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Study of mothers' knowledge and practices related to the feeding of their children during the first six months of life

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Abstract

Background: The practice of breastfeeding is common in Morocco. Indeed, almost 96.6% of women breastfeed their children. However, this practice is accompanied by the early administration of tea before the sixth month and very often from the birth. The purpose of our work was to describe and analyze the knowledge and practices of a group of women on their children nutrition, from birth to six months of age.

Material and methods: This is a prospective descriptive study, with a collection of data by individual interviews. It took place from 1 January to 1 June 2017. The study concerned mothers of infants aged between six and 12 months, primiparous or no, seen as part of the screening appointments at the National Reference Center in Neonatology and nutrition. Various topics were discussed: general knowledge on infant feeding from birth to six months of age, on exclusive breastfeeding and the difficulties encountered in its practice, foods introduced during Breastfeeding, and the factors associated with their use.

Results: The study recorded 78 mothers, the average time to breastfeed at birth was 8±2 hours. The first food received by the newborn was breast milk for 66.7% of mothers (n=52). The other 26 mothers (33.3%) had given their newborn the Verbena infusion before the first breast, 44 mothers had received information on the feeding of the child. 42 mothers (53.8%) breastfed early and 35 mothers (45%) had exclusive breastfeeding up to six months. The reasons given by the 43 other mothers for the choice of another food were different. Factors influencing the practice of breastfeeding included the residence environment (P=0,041).

Conclusion: The practice of exclusive breastfeeding and the early start of breastfeeding are not limited by knowledge, but by cultural representations; Among the factors limiting the early start of breastfeeding, the most important seems to be use of verbena .In order to improve the feeding practices of children, it would be important to strengthen the information of health professionals on the feeding of newborns through education sessions, brochures, and in particular through the training of midwives on the benefits of breast milk.

Introduction

The nutrition of the first six months of an infant is exclusively by milk preferably with breast milk. Diversification is the step of food transition between the exclusive milk diet and an adult type diet. The immaturity of the digestive and renal systems and the increase of allergic risks are arguments against an early diversification (before six months) [1]. It consists of introducing other foods than milk (which does not cover the nutritional requirements of the infant after six months alone).

During this period, the child is exposed to a nutritional disorder, much more by deficiencies than by excess. Current recommendations of the Nutrition Committee of the ESPGHAN and the European Academy of Allergology are to introduce all foods between 4 and 6 months including the most allergenic (egg, fish, exotic fruits, celery, peanut, nuts), And this whether or not there is a personal or family atopic ground [2]. But WHO and UNICEF still recommend exclusive breastfeeding for six months. In Morocco we follow their recommendation.

Diversification is an important step for infants in both nutritional and psychological and social terms [2]. 27.8% of women in Morocco, or nearly three out of ten women, breastfeed their babies exclusively within the first six months [3]. Indeed, there is currently a decrease in this practice in relation to progress in the manufacture, marketing of industrial milk and the lack of information and awareness of mothers [4].

The purpose of our work was to describe and analyze the knowledge and practices of a group of women about their children's nutrition during the first six months of life.

Materials and patients

Type and period of study

This is a prospective descriptive study, with a collection of data by individual interviews. It took place from 1 January to 1 June 2017.

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Place of study

The study took place at the National Reference Centre for neonatology and Nutrition, which is a center located on the ground floor of the Rabat Child Hospital. Our Centre's current hospital capacity is estimated at 55 beds divided into three units:

- A 12-bed medico-surgical Neonatal resuscitation unit, providing assisted ventilation and the various acts of resuscitation essential for life-saving.
- An intensive care and post-resuscitation unit with 11 beds providing the various urgent care and monitoring outside the mechanical ventilation.
- A standard care and rearing unit of 32 beds equipped with a room to receive the mothers who are breastfeeding their baby, recently arranged.
- There are two units in the delivery room of Souissi maternity. In addition to its units, the center provides a day-hospital activity and has an emergency, functional area 7 d/7 and 24h/24.

We also have an ambulatory consultation unit, which was the place of recruitment in this study.

Inclusion criteria

The study concerned mothers of infants aged six to twelve months, primiparous or not, who are admitted in consultation during the study period

Exclusion criteria

Children under 6 months of age and over 12 months were excluded from the study. Parents who refused to participate were also excluded.

Methods

Our study consisted of the development of an operating record that collected information about moms and newborns. The data listed concerned:

- Demographic and socio-economic characteristics (Age, social situation, level of education, provenance, marital status). The woman was considered non-illiterate when she did not know how to write or read Arabic.
- Health and obstetric characteristics (attendance, parity, medical and surgical history, pregnancy monitoring, delivery pathway). A pregnancy was followed when the woman had observed at least 3 prenatal visits.
- Neonatal and clinical characteristics at admission (age, sex, reason for control).
- Various topics were discussed: general knowledge on infant feeding from birth to six months of age, on exclusive breastfeeding and the difficulties encountered in its practice, foods introduced during Breastfeeding, and the factors associated with their use

Definitions of terms

The definitions of world Health Organization and the National Agency for Health Accreditation and evaluation (ANAES) have been used [4,5] the term "breastfeeding" is reserved for the feeding of the newborn or infant by the mother's milk; Passive reception of the expressed breast milk is considered to be breastfeeding even if it is not breastfeeding; Breastfeeding is exclusive when the infant receives only breast milk , is partial when associated with another diet.

Breastfeeding is artificial when it receives any milk formula.

A pregnancy was said to be followed if there were at least three antenatal consultations. Multiple pregnancies: It is a twin pregnancy, triplet; quadruple or more [6].

Primiparous: Woman with only one pregnancy;

Pauciparous: Woman who had two to three pregnancies;

Multiparous: Woman with more than four pregnancies up to 6pregnancies; Large multiparous: Woman with 7 or more pregnancies.

Statistical analysis

Statistical analysis was performed using SPSS software version 13.0; Quantitative variables were expressed in median with quartiles or on average ±standard deviation, and qualitative variables in strength and percentage.

The Student T-Test and Chi 2 or Fisher's exact test were used respectively for the univariate comparison of quantitative variables and qualitative variables with a threshold of significance <0.05.

Ethical considerations

The Protocol of the study was approved by the Ethics Committee of the Faculty of Medicine and Pharmacy of Rabat.

Results

Maternal and child characteristics

The Table1 shows that during the study period, seventy-eight women were interviewed with an average age of 29.66±7.17. The average age of children during the survey was 6.98±0.5 months, 55 of them were female and 30 were of an unaccompanied pregnancy, 48 were born with a low birth weight.

General knowledge of mothers on infant nutrition

General knowledge of infant nutrition from zero to six months was collected from mothers. For all mothers, an infant from zero to six months should be breastfeed; For 44 mothers, this breastfeeding should be exclusive; associated with water for 8 mothers; to water and Verbena infusion for 22 mothers and Verbena infusion alone for 4 mothers. Early breastfeeding was considered an important act by 46 mothers; For 32 mothers, it must be preceded by Verbena infusion while for 7 of them, the breast should only be started after the milky rise .For all mothers interviewed, breast milk was the best milk to feed a child but the virtues associated with it were diverse: "Child protection against Infection" (n=32), "Makes Bones stronger" (n=5), "Consolidates the mother-child bond" (n=9), "Complete food "(n=8) ""provides for better growth" (n=6), "provides spacing of births" (n=1), "Protection of the child from anemia" (n=17).

Child diversification

Regarding the age of introduction other foods with breast milk, 28 (35.90) of the women surveyed were for the age of 6 to 12 months, 32 (41.02%) for 4 months and 18 (28.08%) proposed between 2 to 3 months, the most proposed foods are yogurt, vegetable broth, eggs, soups, biscuits, fish, infant flours and mashed potatoes.

Mothers practices on infant nutrition

The average time to breastfeed was 8±2 hours at birth. The ratio of breastfed children in the hour following birth was 15.38% (n=12).

Table 1. Maternal and child characteristics

Variables	Valeurs
Maternal characteristics	**N=78**
Maternal age¶	29.66±7.17
Marital status¥	
Married	76 (97.43)
No	2 (2.57)
Pregnancy follow up¥	
No	48 (52.73)
Yes	30 (47.27)
Parity	
Primiparous	55 (70.51)
Multiparous	23 (29.49)
Type of pregnancy¥	
Single	75 (89.55)
Twin	3 (9.50)
Mode of Delivery ¥	
Cesarean section	15 (32.54)
Normal	63 (67.46)
Living environment[b]¥	
Suburban	17 (67.22)
Rural	61 (32.78)
Social coverage ¥	
No	48 (61.54)
Ramed	28 (35.90)
Mutual	2 (2.56)
Workers	
Yes	35 (44.87)
No	43 (55.13)
Educational level¥	
No-literate	58 (74.36)
Literate	20 (25.64)
Child characteristics¶	**(N=84)**
Age	6.98±05
Sex	
Male	29 (34.52)
Female	55 (65.48)

The values are expressed on average ±standard deviation (¶), median (£) or effective and percentage (¥)
RAMED: assisted by ministry of health

Those breastfed within 24 hours after birth was 21.8% (n=17) One child (1.28%) was breastfed 72 hours after birth (Table 2).

Mothers sources of information on breastfeeding

Our results showed that only 34 (43.59) of women were informed about the benefits and the interest of breastfeeding. In the majority of cases, the main source of information was the parents mostly the grandmother in 42% of cases and health professionals (Doctor and midwife).

Contraindications of breastfeeding

Question: "Do you know any contraindications to breastfeeding?" The women answered: "No contraindications" (n=52), "Contagious disease" (n=13), "No idea" (n=11), "HIV-AIDS infection" (n=2) (Table 3).

In bivariate analysis only, the residence environment influenced the practice of exclusive breastfeeding in this study.

Discussion

The purpose of this work was to describe and analyze women's knowledge and practices on infant nutrition. We found in this study a proportion of breastfeeding (100%), higher than the 96.6% of the last Moroccan demographic survey [7]. Also, the proportion of exclusive breastfeeding (66%) is much higher than that found in the same survey, which was 27.8% [8]; Those results significantly better than those found in the general population may have a double explanation. On the one hand, by the peculiarity of the study population whose children have stayed in the National Reference Centre in nutrition and neonatology, and who in addition to providing care to children, educates moms about the nutritional management of their children during stay and at discharge. These results can't be extrapolated at the national level, as these women have benefited some coaching during their children's hospitalization. This can be a success factor in the conduct of their children's diet.

All the mothers interviewed said that breast milk is the best milk for the child nutrition. However, a distortion was noted between the declared general knowledge and the practices. Our study reveals that the proportion of exclusive breastfeeding appears to be all the more important as the mother's level of study is high, even if the difference is not statistically significant. This practice of breastfeeding in relation to the level of education has been described by other authors, notably in France by Brett *et al.* [9] and in the United States by Da Vonzo *et al.* [10]. Fromme H *et al.* also found in Germany that the introduction of other foods in infants under 6 months of age was correlated with a low level of education. [11]

The lack of milky elevation, low birth weight was evoked by some mothers who did not practice exclusive breastfeeding to explain the addition of verbena infusion and water to food. These moms

Table 2. Mothers practices regarding infant nutrition

Variables	Mothers population N= 78
Time of first breast feeding	**36,45±3,06**
One hour after child birth	12 (15.38)
A few hours after childbirth	48 (61.54)
The next day	17 (21.80)
72 h after birth	1 (1.28)
Breast feeding practice	
Exclusive breast feeding	51 (65.39)
Mixed breast feeding	27 (34.61)
Reason for not exclusivity	
Refusal of breastfeeding by the child	25 (49.02)
Tiring	15 (29.41)
Lack of time	11 (21.57)

The values are expressed in effective and percentage

Table 3. Factors related to the practice of exclusive breastfeeding

	Exclusive Breastfeeding		
Mothers characteristics	Yes	No	*p*
Workers			0.06
Yes	19 (54.29)	16 (45.71)	
No	32 (74.41)	11 (25.58)	
Residence environment			**0.041**
Suburban	7 (41.18)	10 (58.82)	
Rural	44 (72.13)	17 (27.87)	
Parity			0.08
Primiparous	30 (54.55)	25 (45.45)	
Multiparous	15 (65.22)	8 (34.78)	
Niveau d'instruction			0.061
Scolarisé	8 (40)	12 (60)	
Non scolorisé	32 (55.17)	26 (44.83)	

The values are expressed ineffective and percentage

incriminate grandmothers in this practice, these practices seem to be more related to a fear of bringing food in insufficient quantity to the child than to a true hypogalactie [12]. Breastfed early is a key exercise in the success of breastfeeding, which is to give the child breast within the first hour after birth.

In our study the average of eight hours of breastfeed is long, contrary to the recommendations of who advocating the breast in the half hour following the birth However, in our study, the proportion of breastfeeding mothers in the hour following birth was less than that reported by EDS of 2011 (23%) [7]. This difference can be explained by the health status of its children at birth.

The residence environment is a factor influencing the practice of exclusive breastfeeding, indeed children in rural areas benefit more from this practice than children in the suburban areas. In developing countries, a trend towards declining breastfeeding is being observed, especially in large cities. In Ivory Coast, studies in some areas of Abidjan have found that 90 % of mothers have given breast milk, from artificial milk to infants under 4 months of age [13]. In Senegal, only 5% of infants under 5 months are exclusively breastfed, while 61% of this age group receive water and food supplements [14,15].

Mothers' information on children's nutrition comes from several sources. The level of general knowledge observed was average (43.56%), but only two-thirds of the mothers interviewed had received advice from health workers about child nutrition. Communication sessions to promote breastfeeding in the service during the hospitalization of their newborns can be a positive effect. Practices seem to be based on sociocultural representations, among the limiting factors of the breastfeed, the most important seems to be use of verbena infusion. To improve practices, it would be important to strengthen information by health professionals on the feeding of newborns and target messages at our educational sessions.

Conclusion

The practice of exclusive breastfeeding and breastfeed early does not seem to be limited by knowledge, but by cultural representations. Among the factors limiting the early breastfeed, the most important seems to be use of verbena infusion. To improve the feeding practices of infants, it would be important to strengthen information by health professionals on the feeding of newborns through education sessions, brochures; this study allowed us to target the messages during our educational sessions in order to positively impact the practices of moms.

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