor in 38 % of cases [12].

The lack of milk is linked to numerous parameters. Inappropriate practice of breastfeeding is often the source of a reduction of diminishing milk production. Lack of milk is not only physiological but it may be due to a lack of understanding of the lactation process which works according to expression "the law of supply and demand" meaning "the more the baby sucks, the more there is a milk ". Milk synthesis rate is inversely proportional to the degree of filling of the cells [12].

Another reason, cited in the giving up of breastfeeding, is the fear of not seeing the infant growing up [13,14]. This same reason can also occur in the newborn [13,14]. Whether he does not correctly suck his mother's breast, he cannot stimulate the breast and areola's nerve endings and he will not receive his adequate milk ration though [15,16]. Breast complications are another cause of non-breastfeeding [15,16]. Women feel pain and breast tenderness during the first days of breastfeeding. According to Pilliot, 2005, sore nipples are a bad position for the newborn during the breastfeeding [17]. The results of this study reveal three main reasons leading to non-breastfeeding or its abandonment. Increased ignorance of the breastfeeding practice, the resumption of work and lack of information on the benefits of breastfeeding are the main causes of disinterestedness.

CONCLUSION

This study revealed a great lack of knowledge among mothers on breastfeeding. The promotion of breastfeeding should be part of a general policy of public health. The main action is to inform women about the benefits and the superiority of breastfeeding, as well as the psychological preparation of the mother, which should take place ideally before and during pregnancy and also concerns the spouse.

Scientific arguments for the superiority of breast milk are hardly discussed. They are important in the context of breastfeeding promotion and should be explained to convince people of the interest of breastfeeding.

KNOWLEDGMENTS

This research was wholly funded by the authors and did not receive any institutional support or grants.

CONFLICT OF INTEREST

None to declare by the authors.

REFERENCE

- [1] Infant feeding, Physiological Basis, supplément Vol. 67 WHO Bulletin d, 1989
- [2] World Health Organization. Infant and young child feeding. Model chapter for textbooks for medical students and allied health professionals. [cited 13 Mar 2017]. Available from: http://www.who.int/maternal_child_adolescent/documents/9789241597494/en/
- [3] Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding. 1st August 1990 Florence (Italy).WHO / UNICEF "Breastfeeding in the 1990s" O.M.S Publications September 1990
- [4] World Health Organization.10 facts on breastfeeding. [cited 13 Mar 2017]. Available from: <http://www.who.int/features/factfiles/breastfeeding/en/>
- [5] World Health Report 2005. Let's give every mother and every child a chance. Geneva, WHO, 2005.
- [6] MICS Algeria 2006 "Multiple Indicator Cluster Surveys". O.M.S preliminary report, July 2006.
- [7] Kamina P. Anatomie gynécologique et obstétricale (Gynecological and obstetric anatomy). Maloine Paris 1984; 513: 196 - 485.

- [8] Walburg V, Conquet M, Callahan S, Chabrol H, Schölmerich A. Breastfeeding rate and duration in 126 primiparas. *Journal de Pédiatrie et de Puériculture* 2007; 20 (3): 114-17.
<https://doi.org/10.1016/j.jpp.2007.05.005>
- [9] Turck D, Vidailhet M, Bocquet A, et al. Allaitement maternel : les bénéfices pour la santé de l'enfant et de sa mère (Breastfeeding : the health benefits of the child and his mother). *Archives de pédiatrie* 2013 ; 20 : S29-S48.
[https://doi.org/10.1016/S0929-693X\(13\)72251-6](https://doi.org/10.1016/S0929-693X(13)72251-6)
- [10] Freund C, Mirabel L, Annane K, Mathelin C. Allaitement maternel et cancer du sein (Breastfeeding and breast cancer). *Gynécologie obstétrique & fertilité* 2005 ; 33(10) : 739-44.
<https://doi.org/10.1016/j.gyobfe.2005.07.030>
- [11] Laurent C. Influence de la proximité mère-bébé sur le sommeil du nouveau-né et celui de sa mère, et sur l'allaitement. Quelle proximité recommander sans mettre en danger la sécurité de l'enfant ? (Influence of mother-infant proximity on the sleep of the newborn and his mother and on breastfeeding. What proximity to recommend without endangering the safety of the child?) *Revue de médecine périnatale* 2011; 3 (1): 25-33
<https://doi.org/10.1007/s12611-010-0090-8>
- [12] Gremmo-Feger G. Lactation humaine : nouvelles données anatomophysiologiques et implications cliniques. *Physiologie* 2006 ; 5, 6.
- [13] Azzeh FS. Determinants of Exclusive Breastfeeding and Patterns of Complementary Feeding Practices in Mecca City, Saudi Arabia. *International Journal of Child Health and Nutrition* 2017; 6: 80-9.
- [14] Uwaezuoke SN, Eneh CI, Ikenna K, Ndu IK, Iloh K, Udorah MI. Maternal Diet during Exclusive Breastfeeding can Predict Food Preference in Preschoolers: A Cross-Sectional Study of Mother-Child Dyads in Enugu, South-East Nigeria. *International Journal of Child Health and Nutrition* 2017; 6: 70-9.
- [15] Nelson JM, Perrine CG, Freedman DS, et al. Infant feeding-related maternity care practices and maternal report of breastfeeding outcomes. *Birth*. 2018; 1–8.
[DOI: 10.1111/birt.12337](https://doi.org/10.1111/birt.12337)
- [16] Arribas C . L'allaitement, ça coule de source... et pourtant ! (Doctoral dissertation, Haute Ecole de la Santé La Source) 2006.
- [17] Pilliot, M. (2005). Allaitement en maternité: les clefs pour réussir. *Accompagner la naissance, accompagner l'allaitement. Journée régionale pour l'allaitement*, 2006, 43-54.