Early introduction of complementary feeding in infants: comparing adolescent and adult mothers

Introdução precoce da alimentação complementar infantil: comparando mães adolescentes e adultas

Introducción precoz de alimentación complementaria infantil: comparación entre madres adolescentes y adultas

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Abstract

Objective: Check for associations between maternal age and the reasons provided by mothers for the early introduction of complementary feeding in infants at 30, 90 and 180 days after birth.

Methods: This is a prospective cohort study, conducted in a maternity hospital of the Brazilian Unified Health System (SUS) located in a medium-sized city of the State of São Paulo, Brazil. The sample was made up of 545 participants – 103 adolescents and 442 adults in the postpartum period. Data were collected from October 2016 to October 2017, face to face, at the maternity hospital and via telephone 30, 90 and 180 days after birth, and analyzed using the Chi-square and Fisher's exact tests.

Results: Thirty days after birth, the adolescent mothers mentioned recommendations of other people for introducing tea into the baby's diet; on the other hand, the adult mothers mentioned reasons related to the child (p=0.001). Ninety days after birth, the adolescent mothers reported recommendations for the introduction of water and tea from other people and the adult mothers reported reasons related to the child (p=0.004 for water and p<0.001 for tea). And 180 days after birth, the adolescent and adult mothers reported reasons related to their own choice for the introduction of another type of milk (p = 0.03).

Conclusion: Adolescent and adult mothers presented different reasons for introducing tea 30 days after birth, for introducing water and tea 90 after birth, and presented the same reason for introducing another type of milk 180 days after birth.

Resumo

Objetivo: Verificar a associação entre a idade materna e os motivos alegados pelas mães para o início precoce da alimentação complementar aos 30, 90 e 180 dias de vida da criança.

Métodos: Trata-se de um estudo de coorte prospectivo, desenvolvido em uma maternidade do Sistema Único de Saúde de um município de médio porte do interior do Estado de São Paulo, Brasil. A amostra foi de 545 participantes, sendo 103 adolescentes e 442 adultas no período pós-parto. Os dados foram coletados de outubro de 2016 a outubro de 2017, face-a-face na maternidade e via telefone em 30, 90 e 180 dias após o pato, e analisados por meio dos testes Qui-Quadrado e Exato de Fisher.

Resultados: Aos 30 dias pós-parto as adolescentes referiram motivos para introdução de chá relacionados às orientações de outras pessoas; já as adultas, referiram motivos relacionados à criança (p = 0,001). Aos 90 dias, para a introdução de água e chá, as adolescentes alegaram orientações de outras pessoas e as adultas alegaram motivos da criança (p = 0,004 para água e p < 0,001 para chá). Aos 180 dias, para a introdução de outro leite, adolescentes e adultas referiram motivos relacionados ao seu próprio desejo (p = 0,03).

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Conflict of interest: article extracted from the dissertation: "Early introduction of food in the diet of children: comparison between adolescent and adult mothers" presented at the University of São Paulo at Ribeirão Preto College of Nursing.

Conclusão: As adolescentes e adultas apresentaram motivos diferentes para a introdução de chá aos 30 dias pós-parto, para a introdução de água e chá aos 90 dias e apresentaram o mesmo motivo para a introdução de outro leite aos 180 dias pós-parto.

Resumen

Objetivo: Verificar la relación entre la edad materna y los motivos indicados por las madres para el inicio precoz de la alimentación complementaria a los 30, 90 y 180 días de vida del bebé.

Métodos: Se trata de un estudio de cohorte prospectivo, llevado a cabo en una maternidad del Sistema Único de Salud de un municipio de tamaño medio en el interior del estado de São Paulo, Brasil. La muestra fue de 545 participantes, de las cuales 103 eran adolescentes y 442 adultas en el período de posparto. Los datos fueron recopilados de octubre de 2016 a octubre de 2017, cara a cara en la maternidad y por teléfono a los 30, 90 y 180 días después del parto, y fueron analizados mediante la prueba χ^2 de Pearson y la prueba exacta de Fisher.

Resultados: A los 30 días de posparto, las adolescentes mencionaron motivos para la introducción de té relacionados con instrucciones de otras personas. Las adultas mencionaron motivos relacionados con el bebé ($p = 0,001$). A los 90 días, para la introducción de agua y té, las adolescentes declararon que siguieron instrucciones de otras personas y las adultas que fue por motivos del bebé ($p = 0,004$ para agua y $p < 0,001$ para té). A los 180 días, para la introducción de otra leche, las adolescentes y las adultas mencionaron motivos relacionados con su propio deseo ($p = 0,03$).

Conclusión: Las adolescentes y adultas presentaron motivos diferentes para la introducción de té a los 30 días posparto y para la introducción de agua y té a los 90 días, y presentaron el mismo motivo para la introducción de otra leche a los 180 días posparto.

Introduction

Breastfeeding (BF) remains a public health concern, since its rates do not reach the recommendations of the World Health Organization (WHO) in different countries, even with evidence of BF benefits in the scientific literature.[1] The early introduction of complementary feeding in a child's diet reduces the BF period, affects the absorption of important nutrients such as iron, reduces the effectiveness of lactation in the interpregnancy interval, and increases infant morbidity and mortality.[2]

In Brazil, a large number of children consume different types of food before the age of six months, contrary to the recommendations of the WHO.[2] According to some studies, lack of information about the composition and quality of human milk prevents mothers from recognizing the benefits of breastfeeding, causing them to start early complementary feeding in a child's diet.[3-5]

Early introduction of other types of milk in a child's diet is justified by mothers' perception of insufficient quantity and low quality of breast milk.[6] However, in the world population, most women have biological conditions to produce enough milk to meet the needs of their children, with the hypogalactia index not exceeding 1.5%; and the production of milk with little nutritional value is a rare situation.[7]

Considering the Brazilian culture, beliefs and practices of the population conflict with the recommendations for infant feeding; for example, giving water if the baby is thirsty and tea to calm the baby down, relieve baby's colic or treat different diseases. Such beliefs, combined with the idea that breast milk is not strong enough to meet the child's needs, may also result in early introduction of breast milk substitutes into the child's diet.[8]

Another factor that influences the early introduction of complementary feeding is maternal age, especially among young mothers.[9] Authors have demonstrated that adolescent mothers breastfeed their children for a shorter period when compared to adult mothers, due to factors that include marriage and school life.[4] Some studies report that adolescent mothers are more likely to stop breastfeeding early.[5-10] However, the reasons leading adolescents to early weaning are not evident in the scientific literature, requiring a better understanding of the particularities of motherhood and breastfeeding in adult life and adolescence. Understanding the reasons provided by adolescent and adult mothers may contribute to the implementation of specific actions that effectively encourage and support breastfeeding in these two groups of women.

This study aims to check for associations between maternal age and the reasons provided by mothers for the early introduction of complementary feeding in a child's diet 30, 90 and 180 days after birth.

Methods

This is a prospective cohort study, conducted in a maternity hospital of the Brazilian Unified Health System located in a medium-sized city of the state of São Paulo, Brazil.

The study sample was made up of all adolescent and adult women in the postpartum period admitted to the maternity hospital. The sample was calculated with information from the institution's Annual Nursing Report, based on monthly longitudinal monitoring of the sample units selected for the groups of adolescents and adults. This study adopted a tolerable sampling error of 5%, a confidence level of 95%, a predicted loss of 10% and the groups of adolescent and adult mothers. The final sample calculated was 545 participants: 103 adolescents and 442 adults.

The participants were selected according to the following inclusion criteria: adolescent and adult mothers with babies in biological conditions to breastfeed, who had children of full-term gestational age, who did not need tubes or intermediary pieces to breastfeed, who were accompanied by their children in the room, and who had given birth at least 24 hours before starting the study. The exclusion criteria were: mothers or infants who had pathologies or complications that prevented breastfeeding, and mothers with hearing, visual or cognitive impairments.

Two instruments were used for data collection. The first instrument was built specifically for this study to collect identification data and sociodemographic, obstetric and breastfeeding information. This instrument was used for face-to-face interviews with mothers at the maternity hospital. The second data collection instrument consisted of closed-ended questions to identify the food provided to the baby and an open-ended question to identify the reasons for introducing complementary feeding. The second instrument was used via telephone, 30, 90 and 180 days after birth. Telephone contact was adopted because, in the first postpartum month, mothers may experience challenges and obstacles and are susceptible to early weaning. In the third month, it is possible to assess whether these challenges have been solved and, in the sixth month, it is possible to assess whether EBF (exclusive breastfeeding) has been maintained, as recommended by the WHO. Telephone contact was made according to the information provided by the participants during the application of the first data collection instrument. In cases where the participant could not be reached, up to three attempts were made on different days and at different times before the participant was excluded from the study. Eighteen participants were excluded.

Data were collected from October 2016 to October 2017. According to the study criteria, postpartum mothers were invited to participate in the study, and received explanations about it. After they were aware of the study and ethical aspects, the adult mothers who agreed to participate signed an informed consent form (ICF). The adolescent mothers who accepted to participate signed a consent form and an authorization was obtained from their legal guardians, who signed an ICF authorizing the participation of the adolescents.

This study considered the following definitions:

- Adolescence: between ages 10 and 19.[9]
- Exclusive breastfeeding (EBF): when an infant receives only breast milk, direct from the breast or expressed breast milk, or human milk from another source, with no other liquids or solids, except for drops or syrups containing vitamins, oral rehydration solutions, minerals or medicines.[11]
- Breastfeeding: when an infant receives breast milk directly from the breast or expressed breast milk, regardless of other foods.[11]
- Timely introduction of complementary feeding: introduction of solid, semi-solid or liquid foods in the child's diet in addition to breast milk from 6 to 7 months of age.[12]
- Early weaning: when the child no longer receives breast milk before 6 months of age.[4]

Data were stored in a Microsoft Excel spreadsheet using double typing, which allowed data validation and elimination of possible errors, ensuring reliable data compilation. Data were analyzed using statistical software R - version 3.4.2.[13] In all statis-

tical analyses, a p-value less than 0.05 was statistically significant.

The study was authorized by the maternity hospital and approved by the Research Ethics Committee linked with the National Commission of Ethics in Research (CONEP) of the National Health Council under CAAE registration nº 56833316.0.0000.5393.

Results

The group of participants consisted of 103 adolescent mothers and 442 adult mothers. Table 1 shows the sociodemographic characteristics of the participants.

The adolescent mothers presented a mean of 1.31 pregnancies, 1.2 births, 1.11 abortions, 1.19 live children, mean of 16.81 weeks of gestational age at the beginning of prenatal care and mean of 6.73 prenatal visits. The adult mothers presented a mean of 2.44 pregnancies, 2.26 births, 1.13 abortions, 2.23 live children, mean of 14.5 weeks of gestational age at the beginning of prenatal care and mean of 7.73 prenatal visits. Most participants, both adolescents and adults, had unplanned pregnancies (70.3%). Most women investigated had no complications during the pregnancy (56.0%), delivery (90.4%) and postpartum period (64.8%). Regarding the type of delivery, 51.5% of the adolescents had a normal delivery and 56.5% of the adults underwent a Caesarean section. Regarding the characteristics of the participants' newborns (NB), 52.8% were female, 88.1% were breastfed in the first hour of life, and 90.6% were in EBF at the time of data collection in the maternity hospital. The mean weight of the adolescent mothers' newborns at birth was 3.089 kg and, among adult mothers, 3.197 kg.

Table 2 shows the prevalence of EBF in the investigated period.

The following foods were offered to the children 30, 90 and 180 days after birth: breast milk, another type of milk, water, tea, and fruit in the form of juice and/or baby food.

Table 1. Distribution of study participants by age, self-reported color, education, pregnancy interference in school life, religion, occupation, marital status, housing, assistance with baby care, and family income in minimum wages of R$890,00

Age (years)	Adolescent mothers (n=103)	Adult mothers (n=442)
Mean	17.35 (SD = 1.52)	27.54 (SD = 5.88)
Median	17.00	26.00
Minimum	13.00	20.00
Maximum	19.00	44.00

	Adolescent mothers (n=103) n(%)	Adult mothers (n=442) n(%)	Total (n = 545) n(%)
Self-reported color			
White	33(32.0)	208(47.1)	241(44.2)
Black	12(11.7)	56(12.8)	68(12.5)
Yellow	6(5.8)	16(3.6)	22(4.0)
Brown	52(50.5)	161(36.4)	213(39.1)
Red	0(0.0)	1(0.2)	1(0.2)
Education			
Incomplete elementary education	11(10.7)	42(9.5)	53(9.7)
Complete elementary education	15(14.6)	47(10.6)	62(11.4)
Incomplete high school	55(53.4)	118(26.7)	173(31.7)
Complete high school	22(21.4)	101(45.5)	223(40.9)
Incomplete higher education	0(0.0)	19(4.3)	19(3.5)
Complete higher education	0(0.0)	14(3.2)	14(2.6)
Graduate studies	0(0.0)	1(0.2)	1(0.2)
Quit studying because of pregnancy			
Yes	56(54.4)	45(10.2)	101(18.5)
No	47(45.6)	397(89.8)	444(81.5)
Religion			
Has a religion	80(77.7)	387(87.6)	487(85.7)
Believes in God, but has no religion	20(19.4)	53(12.0)	73(13.4)
Agnostic/atheist	3(2.9)	2(0.5)	5(0.9)
Occupation			
Has a paid job outside the home	24(23.3)	232(52.5)	256(47.0)
Has no paid job outside the home	79(76.7)	210(47.5)	289(53.0)
Marital status			
Single	57(55.3)	72(16.3)	129(23.7)
Married	14(13.6)	172(38.9)	186(34.1)
Lives with someone	31(30.1)	188(42.5)	219(40.2)
Separated/divorced	1(1.0)	8(1.8)	9(1.7)
Other	0(0.0)	2(0.5)	2(0.5)
Housing			
Own home	47(45.6)	197(44.6)	244(44.8)
Rented home	52(50.5)	198(44.8)	250(45.9)
Borrowed home	4(3.9)	47(10.6)	51(9.4)
Assistance with baby care			
Yes	102(99.0)	419(94.8)	521(95.6)
No	1(1.0)	23(5.2)	24(4.4)
Who helps			
Husband/partner	14(13.7)	67(16.1)	81(15.7)
Mother	66(64.7)	221(53.3)	287(55.5)
Mother-in-law	9(8.8)	57(13.7)	66(12.8)
Another family member	11(10.8)	59(14.2)	70(13.5)
Friend	0(0.0)	1(0.2)	1(0.2)
Other	2(2.0)	10(2.4)	12(2.3)

Family income in minimum wages	Adolescent mothers (n = 72)	Adult mothers (n = 402)
Mean	1649 (SD = 988)	2086 (SD = 986)
Median	1400	2000
Minimum	248	200
Maximum	6000	6800

Table 2. Prevalence of exclusive breastfeeding 30, 90 and 180 days after birth

	Adolescent mothers (n = 103) n(%)	Adult mothers (n = 442) n(%)	Total (n = 545) n(%)	p-value*
EBF (30 days after birth)				
Yes	50(48.5)	270(61.1)	320(58.7)	0.004
No	46(44.7)	125(28.3)	171(31.4)	
Early weaning	7(6.8)	47(10.6)	54(9.9)	
EBF (90 days after birth)				
Yes	22(21.4)	180(40.7)	202(37.1)	0.000
No	64(62.1)	183(41.4)	247(45.3)	
Early weaning	17(16.5)	79(17.9)	96(17.6)	
EBF (180 days after birth)				
Yes	11(10.7)	71(16.1)	82(15.0)	0.200
No	59(57.3)	233(52.7)	292(53.6)	
Early weaning	33(32.0)	138(31.2)	171(31.4)	

*Chi-square test.

Table 3 shows the reasons presented by adolescent and adult mothers for starting early complementary feeding 30 days after birth and their respective values of statistical significance. Tea was the most frequent food; regarding the decision for the early introduction of tea in the child's diet, the adolescents claimed to follow suggestions or indications from other people, such as medical prescriptions or recommendations from someone in the family (55.2%). Among adult mothers, the main reasons were related to their perception of the child's demand, based on observation of the child's behavior (80.9%).

Table 3. Reasons provided by adolescent and adult mothers for introducing other foods in the child's diet 30 days after birth

Reasons	Adolescent mothers n(%)	Adult mothers n(%)	p-value*
Introduction of water			
Related to the child	13(41.9)	25(58.1)	0.080
Related to the mother	0(0.0)	3(7.0)	
Other (physician/family member)	18(58.1)	15(34.9)	
Introduction of tea			
Related to the child	13(44.8)	55(80.9)	0.001**
Related to the mother	-	-	-
Other (physician/family member)	16(55.2)	13(19.1)	
Introduction of artificial milk			
Related to the child	1(4.0)	8(7.4)	1.0
Related to the mother	18(72.0)	76(70.4)	
Other (physician/family member)	6(24.0)	24(22.2)	

*Fisher's exact test; **Chi-square test.

As indicated above, 30 days after birth, the reasons of adolescent mothers for introducing tea were associated with recommendations from other people; while the reasons of adult mothers were associated with their perception of the child's needs (p=0.001).

Table 4 shows the reasons of adolescent and adult mothers for starting early complementary feeding 90 days after birth. Water was the most frequent complement; regarding the decision for the early introduction of water in the child's diet, the adolescents claimed to follow suggestions or indications from other people, such as medical prescriptions or recommendations from someone in the family (51.6%). Among adult mothers, the main reasons were related to their perception of the child's demand (68.0%).

Table 4. Reasons provided by adolescent and adult mothers for introducing other foods in the child's diet 90 days after birth

Reasons	Adolescent mothers n(%)	Adult mothers n(%)	p-value*
Introduction of water			
Related to the child	29 (45.3)	100 (68.0)	0.004
Related to the mother	2 (3.1)	5 (3.4)	
Other (physician/family member)	33 (51.6)	42 (28.6)	
Introduction of tea			
Related to the child	7 (36.8)	44 (83.0)	0.000**
Related to the mother	-	-	
Other (physician/family member)	12 (63.2)	9 (17.0)	
Introduction of juice			
Related to the child			
Related to the mother	0 (0.0)	1 (33.3)	1.000
Other (physician/family member)	3 (100.0)	2 (66.7)	
Introduction of another type of milk			
Related to the child	1 (2.9)	6 (4.1)	0.184
Related to the mother	25 (73.5)	122 (84.1)	
Other (physician/family member)	8 (23.5)	17 (11.7)	
Introduction of baby food or fruit			
Related to the child			
Related to the mother	0 (0.0)	2 (40.0)	1.000
Other (physician/family member)	2 (100)	3 (60.0)	

*Fisher's exact test; **Chi-square test.

Ninety days after birth, the reasons of adolescent mothers for introducing water were associated with recommendations from other people; while the reasons of adult mothers were associated with the child's needs (p=0.004). Regarding the introduction of tea, the adolescents claimed it was recommended by the physician and/or a family member and the adult mothers claimed it was related to the child (p<0.001).

Table 5 shows the reasons of adolescent and adult mothers for the early introduction of foods in the child's diet 180 days after birth. Fruit was the most frequent food, in the form of juice and/or baby food. Adolescent and adult mothers claimed they offered fruit as suggested and/or recommended by other people.

Table 5. Reasons provided by adolescent and adult mothers for early start of complementary feeding 180 days after birth

Reasons	Adolescent mothers n(%)	Adult mothers n(%)	p-value*
Water			
Related to the child	28 (45.2)	98 (50.5)	0.266
Related to the mother	4 (6.5)	23(11.9)	
Other (physician/family member)	30 (48.4)	73 (37.6)	
Tea			
Related to the child	-	1 (100)	1.000
Related to the mother	-	-	
Other (physician/family member)	1 (100)	-	
Fruit juice			
Related to the child	-	2 (1.9)	1.000
Related to the mother	7 (30.4)	30 (28.6)	
Other (physician/family member)	16 (69.6)	73 (69.5)	
Another type of milk			
Related to the child	1 (2.9)	4 (2.5)	0.030
Related to the mother	22 (62.9)	132 (82.0)	
Other (physician/family member)	12 (34.3)	25 (15.5)	
Fruit cream (baby food)			
Related to the child	1 (2.1)	7 (3.3)	0.890
Related to the mother	16 (33.3)	67 (32.1)	
Other (physician/family member)	31 (64.6)	135 (64.6)	

*Fisher's exact test.

Adolescent and adult mothers provided the same reason for introducing another type of milk 180 days after birth, which was related to their own choice (p=0.03).

Discussion

Despite the various adverse effects on children's health, early introduction of complementary foods is still common in both developed and developing countries, as observed in this study. In this sense, a European multicenter study that included five countries (Belgium, Germany, Italy, Poland and Spain) revealed that complementary feeding started before month 4 in around 25% of the children investigated; at month 6 at least 90% of children had already consumed solid foods.[14] A study about complementary feeding in the Middle East showed that contemporary practices do not observe the recommendations established by the WHO – in Iraq, the United Arab Emirates and Lebanon, 78.6%, 70.0% and 52.9% of children, respectively, received complementary feeding between four and six months of age.[15]

Regarding the introduction of water in the first 30 days and the introduction of water and tea 90 days after birth, our study found that most adolescent mothers provided reasons related to medical prescriptions and/or family recommendations; on the other hand, most adult mothers said it was related to the child. In Brazil, tea and water are the most frequent liquids used for early introduction in a child's diet. A study conducted in Goiânia, Brazil, with most participants over 20 years of age, found that in the first month of the child's life, tea consumption reached 32.6% and water 19.1%.[16] The same study showed that, besides water and tea since the first month of life, a high consumption of water (54.1%), tea (31.5%), other types of milk (18.0%) and juice (11.5%) was observed.[16] A study conducted in the state of São Paulo with children at around four months old showed water was the most frequent liquid given by mothers to thirsty children,[17] although, according to the WHO, healthy children in EBF do not need water during the first six months, not even on hot days.[18] This finding indicates Brazilian mothers often give water to infants, in agreement with our study.

Regarding support for breastfeeding, in this study, younger mothers sought in their social and family environments information to guide their children's feeding habits, leading them to offer other foods before six months of life. This way, families, according to their histories and experiences, transfer feeding knowledge to new mothers. The influence of a maternal grandmother, for example, can be a negative factor for the maintenance of EBF up to 6 months after birth, since in some contexts, the grandmother recommends tea to relieve baby's colic.[8]

Regarding the reasons for introducing another type of milk in the first month of a child's life,

no significant association was found between adolescent and adult mothers – most mothers of both groups introduced artificial milk for maternal reasons. The first two weeks after birth are essential for the successful start of breastfeeding.[11] In this period, mothers and their babies learn about breastfeeding. Thus, this period is considered critical, with breastfeeding occurrences and mothers frequently reporting that 'breast milk is sufficient, but the child is still hungry,' 'my milk is not strong enough,' 'the baby cried a lot,' 'I had no milk,' 'my milk has dried up' in several studies.[8,19] Such situations also occur with adolescent mothers.[20]

In addition, another reason for early introduction of complementary feeding in the first month is nipple trauma, which could be resolved through learning by observation and practice.[21] Health professionals must help nursing mothers in this period, providing guidance and answers to their questions about breastfeeding techniques and recommendations about timely introduction of complementary feeding.[21] The justifications for the early introduction of food in the baby's first month of life can often be interpreted as a request for help due to the challenges faced in this period. The claim that 'milk is not strong enough,' for example, can be a cultural justification, due to a mother's lack of knowledge about the characteristics of breast milk, and the fact that a baby's crying is usually related to hunger, which is not always the case, as crying may be related to other situations.[22,23]

Regarding the introduction of juice, other types of milk, baby food and fruit 90 days after birth, no significant association was found between the reasons provided by adolescent and adult mothers. A study shows that at three months of age, on average, a new food is introduced in a child's diet, especially in low-income countries, where introducing complementary food is an almost universal standard.[24] Despite that, a Canadian study showed that, after an effective intervention by family members and qualified health professionals during breastfeeding, adolescent mothers understood the importance of EBF and maintained this practice until the baby was six months old.[25] Therefore, it is important to highlight that family members and health professionals have an influence on mothers in view of habits and previous experiences of inserting complementary food in a child's diet.

Regarding the reasons provided by the participants for the introduction of another type of milk 180 days after birth, adolescent and adult mothers had the same reasons related to their own choice. Regarding the introduction of water, tea, juice and baby food or fruit, no statistically significant association was found regarding the reasons. Authors show that in a child's sixth month of life, the consumption of different foods is higher, especially: water (77.5%), fruit (62.7%), juice (57.2%) and salt food (55.1%).[17] In this sense, our study showed that 15.0% of the total sample (adolescent and adult mothers) managed to maintain EBF until the child's six months of life, introducing other foods such as water, juice, fruit and baby food in a timely manner after this period.

Breast milk fulfills all nutritional needs of a child up to 6 months after birth; therefore, no other food should be introduced in the diet until then.[1,12,24-26] However, after 6 months, a timely introduction of complementary foods is essential to ensure the appropriate development of the child.[12,27] A timely introduction of foods fulfills the nutritional needs of the child, allowing the child to have similar eating habits in relation to the family and a new phase of life with new flavors, colors, textures and aromas,[27] contributing to disease prevention and psychological, motor and cognitive development.[28] Introducing safe foods that offer all required nutrients, in addition to breast milk, is important for child development and growth.[29,30]

Therefore, BF is not a purely physiological action. It is a complex phenomenon and, in this sense, a mother's decision to breastfeed or not involves social, psychological and cultural factors.[31] In this perspective, family members and health professionals play an important role in monitoring the timely introduction of foods, since mothers, as they feel insecure, rely on the recommendations from these people. In this study, most children could not benefit from EBF,

showing that an educational process must be implemented in a more participatory, continuous and planned way, since the pregnancy period and extending to the late post-natal period, in order to help these women become more confident mothers and have the necessary knowledge to continue breastfeeding their children. Study limitation referred to the impossibility of face-to-face follow-up of participants at the three moments of the study; however, telephone contact was very important in this sense and could make up for such limitation.

Conclusion

This study analyzed adolescent and adult mothers 30, 90 and 180 days after birth, allowing a better understanding of the care they provide when feeding their babies. Adolescent and adult mothers presented different reasons for introducing tea 30 days after birth, water and tea 90 days after birth, and presented the same reason for introducing other types of milk 180 days after birth. Adolescent mothers rely on recommendations from other people, a fact that emphasizes why nurses, physicians and other health professionals must be prepared in their training to handle these specificities of adolescent motherhood. Further studies should be conducted with follow-up of adolescent and adult mothers in terms of breastfeeding and complementary feeding after the sixth month of a child's life, especially using qualitative approaches, in order to fill in the gaps that still exist regarding this theme, thus contributing to an increase in breastfeeding rates.

Collaborations

Murari CPC, Arciprete APR, Gomes-Sponholz F and Monteiro JCS state they contributed to the development of the project, analysis and interpretation of data, writing of the manuscript, relevant critical review of the intellectual content and approval of the final version to be published.

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