Sociodemographic and obstetric factors associated with the interruption of breastfeeding within 45 days postpartum - Maternar Cohort Study

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Abstract

Objectives: to evaluate and identify the prevalence of interruption of breastfeeding (BF) in the period of up to 45 days postpartum and the associated sociodemographic and obstetric factors.

Methods: cohort of 622 puerperal women, selected between 2018 and 2019 in a reference maternity hospital in the South Brazil. Data collection was carried out in two phases, the first in the maternity hospital during hospitalization of the puerperal woman and the newborn and the second through a telephone call, which occurred 60 days after birth. Poisson regressions with robust variance were performed to identify the factors associated with interruption of BF in the first 45 days of life. The variables that presented p<0.20 in the crude analysis were included in the adjusted analysis.

Results: the interruption of BF at 45 days was identified in 14% of the sample. Higher maternal age (PR= 0.46; CI95%= 0.22-0.93), eight years or less of education (PR= 2.11; CI95%= 1.05-4.25), support from the maternal grandmother (PR= 1.91; CI95%= 1.20-3.06) and receiving complement at the maternity hospital (PR= 1.53; CI95%= 1.04-2.25) were factors related to the interruption of BF in the 45-day postpartum period.

Conclusion: maternal age ≥35 was a protective factor, and less education, the support of the maternal grandmother and receiving complement at the maternity hospital were predictors of early breastfeeding abandonment.

Key words *Breastfeeding, Weaning, Risk factors, Postpartum period*

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Introduction

The early interruption of breastfeeding (BF) remains a public health problem that affects low and middle-income countries, among which only 37% of children under six months are exclusively breastfed. In high-income countries, the prevalences found are even lower.[1] The evidence on the benefits of breastfeeding has accumulated and been largely translated into public policies in Brazil, especially in the last decade, resulting in a 60% prevalence of exclusive breastfeeding (EBF) for children under 4 months of age and for those under 6 months of age, a prevalence of 45.7%. Early interruption of BF can affect rates of continued breastfeeding, and the southern region of Brazil has the worst prevalence of BF at 12 months, of only 35%, compared to the national rates that add up to 53.1%.[2]

Children who are breastfed for longer periods have less infectious disease morbidity and mortality, lower risk of dental malocclusions and greater intelligence than those who are breastfed for shorter periods or not breastfed. Growing evidence also suggests that breastfeeding can protect against overweight and diabetes later in life. Furthermore, breastfeeding benefits mothers, preventing breast cancer, improving the interpartal interval and reducing the risk of diabetes and ovarian cancer.[1]

The World Health Organization (WHO) indicates that until the baby's sixth month of life no other food or liquid should be offered, because breast milk meets all energy, nutritional and immunological needs of the child.[3,4] The introduction of complementary feeding at an early stage or the interruption of breastfeeding or EBF deprive the child of the range of breastfeeding benefits.[5]

Sociodemographic, cultural and economic factors can interfere in the prevalence of BF. It has been found that the maintenance of breastfeeding for 12 months or more is associated with multiple factors, with emphasis on those related to some socioeconomic and demographic characteristics of the mothers, such as maternal age and education, the mother's marital status, the number of children and family income.[6] Obstetric and medical issues, attention to labor and birth or inappropriate practices in maternity hospitals are also associated with early weaning.[7] A review of the literature on the practice of weaning showed that 42.5% of the cases occur between the second and third postpartum months, which implies the need to know the barriers that make women stop breastfeeding in this period in order to offer comprehensive care considering the context in which the puerperal woman is inserted.[8]

Considering that there are still few studies that identify the rates and the factors associated with early interruption of BF in the South Brazil in referral hospitals for highly complex care, the present study aims to assess and identify the prevalence of interruption of breastfeeding within 45 days postpartum and the associated sociodemographic and obstetric factors.

Methods

The present study is part of the cohort entitled Maternar, which listed puerperal women in a maternity hospital in Porto Alegre - RS and followed them until the baby's sixth month of life.

The study population is composed of puerperal women admitted to the maternity of the *Hospital de Clínicas de Porto Alegre* – HCPA (Porto Alegre Teaching Hospital) for childbirth monitoring and immediate postpartum. This is a tertiary, public and university hospital in the south of Brazil and, according to data from 2019, it performs approximately 260 births per month. HCPA participates in the Baby-Friendly Hospital Initiative (BFHI) to support BF and its maternity and is considered a reference in assistance for highly complex services.

Postpartum women aged 19 years or older, who delivered a live newborn or a dead fetus weighing more than 500g and / or with a gestational age (GA) greater than 20 weeks were considered eligible. Postpartum women who did prenatal care outside of the state of Rio Grande do Sul were not included in the cohort, as well as those with psychological or mental impairment that did not allow communication with the researcher and with cognitive disability to answer the questionnaire. For the present study, a sample of the cohort was selected between April 2018 and August 2019. For this analysis, mothers with breastfeeding restriction (with human immunodeficiency virus [HIV]), neonatal and stillborn deaths were excluded.

Data collection was carried out in two phases by researchers trained for the function, from two pretested questionnaires in a pilot study. Postpartum women were selected by simple random sampling, through the daily list of hospitalized mothers and review of electronic medical records. Subsequently, those included in the eligibility criteria were selected for an in-person interview during hospitalization.

In the first phase, during the hospitalization of both puerperal woman and newborn in the maternity hospital, data on maternal sociodemographic, prenatal, delivery and birth characteristics were collected. The second phase of data collection took

place via telephone call, 60 days after birth. At this time, the data were collected on general aspects of mother and baby health in the puerperal period and on the practice of BF.

Maternal age was obtained from the date of birth recorded in the electronic medical record (19 - 25; 26 - 34; ≥35), the maternal skin color was collected by self-report using the criteria of The Brazilian Institute of Geography and Statistics (IBGE – Portuguese acronym) and after categorized as "white" and "non-white"; family income was obtained in minimum wages, by means of a reply card and later transformed into per capitas for the division into tertiles; education was obtained in complete years of study (≤ 8; 9 - 11; ≥ 12); family support was identified through maternal reporting, as well as occupation (paid or unpaid work), marital status and parity (primiparous or multiparous); variables referring to prenatal care (adequacy of the number of consultations, beginning of prenatal care and guidance on BF) were obtained from the pregnant woman's booklet and analyzed according to the *Caderno de Atenção Básica* number 32.[9]

The type of delivery was identified through the electronic medical record. Information on previous breastfeeding experiences, breastfeeding in the first hour of life and offer of complement in the maternity hospital were reported by the patient during the interview in the first phase of the study. Gestational age (GA) at the time of delivery was calculated according to the first ultrasound when it occurred before the 20th week of pregnancy. When performed after the 20th week, the date of the last reported menstruation was used.

The evaluated outcome was interruption of BF defined as the cessation of breastfeeding in the 45-day postpartum period, denominated as a puerperal period.

Statistical analyses were performed using the statistical package Statistical Package for the Social Sciences (SPSS) version 22.0. The quantitative variables were described as mean and standard deviation or median and interquartile range. The categorical variables were presented using absolute and relative frequencies. The relationship between sociodemographic and obstetric characteristics comparing the sample effectively analyzed and the losses from follow-up was verified using Pearson's chi-square test. Crude and Adjusted Prevalence Ratios (PR) were estimated as well as their respective 95% Confidence Intervals (CI95%), using Poisson Regression with robust variance to identify the factors associated with interruption of BF in a period of up to 45 days after childbirth. The variables that presented $p<0.20$ in the univariate analysis were inserted as covariates in the multivariate analysis. In the final adjusted model, those with $p<0.05$ remained

The ethical issues of the present study follow the Regulatory Guidelines and Norms for Research Involving Human Beings (resolution 466/12), was submitted to the institution's Research Ethics Committee (CEP – Portuguese acronym) for approval and was approved under protocol number 2018-0136. Participation in the study was voluntary and was expressed in the signing of the Free and Informed Consent form. Secrecy was guaranteed in relation to the identity, privacy and confidentiality of the data obtained.

Results

In the first phase of the study, 769 puerperal women and their newborns were included. Of these, 147 (19.2%) did not respond to the second phase of the study and were excluded from the analysis, being the final sample comprised of 622 mothers and their respective newborns (Figure 1).

Table 1 lists the sociodemographic and obstetric characteristics according to the inclusion in the study. The analysis of sociodemographic characteristics identified that the average age of the puerperal women was of 28.1 ± 6.2 years and 79.1% had 11 years of education or less. Per capita income, which represents 64.6% of the sample, was less than 603 Brazilian reais. As for obstetric history, 58.0% of the puerperal women reported being multiparous and 52.9% had previous experience in breastfeeding. Women with loss of follow-up had less education and there was a higher percentage of them who had no partner and with late prenatal initiation.

The interruption of BF in the period of up to 45 days was identified in 87 mothers, equivalent to 14% (CI95%= 11.2 – 16.7) of the sample. The prevalence of breastfeeding interruption within 45 days according to sociodemographic and obstetric characteristics are shown in Table 2.

Table 3 shows the sociodemographic and obstetric factors associated with interruption of BF within 45 days after delivery. The multivariate analysis was adjusted for the variables of age, years of education, family support network, previous breastfeeding experience, participation in a group of pregnant women during prenatal care and the offering of complementary care at the maternity hospital. Maternal age greater than or equal to 35 years reduced the prevalence of interruption of BF (PR= 0.46; CI95%= 0.22 - 0.93), education less than or equal to eight years increased weaning by 110%

(PR= 2.11; CI95%= 1.05-4.25), family support, when received from the maternal grandmother, increased weaning prevalence by 91% (PR= 1.91; CI95%= 1.20-3.06) and receiving complement at the maternity hospital was associated with a 53% increase in the prevalence of interruption of BF (PR= 1.53; CI95%= 1.04-2.25).

Discussion

The present study evaluated the sociodemographic and obstetric factors associated with interruption of BF up to 45 days postpartum. The prevalence of breastfeeding interruption found was of 14% and in the adjusted analysis, it was demonstrated that education ≤ 8 years, the support of the maternal grandmother and having received complementary feeding in the maternity were related to higher frequencies of interruption of breastfeeding up to 45 days postpartum. Maternal age ≥35 years was associated with a lower prevalence of interruption of BF. Worldwide prevalence of BF is inversely related to

Figure 1

Flowchart of selection sample - Maternal Cohort Study, Rio Grande do Sul, Brazil, 2019.

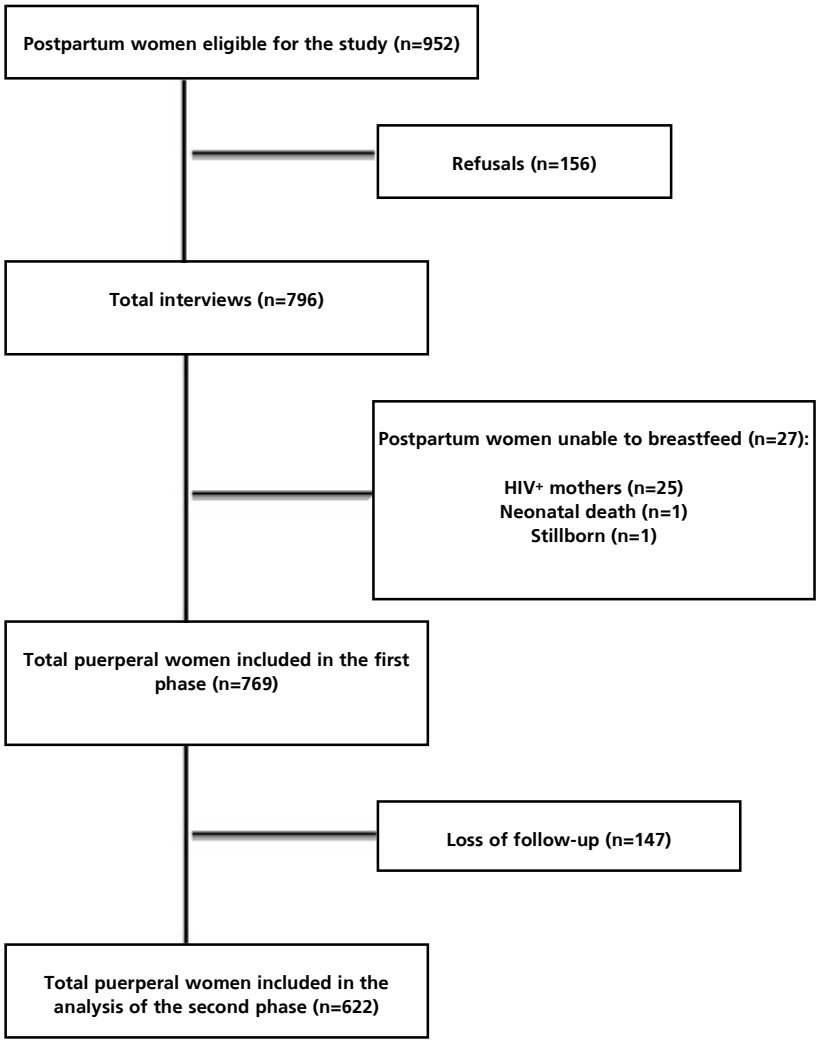

Table 1

Sociodemographic and obstetric characteristics, according to inclusion in the study, in puerperal women of a cohort in the South Brazil - Maternar Cohort Study, Rio Grande do Sul, Brazil, 2019.

Characteristics	Included (n=622)		Loss of follow-up (n=147)		*p*[#]
	n	%	n	%	
Maternal age (years)					0.455
19-25	258	41.5	61	41.5	
26-34	241	38.7	63	42.9	
≥35	123	19.8	23	15.6	
Maternal skin color					0.138
White	351	56.4	74	50.3	
Non-white	271	53.6	73	49.7	
Maternal education					0.004
≤ 8	170	27.3	56	38.1	
9 – 11	322	51.8	75	51.0	
≥ 12	130	20.9	16	10.9	
Per capita income (R$)					0.072
≤ 351.0	190	30.5	59	40.1	
352 – 602	212	34.1	46	31.3	
≥ 603	220	35.4	42	28.6	
Occupation					0.790
Paid	308	49.5	71	48.3	
Unpaid	314	50.5	76	51.7	
Marital status					0.334
With companion	520	83.6	118	80.3	
No companion	102	16.4	29	19.7	
Family support network					0.045
Companion	287	46.1	55	37.4	
Mother	106	17.0	22	15.0	
Mother-in-law	36	5.8	9	6.1	
Companion and mother	156	25.1	43	29.3	
Others	37	5.9	18	12.2	
Parity					0.077
Primiparous	261	42.0	50	34.0	
Multiparous	361	58.0	97	66.0	
Previous breastfeeding experience					0.127
Yes	329	52.9	88	59.9	
No	293	47.1	59	40.1	
Early onset of prenatal care					0.029
Yes (≤ 12 weeks of gestation)	419	67.4	85	57.8	
No (> 12 weeks of gestation)	203	32.6	62	42.2	
Number of prenatal consultations					0.127
<6	80	12.9	26	17.7	
≥6	542	87.1	121	82.3	
Receiving information on prenatal breastfeeding					0.691
Yes	247	39.7	61	41.5	
No	375	60.3	86	58.5	

continue

[#] Pearson's chi-square test; R$= Real, Brazilian currency.

Table 1 **concluded**

Sociodemographic and obstetric characteristics, according to inclusion in the study, in puerperal women of a cohort in the South Brazil - Maternar Cohort Study, Rio Grande do Sul, Brazil, 2019.

Characteristics	Included (n=622)		Loss of follow-up (n=147)		*p*[#]
	n	%	n	%	
Participation in a group of pregnant women in prenatal care					0.798
Yes	68	10.9	132	89.8	
No	554	89.1	15	10.2	
Type of childbirth					0.466
Normal	380	61.1	85	57.8	
Cesarean	242	38.9	62	42.2	
Breastfed in the first hour of life					0.601
Yes	356	52.2	48	55.2	
No	326	47.8	39	41.3	
Offer of complement at the maternity hospital					0.541
Yes	224	36.0	49	33.3	
No	398	64.0	98	66.7	
Gestational age at childbirth (weeks)					0.115
<37	85	13.7	13	8.8	
37 - 42	537	86.3	134	91.2	

[#] Pearson's chi-square test; R$= Real, Brazilian currency.

Table 2

Prevalence of breastfeeding interruption in the period of up to 45 days after delivery according to sociodemographic and obstetric characteristics of puerperal women from a cohort in the South Brazil - Maternal Cohort Study, Rio Grande do Sul, Brazil, 2019 (n = 622).

Characteristics	Interruption of BF within 45 days after childbirth (n=87)		
	N	%	CI95%
Age, average 26.9 ± 5.5			
19-25	41	15.9	11.4 – 20.4
26-34	37	15.3	10.8 – 19.9
≥35	9	7.3	2.6 – 11.9
Maternal skin color			
White	54	15.4	11.6 – 19.2
Non-white	33	12.2	8.3 – 16.1
Maternal education, average of 10.5 ± 2.0			
≤ 8	26	15.3	9.8 – 20.8
9 – 11	50	15.5	11.5 – 19.5
≥ 12	11	8.5	3.6 – 13.3

continue

BF= breastfeeding; Interruption of breastfeeding within 45 days after delivery = cessation of both exclusive and non-exclusive breastfeeding within a period of up to 45 days (yes or no).
R$= Real, Brazilian currency; IQ= interquartile range; * The category "Others" of the variable "Family support network" was excluded from these analyses for presenting only one individual.

Table 2 **concluded**

Prevalence of breastfeeding interruption in the period of up to 45 days after delivery according to sociodemographic and obstetric characteristics of puerperal women from a cohort in the South Brazil - Maternal Cohort Study, Rio Grande do Sul, Brazil, 2019 (n = 622).

Characteristics	Interruption of BF within 45 days after childbirth (n=87)		
	N	%	CI95%
Per capita income (R$), median 468.5 IQ: 281.1 - 780.8			
≤ 351.0	24	12.6	7.9 – 17.4
352 – 602	32	15.1	10.2 – 19.9
≥ 603	31	14.1	9.5 - 18.7
Occupation			
Paid	48	12.7	8.9 – 16.4
Unpaid	39	15.3	11.3 – 19.3
Marital status			
With companion	71	13.6	10.7 – 16.6
No companion	16	15.6	8.5 – 22.9
Family support network (n=86)*			
Companion	34	11.8	8.1 – 15.6
Mom	26	24.5	16.2 – 32.8
Mother-in-law	5	13.9	2.0 – 25.7
Companion and mother	21	13.5	8.1 – 18.9
Parity			
Primiparous	41	15.7	11.3 – 20.1
Multiparous	46	12.7	9.3 – 16.2
Previous breastfeeding experience			
Yes	53	10.3	7.0 – 13.6
No	34	18.1	13.7 – 22.5
Early onset of prenatal care, average 11.0 ± 4.9			
Yes (≤ 12 weeks of gestation)	58	13.8	10.5 – 17.2
No (> 12 weeks of gestation)	29	14.3	9.4 – 19.1
Number of prenatal consultations, average 9.4 ± 3.7			
<6	11	13.7	6.0 – 21.5
≥6	76	14.0	11.1 – 16.9
Receiving information on prenatal breastfeeding			
Yes	38	15.4	10.5 – 19.9
No	49	13.1	9.6 – 16.5
Participation in a group of pregnant women in prenatal care			
Yes	14	20.6	10.7 – 30.4
No	73	13.2	10.3 – 16.0
Type of childbirth			
Normal	36	13.4	9.9 – 16.9
Cesarean	51	14.9	10.4 – 19.4
Breastfed in the first hour of life			
Yes	39	13.2	9.3 – 17.1
No	48	14.7	10.9 – 18.6
Offer of complement at the maternity hospital			
Yes	42	18.7	13.6 – 23.9
No	45	11.3	8.2 – 14.4
Gestational age at childbirth, average 38.4 ± 1.7			
<37	11	12.9	5.7 – 20.2
37 - 42	76	14.1	11.2 – 17.1

BF= breastfeeding; Interruption of breastfeeding within 45 days after delivery = cessation of both exclusive and non-exclusive breastfeeding within a period of up to 45 days (yes or no).
R$= Real, Brazilian currency; IQ= interquartile range; * The category "Others" of the variable "Family support network" was excluded from these analyses for presenting only one individual.

Table 3

Crude Prevalence Ratios and Adjusted by Poisson Regression with robust variance between Breastfeeding Interruption within 45 days after delivery and the sociodemographic and obstetric characteristics of puerperal women in a cohort in the South Brazil - Maternal Cohort Study, Rio Grande do Sul, Brazil, 2019 (n = 622).

Characteristic	Interruption of BF within 45 days after delivery (n=87)	
	Crude PR (CI95%)	Adjusted PR (CI95%)
Maternal age (years)		
19-25	1.03 (0.69 – 1.56)	0.79 (0.51 – 1.23)
26-34	1	1
≥35	0.47[a] (0.23 – 0.95)	0.46[a] (0.22 – 0.93)
Maternal skin color		
White	1	
Non-white	0.79 (0.52 – 1.18)	
Maternal education		
≤ 8	1.80 (0.92 – 3.52)	2.11[a] (1.05 – 4.25)
9 – 11	1.83 (0.98 – 3.41)	1.83 (0.99 – 3.37)
≥ 12	1	1
Per capita income (R$)		
≤ 351.0	0.89 (0.54 – 1.47)	
352 – 602	1.07 (0.67 – 1.69)	
≥ 603	1	
Occupation		
Paid	1	
Unpaid	1.20 (0.81 – 1.78)	
Marital status		
With companion	0.87 (0.52 – 1.43)	
No companion	1	
Family support network (n=86)*		
Companion	1	1
Mom	2.07[a] (1.30 – 3.27)	1.91[a] (1.20 – 3.06)
Mother-in-law	1.17 (0.49 – 2.80)	1.27 (0.55 – 2.92)
Companion and mother	1.13 (0.68 – 1.88)	0.98 (0.59 – 1.63)
Parity		
Primiparous	1.23 (0.83 – 1.82)	
Multiparous	1	
Previous breastfeeding experience		
Yes	1	1
No	1.75[a] (1.17 – 2.61)	1.56[a] (1.00 – 2.44)
Early onset of prenatal care		
Yes (≤ 12 weeks of gestation)	1	
No (> 12 weeks of gestation)	1.03 (0.68 – 1.56)	
Number of prenatal consultations		
<6	0.98 (0.54 – 1.76)	
≥6	1	
Receiving information on prenatal breastfeeding		
Yes	1	
No	0.84 (0.57 – 1.25)	
Participation in a group of pregnant women in prenatal care		
Yes	1	
No	0.64 (0.38 – 1.06)	

continue

BF=breastfeeding; Interruption of breastfeeding within 45 days after delivery = cessation of both exclusive and non-exclusive breastfeeding within a period of up to 45 days (yes or no).
PR= Prevalence Ratio; R$= Real, Brazilian currency; [a]p<0.05.
* The category "Others" of the variable "Family support network" was excluded from these analyzes because it presents only one individual.

Table 3 **concluded**

Crude Prevalence Ratios and Adjusted by Poisson Regression with robust variance between Breastfeeding Interruption within 45 days after delivery and the sociodemographic and obstetric characteristics of puerperal women in a cohort in the South Brazil - Maternal Cohort Study, Rio Grande do Sul, Brazil, 2019 (n = 622).

Characteristic	Interruption of BF within 45 days after delivery (n=87)	
	Crude PR (CI95%)	Adjusted PR (CI95%)
Type of childbirth		
Normal	1	
Cesarean	1.10 (0.74 – 1.64)	
Breastfed in the first hour of life		
Yes	1	
No	1.11 (0.75 – 1.65)	
Offer of complementat the maternity hospital		
Yes	1.65[a] (1.12 – 2.44)	1.53[a] (1.04 – 2.25)
No	1	1
Gestational age at childbirth (weeks)		
<37	0.91 (0.50 – 1.64)	
37 - 42	1	

BF=breastfeeding; Interruption of breastfeeding within 45 days after delivery = cessation of both exclusive and non-exclusive breastfeeding within a period of up to 45 days (yes or no).
PR= Prevalence Ratio; R$= Real, Brazilian currency; [a]$p<0.05$.
* The category "Others" of the variable "Family support network" was excluded from these analyzes because it presents only one individual.

the nation's crude domestic product, that is, the greater the national wealth, the lower are the prevalences. In low-income countries, the percentage of children under 6 months who are not in breastfeeding is of 53%, increasing to 63% in medium-high income countries, which is still far from the WHO reference targets.[1] In Brazil, when considering the first 30 days postpartum, the prevalence of EBF cessation varies between 20.5%,[10] 25.3%[11] and 53.6%,[12] with few studies investigating this early postpartum period. A finding from the south of Brazil assessed the interruption of BF at four months and found a prevalence of 15.6%,[13] which is in line with what we observed in our study. The prevalence of breastfeeding interruption of 14% at 45 days after delivery is considerable, taking into account the extent of benefits that breastfeeding could provide and the potentially negative effects that the lack of breastfeeding has on maternal and child health.

Regarding maternal age, studies still bring very divergent results. Systematic reviews of the literature demonstrate that adolescents, as well as women under the age of 20 or over the age of 35, interrupt EBF early and report intermediate age as a protective factor for breastfeeding.[14,15] However, our results indicate a lower prevalence of interruption of breastfeeding up to 45 days after delivery among older women. One hypothesis to explain this finding is the fact that women in the middle age group (26-34 years old) more often stop breastfeeding early because of the need to return to occupational activities. We observed that, in our sample, the largest proportion of women in paid employment is in this intermediate age group. In addition, as our sample is characterized by low income, it is possible that the paid activities carried out by the puerperal women do not entitle them to maternity leave for 6 months. Furthermore, younger age may be linked to difficulties that may interfere with breastfeeding results, like insecurity and financial instability.[15]

Previous studies have associated low education with a higher risk of early weaning.[12,16] A cohort study carried out in Bahia with 1,344 mother-children pairs found out that women with up to eight years of education had a 34% higher risk of interrupting EBF in the first six months postpartum,[17] resembling our research. Low education is possibly associated with less knowledge about the benefits of breast milk, favoring the early introduction of other foods or the interruption of BF.[18] This fact can be aggravated in the initial postpartum period due to the sensitivity and the difficulties encountered at the beginning of the practice of breastfeeding. Women with low education may also become more vulnerable to breastfeeding in view of the fewer opportunities for social inclusion and access to health

services, since health services are considered facilitators for the maintenance of BF.[19]

Our findings point to a higher probability of interrupting breastfeeding in the period of up to 45 days after delivery when the maternal grandmother is the main support network in the care of the baby. It has been demonstrated before that advice on offering water and / or teas and other milks by the maternal grandmother, increases the risk of weaning in the child's first month of life by approximately 4.51 times.[20] In agreement, a study analyzed the mothers' statements and the reasons that led them to stop breastfeeding and found a strong influence from the maternal grandmothers for inciting the introduction of other milks and supplements, leading mothers to believe their milk is weak.[21] Breastfeeding should be considered a sociocultural act, determined by experiences that pass from one generation to another. This period is also considered of extreme vulnerability and fear for the mother, making her more sensitive to being influenced in her decisions, especially by family members who are her main social nucleus.[1]

The relationship between the interruption of breastfeeding up to 45 days after delivery and previous breastfeeding experience was borderline for statistical significance. Although our data is not conclusive, the lack of experience has already been identified as a predictive factor for shorter breastfeeding times[22] and may be associated with less knowledge about the practice of breastfeeding, leading to insecurity on the part of the woman regarding the real effectiveness of her milk, making her more susceptible to abandon or complement breastfeeding. Furthermore, previous experiences may be linked to a pleasurable and positive feeling of lactation, influencing the decision to breastfeed.

The receipt of complement at the maternity hospital was associated with a 53% higher prevalence of interruption of breastfeeding. Early offering any supplement can increase the chances of injury to the baby's intestine, decrease protection against pathogens, reduce breast milk supply[23] and interfere with aspects of the feeding technique.[24] It has been shown previously that the supply of complement in the hospital can reduce the duration of exclusive breastfeeding or any breastfeeding in the period from 30 to 60 days after delivery[10,25] and when this supplementation in the maternity hospital is done with a bottle, the chances of weaning may be even greater compared to using a cup.[26] The need to think more rigorously about strategies to control the use of supplements in maternity and to support breastfeeding is reinforced, bearing in mind that this can be considered a modifiable and easy to intervene risk factor.

Among the limitations that can be registered in the study, we mention the fact that it was a study carried out in only one maternity hospital in the south of Brazil that, although it is a reference for the city and the state, its results should be interpreted within their possible external validity. Our sample did not include adolescent mothers, who could be a risk group for the analyzed outcome, restricting the study population. In contrast, although a significant number of losses were recorded (19.2%), in general, the characteristics of the puerperal women included in the sample did not differ statistically significantly from those with whom we lost follow-up. Furthermore, the fact that it was carried out in a referral hospital that serves a comprehensive population with diverse characteristics, increases the generalizability of the study. Another highlight was the use of a pre-tested questionnaire in a pilot study and applied by a trained team.

This study showed a 14% prevalence of interruption of BF in the period of up to 45 days after childbirth and demonstrated that sociodemographic factors, such as less education, the support of the maternal grandmother; as well as obstetric factors, such as receiving a supplement at the maternity hospital, are predictors of early breastfeeding abandonment, and higher maternal age is associated with less interruption of BF. The results found strengthen the problem that some women are in a situation of vulnerability for breastfeeding and allow for a more effective approach through the development of specific strategies according to their needs. The importance of encouraging public policies to promote breastfeeding is emphasized with a look extended to the initial postpartum period, aiming at a longer duration of breastfeeding. Still, the findings expand the possibilities of themes that need to be further investigated, for example, the interference of receiving supplements at the maternity hospital and breastfeeding time. The hospital where the study was carried out includes a reference maternity hospital for more complex and high-risk cases and is a participant in the Baby-Friendly Hospital Initiative (BFHI), responsible for protecting and supporting BF, therefore, control strategies should be sought regarding the use of supplements for neonates during hospitalization, avoiding unnecessary supplementation, considering that it can interfere with the duration of breastfeeding.

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Authors' contribution

Santos VL participated in the choice of the theme, data acquisition and writing of the manuscript. Holand BL did the study design, analysis and interpretation of the data, and review of the manuscript. Drehmer M participated in the interpretation of the data and review of the manuscript. Bosa VL contributed as a supervisor and reviewer of the manuscript. All authors approved the final version of the article.

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