RESEARCH

THE PREVALENCE AND FACTORS ASSOCIATED WITH EXCLUSIVE BREASTFEEDING IN BABIES YOUNGER THAN SIX MONTHS IN THE CITY OF ROLÂNDIA– PR*

PREVALÊNCIA E FATORES ASSOCIADOS AO ALEITAMENTO MATERNO EXCLUSIVO EM MENORES DE SEIS MESES NO MUNICÍPIO DE ROLÂNDIA – PR

PREVALENCIA Y FACTORES ASOCIADOS A LA LACTANCIA MATERNA EXCLUSIVA EN NIÑOS MENORES DE SEIS MESES EN EL MUNICIPIO DE ROLÂNDIA – PR

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ABSTRACT

To estimate the prevalence and factors associated with exclusive breastfeeding (EB) in babies younger than six months, in the municipality of Rolândia – PR. A cross-sectional, quantitative study was conducted during the national vaccination campaign in September, 2009. A questionnaire of the Breastfeeding and Municipality project (AMAMUNIC), developed by the São Paulo Health Institute, was administered to the mothers or caregivers. The population consisted of all children younger than one year of age, residents in the municipality who were vaccinated in the second stage of the campaign. The data were entered into an online application and the information was exported to an Excel spread sheet. For the association between the variables, the chi-square and Fisher's exact tests were used and the EB prevalence was determined, considering the confidence interval of 95%. The study was approved by the Ethics Committee in Research of Londrina State University, protocol number 111/09 of 07/18/2008 and the São Paulo Health Institute, protocol number 001/08, of 05/06/2008. Exclusive breastfeeding was verified in 36.8% of the children younger than six months. The factors associated with this practice were: the avoidance of using pacifiers (p=0.003); the avoidance of introducing a bottle (p<0.001); and, under four months of age, in addition to the previous factors, the mother's education level above the medium level (p=0.030). The prevalence of EB was shown to be superior when compared to results obtained in the city, with a better support structure and incentive for breastfeeding.

Keywords: Breast Feeding; Nutrition Surveys; Cross-Sectional Studies.

RESUMO

Estimar a prevalência e identificar fatores associados ao aleitamento materno exclusivo (AME) em menores de seis meses no município de Rolândia-PR. Estudo quantitativo do tipo transversal realizado durante a campanha nacional de vacinação em setembro de 2009. Utilizou-se questionário do projeto Amamentação e Municípios (AMAMUNIC), desenvolvido pelo Instituto de Saúde de São Paulo, aplicado às mães ou responsáveis. A população constituiu-se de todas as crianças menores de um ano residentes no município, vacinadas na segunda etapa da campanha. Os dados foram digitados em aplicativo on-line, sendo exportados para uma planilha do Excel. Para associação entre as variáveis utilizaram-se os testes do qui-quadrado e exato de Fisher e determinou-se a prevalência do AME, considerando-se intervalo de confiança de 95%. O estudo foi aprovado pelo Comitê de Ética em Pesquisa da Universidade Estadual de Londrina, parecer nº 111/09 de 18/07/2008, e do Instituto de Saúde de São Paulo, protocolo 001/08 de 06/05/2008. Verificou-se AME em 36,8% dos menores de seis meses. Os fatores associados a essa prática foram o não uso de chupeta (p=0,003) e a não introdução de mamadeira (p<0,001) e, para menores de quatro meses, além dos fatores anteriores, a escolaridade materna acima do nível médio (p=0,030). A prevalência de AME apresentou-se superior a resultados obtidos em municípios com melhor estrutura de apoio e incentivo ao aleitamento.

Palavras-chave: *Aleitamento Materno; Inquéritos Nutricionais; Estudos Transversais.*

RESUMEN

Estimar la prevalencia e identificar factores asociados con la lactancia materna exclusiva (AME) en menores de seis meses en el municipio de Rolândia – PR. Estudio cuantitativo de tipo transversal realizado durante la campaña nacional de vacunación en septiembre de 2009. Se utilizó un cuestionario del proyecto Amamantamiento y Municipios (AMAMUNIC), desarrollado por el Instituto de Salud de San Pablo, aplicado a las madres o responsables. La población consistía de todos los niños menores de un año residentes en el municipio, vacunados en la segunda etapa de la campaña. Los datos fueron digitados en aplicativo on-line siendo exportados para una hoja de cálculo de Excel. Para asociación entre las

variables se utilizaron los tests chi-cuadrado y exacto de Fisher y se determinó el predominio del AME, considerando el intervalo de confianza de 95%. El estudio fue aprobado por el Comité de Ética en investigación de la Universidad Estatal de Londrina, parecer nº 111/09 de 18/07/2008 y del Instituto de Salud de San Pablo, protocolo 001/08 de 06/05/2008. Comprobó AME en 36/8% de los menores de seis meses. Los factores asociados a esta práctica fueron el no utilizar el chupete (p=0,003) y el no introducir el biberón (p=0,001) y, para menores de cuatro meses, además de los factores anteriores, la escolaridad materna por encima del nivel medio (p=0,030). La prevalencia del AME se mostró superior a los resultados obtenidos en municipios con mejor estructura de apoyo e incentivo a la lactancia materna.

***Palabras clave**: Lactancia Materna; Encuestas Nutricionales; Estudios Transversales.*

INTRODUCTION

One of the major foci of the comprehensive health care of children is encouraging breastfeeding (BF), because of its numerous benefits. Among these, the low risk of diarrhea, respiratory diseases and death in the first year of life stand out. [1-3] Long-term benefits are also attributed to human milk, such as prevention of obesity, arterial hypertension, cardiovascular diseases and type 2 diabetes, among others. [4,5] Just as children are benefited by breastfeeding, the women equally benefit, because they may have better postpartum weight loss, less postpartum uterine bleeding, and lower risk of breast cancer. [1]

Given the advantages of breastfeeding, the World Health Organization (WHO) recommends that mothers exclusively breastfeed their children until six months of age and that, thereafter, they supplement with other foods rich in iron, vitamins and other nutrients, preferably maintaining breast milk for up to 24 months or more.[6]

There has been overall growth in the prevalence of BF between 1995 and 2008, but it is observed that in a few regions of the world more than half of children under six months receive exclusive breastfeeding (EBF). Brazil is among the countries whose rates range from 20 to 49% EBF in this age group.

Prevalence studies have been conducted in Brazil since the 1970s, and have intensified in recent years.[7,8] Research on prevalence of breastfeeding conducted in state capitals and the Federal District, in 1999 and 2008, revealed an increased prevalence of EBF in children under four months, from 35.5% in 1999 to 51.2% in 2008.[9]

In the same way that prevalence of BF and EBF were investigated, research seeks to elucidate factors that may be associated with maintenance of BF or with weaning. What is encountered most frequently with this has been the use of a pacifier, bottle, maternal education, primiparity, prematurity, type of delivery, and low birth weight.[10,11]

The monitoring of infant feeding in the first year of life has been reproduced in several cities, including the use of the same national methodology.[12,13] The municipality of Rolândia-PR, by 2009, had no public policies to incentivize BF, which aroused the interest of public managers of that city to support this research. Therefore, this study had as its objective to estimate the prevalence and to identify factors associated with exclusive breastfeeding in infants less than six months of age, in the city of Rolândia-PR.

METHODS

This was a cross-sectional, quantitative study conducted during the second step of the national vaccination campaign against poliomyelitis, that occurred in September 2009, in the municipality of Rolândia, located in the northern area of the state of Paraná, 348 km from the capital of Curitiba. In 2009, the population of the city was estimated at 56,352 inhabitants.[14]

The network of public health care in the city had seven basic health units (BHU), a specialty center, and a general hospital of medium complexity that did not have certification as a Baby Friendly Hospital (BFH).

The study used the same methodology of the *Breastfeeding and Municipalities* (AMAMUNIC) project, developed by the Institute of Health of São Paulo in 1998, with the objective of monitoring infant feeding practices in children under one year of age, using the national vaccination campaigns against polio. Furthermore, the AMAMUNIC project aims to raise the prevalence of breastfeeding in the municipalities and, therefore, to discuss strategies for the implementation of local policies to promote breastfeeding.[12]

The population consisted of all children less than one year of age, living in Rolândia. As determined by the AMAMUNIC project, the population of children under one year of age was estimated based on the data of the vaccination campaign in the year prior to the study.[12]

The instrument used for data collection, and provided by AMAMUNIC, was a questionnaire administered to mothers or caretakers of children at the time of vaccination. It is composed of a food recall consisting of questions about the child's nutrition over the past 24 hours (breast milk consumption, other types of milk and foods, including water, teas and other liquids), as well as questions about the health services (birth in the BFH, public or private monitoring of care) and variables related to the mother (age, education, work, and parity) and the children (sex, birth weight, breastfeeding in the first hour of life, use of bottles and pacifiers). The instrument was administered by the research team, composed of 65 community health agents (CHA) of Rolândia, previously trained and supervised by five researchers during data collection.

The definitions of breastfeeding proposed by the World Health Organization (WHO) were adopted:[15]

- **exclusive breastfeeding (EBF):** a child receives from his mother or wet nurse only breast milk or expressed milk; he receives no other liquids or solids, with the exception of vitamins, mineral supplements or medicines;
- **predominant breastfeeding (PBF):** the predominant source of infant nutrition is breast milk. The child may also receive water and water-based beverages (sweetened water and flavored water, infusions, tea, etc.); fruit juice; oral solution of rehydrating salts; vitamins, minerals and medicines in drops or syrups and other liquids, except non-breast milk;
- **breastfeeding (BF):** the child receives breast milk (directly from the breast or expressed), with any type of food supplement, liquid, semisolid or solid, as well as other non-maternal milk.

The dependent variable was exclusive breastfeeding and the independent variables were the characteristics of the service (birth in a Baby Friendly Hospital and monitoring service), those of the children (breastfed in the first hour of life, birth weight, bottle feeding and use of pacifiers) and of the mothers (type of birth, age, education, work, parity).

The collected data were entered into a *web* application called AMAMUNIC, made available by the project of the same name, and funded by the *United Nations Children's Fund* (UNICEF).[12] This application is provided by the staff of the Institute of Health of São Paulo to the municipalities that receive training to perform the research, allowing them to obtain standardized reports with indicators of infant feeding practices and to export the database to an Excel spreadsheet for analysis.

The association between the independent variables and the dependent variable were evaluated with the chi-square or Fisher's exact test, as indicated. Data were measured to quantify the association by the prevalence ratio (PR) and a confidence interval of 95%. We adopted a significance level of 5% for the statistical tests.

The study was authorized by the Municipal Secretary of Health of Rolândia, and approved by the Ethics in Research Involving Humans Committee of the *Universidade Estadual de Londrina* (State University of Londrina) under number 111/09 on 18/07/2008, and by the *Instituto de Saúde de São Paulo* (Health Institute of São Paulo), protocol 001/08 on 06/05/2008.

Results

A total of 734 children under one year of age were vaccinated. Of the total number vaccinated, there was a loss of 127 caregivers and 12 refusals. Thus, the study population consisted of 285 children under six months of age. The "do not know" or "do not remember" responses were excluded. As a result, the total number of children varies within the presentation of data.

Regarding the characteristics of the study population, 143 (50.2%) were male, 244 (85.6%) were born in Rolândia, 170 (59.6%) were delivered by cesarean section, 25 (8.8%) had low birth weight, and 165 (57.9%) were breastfed within the first hour of life. Regarding the profile of mothers of the children, 115 (40.4%) were primiparous, 213 (74.7%) were 20 years or older, 93 (32.6%) had completed elementary school, and 224 (78.6%) were not employed outside the home or were on maternity leave.

The prevalence of EBF was 36.8% for children less than six months of age. Figure 1 shows the monthly prevalences, up to six months of life, in the population studied.

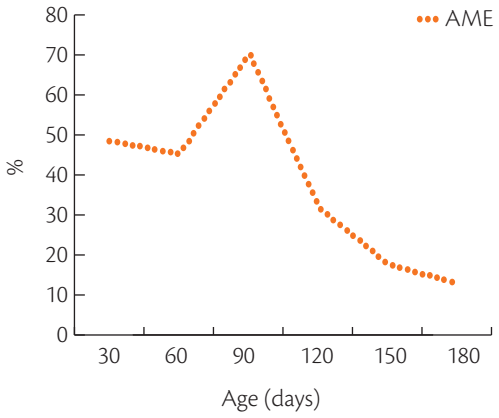

Figure 1 - Prevalence of EBF in children under six months, according to their age, Rolândia-PR, Brazil – 2009.

It can be observed, in Table 1, that among children younger than six months who did not use a bottle, the prevalence of EBF was 22.32 times higher than that of children who had this habit (p <0.001). It was also found that those who were not using a pacifier presented an 89% greater prevalence of EBF when compared with those who did use a pacifier (p <0.001). No association was observed between EBF in children less than six months and the other variables in the study.

In order to improve the understanding about factors that have contributed to the maintenance of the EBF or that led to weaning, an analysis of children under four months that were part of this sample was conducted. Infants younger than four months had a prevalence rate of 47.9% for EBF. Regarding factors associated with EBF in children younger than four months (Table 2), it was observed that the fact that the newborn breastfed in the first hour of life was associated with a higher prevalence of EBF among children in this age group (1.43 times).

Children younger than four months who did not use a bottle presented a prevalence rate of exclusive breastfeeding 13.56 times higher than children who used a bottle (p <0.001).

Table 1 - Factors associated with EBF in children under six months, in Rolândia-PR, Brazil – 2009

Variables	EBF						
	n	%	Total	%	PR	IC 95%	*p*
Characteristics of the Service							
Born in BFH							
Yes	5	35,7	14	5,0	0,94	0,46-1,94	0,871*
No	100	37,9	264	95,0	1,00	Reference	
Monitoring of care							
Public	88	37,9	232	84,4	1,01	0,66-1,54	0,960*
Private	16	37,2	43	15,6	1,00	Reference	
Characteristics of the Infant							
Breastfed in First Hour of Life							
Yes	67	41,9	160	61,8	1,34	0,95-1,89	0,089*
No	31	31,3	99	38,2	1,00	Reference	
Birthweight							
Not low birthweigh (>2.500g)	96	38,6	249	91,2	1,32	0,70-2,51	0,365*
Low birthweight (<2.500g)	7	29,2	24	8,8	1,00	Reference	
Use of Bottle							
No	101	69,2	146	52,7	**22,32**	8,58-59,82	**<0,001***
Yes	4	3,1	131	47,3	1,00	Reference	
Use of Pacifier							
No	74	47,7	155	55,8	1,89	1,34-2,68	**<0,001***
Yes	31	25,2	123	44,2	1,00	Reference	
Maternal Characteristics							
Type of Birth							
Normal	37	35,6	104	38,2	0,91	0,66-1,25	0,540*
Cesearean	66	39,6	168	61,8	1,00	Reference	
Maternal Age							
≥ 20 years	81	38,8	209	83,9	1,29	0,78-2,14	0,294*
< 20 years	12	30,0	40	16,1	1,00	Reference	
Education							
Higher	11	50,0	22	8,6	1,55	0,89-2,69	0,385*
Middle	32	40,5	79	31,0	1,26	0,80-2,69	
Elementary	31	33,7	92	36,1	1,05	0,66-1,66	
None/Incomplete elementary	20	32,3	62	24,3	1,00	Reference	
Maternal Work							
Not working outside the home	61	38,1	160	64,0	1,69	0,85-3,34	0,132*
On maternity leave	26	44,1	59	23,6	1,95	0,96-3,98	
Working outside the home	7	22,6	31	12,4	1,00	Reference	
Parity							
Multiparous	54	39,4	137	55,0	1,13	0,49-1,38	**0,450***
Primiparous	39	34,8	112	45,0	1,00	Reference	

* * P-value from Chi-Square
EBF = Exclusive Breastfeeding, BFH = Baby Friendly Hospital, 95% CI = Confidence Interval 95%, PR = Prevalence Ratio.

Table 2 - Factors associated with EBF in children younger than four months, in Rolândia-PR, Brazil – 2009

Variables	EBF						
	N	%	Total	%	PR	IC 95%	*p*
Characteristics of the Service							
Born in BFH							
Yes	4	40,0	10	5,2	0,83	0,38-1,79	0,750 †
No	88	48,4	182	94,8	1,00	Reference	
Monitoring of care							
Public	79	48,5	163	86,2	1,04	0,67-1,62	0,870 *
Private	12	46,2	26	13,8	1,00	Reference	
Characteristics of the Infant							
Breastfed in First Hour of Life							
Yes	58	53,7	108	60,0	1,43	1,01-2,02	**0,033** *
No	27	37,5	72	40,0	1,00	Reference	
Birthweight							
Not low birthweight (>2.500g)	6	40,0	15	8,0	0,82	0,44-1,56	0,525 *
Low birthweight (<2.500g)	84	48,6	173	92,0	1,00	Reference	
Use of Bottle							
No	88	74,6	118	61,8	**13,56**	5,22-35,49	**<0,001** *
Yes	4	5,5	73	38,2	1,00	Reference	
Use of Pacifier							
No	63	57,3	110	57,3	1,62	1,16-2,26	**0,003** *
Yes	29	35,4	82	42,7	1,00	Reference	
Maternal Characteristics							
Type of Birth							
Normal	34	46,6	73	39,0	0,95	0,70-1,29	0,734 *
Cesarean	56	49,1	114	61,0	1,00	Reference	
Maternal Age							
≥20 years	72	49,7	145	83,8	1,39	0,82-2,35	0,176 *
< 20 years	10	35,7	28	16,2	1,00	Reference	
Education							
Higher	9	69,2	13	7,3	1,85	1,10-3,09	**0,030** *
Middle	30	58,8	51	28,5	1,57	1,02-2,42	
Elementary	26	38,8	67	37,4	1,04	0,64-1,66	
None/Incomplete elementary	18	37,5	48	26,8	1,00	Reference	
Maternal Work							
Not working outside the home	52	47,3	110	63,2	1,23	0,60-2,51	0,714 *
On maternity leave	26	51,0	51	29,3	1,33	0,63-2,77	
Working outside the home	5	38,5	13	7,5	1,00	Reference	
Parity							
Multiparous	47	52,8	89,0	51,4	1,27	0,92-1,75	0,142 *
Primiparous	35	41,7	84,0	48,6	1,00	Reference	

† P-value From Fisher's Exact Test
* P-value From Chi-Square
EBF = Exclusive Breastfeeding, BFH = Baby Friendly Hospital, 95% CI = Confidence Interval 95%, PR = Prevalence Ratio

An association was detected between no use of a pacifier and EBF in infants under four months, although this association was less pronounced than that observed with not using a bottle (p = 0.003). Children younger than four months who did not use pacifiers showed a prevalence of exclusive breastfeeding 62% higher when compared to children who did use them.

The level of maternal education was also associated with EBF in infants under four months. The analysis of the categories of this variable showed that the lower the educational level, the lower the prevalence of EBF in this age range. The other variables studied were not associated with exclusive breastfeeding in infants under four months of age.

Discussion

The nutritional survey with the aim of assessing feeding in infants under one year of age, administered on the national immunization days, was found to be an excellent research method, because it is easy to plan and low cost, as well as obtaining good adherence from the population.[16] This can be evidenced in this study by the low refusal rate (<2%) encountered, and the fact that over 80% of the vaccinated population was included. One limitation of the study is that it did not include the population living in rural areas.

The prevalence rate of EBF in infants under four months (47.9%) and less than six months (36.8%) of age, in Rolândia, although lower than recommended, were of higher values than those in Londrina, in 2008, the nearby city, whose actions in favor of breastfeeding have a tradition of several years.[13,17]

Comparing the prevalence of EBF in infants under four months, in Rolândia, with that found in larger cities, we obtained approximate values, as in Cuiabá-MT in 2004 (34.5%), [18] where, as in Rolândia, there was no effective support network for BF at the time of the research. This scenario changed when compared with the prevalence of the capital, Curitiba, in 2008 (46.1%), the southern region (43.9%), and with Brazil (41%), [9] which shows the heterogeneity of the prevalence of breastfeeding in the country.

The results of this study allowed us to infer that the fact that a city has a network of support and promotion of breastfeeding does not guarantee higher prevalence levels. This reinforces the multidimensionality of BF, because many factors are involved in the practice of breastfeeding; success cannot be solely attributed to the presence or absence of strategies for support and promotion of health services.

However, evidence about strategies that contributed to the improvement of indicators of BF are described in the literature. Among these, we encountered the Baby Friendly Hospital Initiative (BFHI), the installation of milk banks, and lactation clinics.

The BFHI, present in several Brazilian municipalities, is an initiative that has global recognition of its impact on the rates of EBF and BF. A review study showed that the results of this initiative in increasing rates of EBF demonstrated that the effort was valid, however, there were many difficulties, both in its implementation and for its maintenance.[19] The authors emphasized that the BFHI-accredited hospitals served as the reference for the community and also for other hospitals in the area. The effectiveness of the implementation of the BFHI on the increase of BF rates was also observed in a cohort study in Porto Alegre.[20]

Currently there has been focused attention on the development of strategies that go beyond the hospital environment, highlighting the continued monitoring in the postpartum, of the baby and family after discharge. For this, it is necessary to organize primary health care services to support BF.[19] A randomized study verified the need to associate the hospital systems credentialed with the BFHI and home visits.[21]

Based on this understanding, the Ministry of Health began, in 2009, the implementation of the Brazil Breastfeeding Network, whose objective is to contribute to the increase in the prevalence of BF in Brazil through the actions of promotion, protection and support agreed on the basis of the reality of the BHU.[22] The city of Rolândia has already benefited from this strategy, conducting workshops in July of 2010, with the purpose of awakening interest and contributing to the training of workers and health professionals in the primary care network in regards to the incentive for breastfeeding.

It is believed that, in Rolândia, the Family Health team presents itself as an ally to the cause of BF and could be one of the main reasons for the prevalence value that is found in the city, since it has 66% of the population served by the Family Health Program program (FHP), and there are no other strategies implemented in the specific municipality for the promotion and support of BF. The FHP teams, embedded in the reality of people who attend, create bonds with pregnant women, and can follow the guidelines related to breastfeeding during prenatal visits, educational activities in groups, home visits and consultations of review of early delivery and childcare, A study by Cruz *et al.*, [23] in cities in Rio Grande do Sul, revealed that primary care services of the FHP were more effective in providing information about breastfeeding when compared with services that provided treatment under the traditional model of care. The FHP is an example of the system of primary care with rapid growth, that is cost-effective and comprehensive.[24]

The use of artificial nipples was associated with a reduced prevalence of EBF, both in relation to the use of the bottle and the pacifier. In the population studied, a considerable percentage of prevalence of pacifier use both in children younger than four months (42.7%) and in those less than six months (44.2%) was verified, findings similar to those of other authors.

The prevalence of EBF was 62% higher for children younger than four months and 89% higher for those younger than six months, when compared to those who had the habit of using a pacifier. A cross-sectional study emphasized the use of pacifiers as a main risk factor for weaning during the first year of life.[18] However, a review study about pacifier use and breastfeeding observed that the correlation between reduced duration of breastfeeding and pacifier use in observational studies probably reflected other factors such as breastfeeding difficulties or intent to wean.[25]

The non-use of bottle feeding was not related to BFE. A considerable percentage of children under four (38.2%) and six months (47.3%) were using bottle feeding. Likewise, the introduction of the bottle may be related to the same factors that led to the use of pacifiers. One of these, observed with frequency in practice, is the introduction of the bottle, because of the future need of the mother to return to work.

To regulate the commercialization of infant formula, nipples, pacifiers and bottles, the Ministry of Health created the Brazilian Standard for Marketing of Baby Food (BNCIF) in 1999, aimed to inhibit excessive marketing, that stimulated the sale of these products without restriction.[26]

The guidelines provided by health professionals to mothers and society in general, as well as campaigns to encourage breastfeeding, should include the disadvantages to breastfeeding of pacifier and bottle use. The use of artificial nipples (bottle, pacifier or nipple shields) can be related to lower milk production, caused by reducing the number of feedings and the consequent reduction of the stimulus of the breast, and to less breast milk production.[27]

It is believed that, over the years, we are reaping the fruits of standardization coupled with increasingly broad and comprehensive dissemination of the superiority of BF and damage caused by nipples, bottles and pacifiers.

Issues of access to information and advice about BF are also related to maternal education. In this study, mothers with higher levels of education were associated with breastfeeding in the first hour of life and EBF in children less than four months. France *et al.*, [18] found similar results, that children of women with primary and secondary education had a higher risk of not exclusively breastfeeding at four and six months, compared with children of mothers with more education. This may indicate that women with more education assimilate, understand and appreciate more information and guidance on BF, contributing to the success in breastfeeding their children. Thus, this issue needs to be taken into account in campaigns to stimulate BF.

With regard to breastfeeding in the first hour of life, children younger than four months that breastfed in the first hour of life had, in this study, more than a 43% higher prevalence of EBF than children who did not. A study by Boccolini *et al.*,[28] identified primary factors leading to the postponement of the first breastfeeding: cesarean section, hospitalization of the newborn (NB) in nursery, older mothers, and NB with immediate complications. In the present study we observed a high rate of cesarean sections (63.7%), which may have contributed to the low incidence of breastfeeding in the first hour of life (46.9%), making it difficult to initiate breastfeeding with good success. In research conducted in Ghana with 10,947 children up to three days of life, neonatal mortality was reduced 22% when breastfeeding was initiated within the first hour of life.[29]

These results suggest the need to review the conduct of the hospital care of the mother in the delivery room, so that breastfeeding in the first hour of life is promoted, as well as presenting an influence on initiation and continuity of breastfeeding, the mother/child relationship, and reducing the risk of bleeding, as well as conferring protection against neonatal deaths.[30]

Strategies such as the certification of a hospital as a "friend of the child" collaborate with this practice, as well as one of the "Ten Steps to Successful Breastfeeding", that of helping mothers to initiate breastfeeding within one hour of birth of the child.[30] Despite the success of the BFHI, Lamounier *et al.*[19] warn that it takes broad support and determination of the direction of the hospital, and the commitment of professionals to the steps recommended to be executed.

Despite the lack of a Baby Friendly Hospital or lactation clinics, the city of Rolândia presented a higher prevalence than in surrounding municipalities with these characteristics. The FHP and the professionals that work there may be playing an important role in the elevation of the breastfeeding rates.

EBF prevalence in children under six months, lower than in the capital of Curitiba, may suggest a lack of uniformity in the conduct of managers regarding the implementation of public policies for the promotion of BF, which is directly reflected in the unprepared health professionals. The implementation of the Brasil Breastfeeding Network should contribute to further improvement of the rates of breastfeeding in the whole state of Paraná.

It is expected that this study can serve as a subsidy to many other cities, not only in the state of Paraná, but also from other states, in order to take advantage of the structure of the national vaccination campaigns to conduct research that give visibility to real health needs of these municipalities. It was shown here that it is possible and also necessary to strengthen partnerships between health professionals and services of the universities to join efforts and develop research that is relevant and bring benefits to the planning of public health policies to be developed in the municipalities, as in the case of BF.

Conclusion

The completion of this survey was of paramount importance to guiding the public policies in the municipality of Rolândia, directed toward the improvement of the rates of BF and EBF, as well as reinforcing the issues that were associated

with lack of breastfeeding, such as low maternal education and the use of bottles and pacifiers.

From this research, others will be conducted, mainly focusing on the role of the FHP in the primary network of the municipality of Rolândia, and its contributions to the encouragement and support of BF, as well as mechanisms to enhance the existing actions and search for others that may be triggered to make this city more and more "child-friendly".

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