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REVIEW ARTICLE

Percentage of Exclusive Breastfeeding in a Reference Hospital in the Serra Gaucha Region

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Keywords:
Breast feeding,
Socioeconomic factors,
Risk factors.

Abstract

Objective: The objective of this study was to quantify the rate of exclusive breastfeeding (EBF) for at least six months after hospital discharge of newborns (NBs). **Methods:** This was a prospective cohort study. The sample was described using summary measures such as means and standard deviations or medians and quartiles, minimum and maximum values for quantitative variables, and absolute and relative frequencies for qualitative variables. **Results:** A total of 357 patients were analyzed, of whom 113 were excluded due to lack of available information on breastfeeding. The mean age was 30.2 years, the predominant level of education was high school (42.4%), the majority did not have health insurance (64.4%), and 63% of patients underwent a cesarean section. Using formula in previous pregnancies was associated with continuing formula in the current pregnancy (p 0.004). In the sample analyzed, 92% of mothers breastfed within the first hour of life, and introducing formula in the hospital led to the lowest EBF rate (p = 0.179). After hospital discharge, the average EBF duration was 150 days (51.9%), with the period of formula introduction being between 90 and 150 days (34.3%). **Conclusion:** The authors conclude, therefore, that breastfeeding within the first hour of life and maintaining this breastfeeding until the newborns discharge places this hospital on a different level and ensures good hospital EBF practices.

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INTRODUCTION

According to the World Health Organization (WHO), breastfeeding (BF) should begin in the delivery room, within the first hour of life, be maintained as exclusive breastfeeding (EBF) during the first six months of life, and, after this period, together with appropriate complementary feeding, should be continued for at least two years of age[1]. In 2016, the United Nations Children's Fund (UNICEF)[1] described notable advances in breastfeeding practices worldwide, including a rate of 44% of breastfeeding within the first hour of life, 39% of breastfeeding in children under six months, and 49% of continued breastfeeding up to two years of age. In Brazil, similar patterns are observed; for example, in the Northeast region, EBF in children under six months is 37%, and in the city of Recife, 38.3%[2]. Globally, continued breastfeeding is more frequent in low- and middle-income countries. In these settings, continued breastfeeding at 12 and 24 months exceeds 90% and 60%, respectively, whereas in high-income countries, fewer than 20% of children are breastfed up to 12 months[3]. Studies conducted in 2019 through ENANI (Brazilian National Survey on Child Nutrition) aimed to analyze breastfeeding indicators at the national level and found a median duration of EBF of three months and BF of 16 months. However, few women breastfeed their children for this duration, and natural weaning is still uncommon in Brazil. Studies point to several contributing factors, including sociodemographic characteristics of the mother, women's participation in the labor market, beliefs and myths about breastfeeding, lack of support from the child's father or other family members, marketing by companies producing breast milk substitutes, and hospital practices that do not favor breastfeeding[4,5,6]. Tacchini Hospital provides care to pregnant women through its maternal–child health team. It is a regional reference center and aims to become a Baby-Friendly Hospital. Breastfeeding promotion practices are widely implemented in the rooming-in unit; however, there are no available data quantifying how many of these mothers maintained exclusive breastfeeding after hospital discharge for at least six months, as recommended by WHO. There are also no data regarding the relationship between socioeconomic status and breastfeeding, vaginal delivery and breastfeeding, or cesarean delivery and breastfeeding. The objective of this study was to quantify the rate of exclusive breastfeeding within the first hour of life and for at least six months after hospital discharge in these newborns, and to analyze the socioeconomic status of these families, the percentage of vaginal delivery and breastfeeding, the percentage of cesarean delivery and breastfeeding, and possible factors associated with early weaning.

METHODS

This was a prospective and cross-sectional cohort study aimed at quantifying the rate of exclusive breastfeeding (EBF) for at least six months after hospital discharge among live newborns delivered at this referral hospital in the Serra Gaúcha region, with gestational age ≥37 weeks. Patients who met the following criteria were included: born in the hospital's Obstetric Center; gestational age ≥37 weeks; regardless of private health insurance or care through the public health system (SUS). Newborns requiring admission to the neonatal intensive care unit at birth were excluded.

The following variables were collected: maternal data (age, education level, health insurance, prenatal care, number of consultations, whether breastfeeding counseling was provided), delivery data (type of delivery, indication for cesarean section, gestational age, number of previous pregnancies, delivery outcome), history (number of children, children who received EBF, duration of EBF, formula use, duration of formula use, cow's milk use, duration of cow's milk use), hospitalization data (desire to breastfeed, breastfeeding within the first hour of life, maintenance of EBF until discharge, use of nipple shield in the hospital), and post-discharge data (EBF practice and duration, formula use and duration, type of formula, use of cow's milk). Post-discharge data were collected again at six months through telephone contact conducted by the researcher. Three telephone attempts were made on alternate days; if unsuccessful, contact was attempted via WhatsApp. After these attempts, if contact was not established, the patient was excluded from the study.

The sample size was calculated based on 30% of the total number of live births over a one-year period. It was reported that in 2023 there were 1,793 live births, averaging 149 births per month. Based on this number, it was estimated that over a four-month data collection period, there would be an average of 597 participants, corresponding to 30% of the annual sample of live births.

The sample was described using summary measures such as means and standard deviations or medians and quartiles, as well as minimum and maximum values for quantitative variables, and absolute and relative frequencies for qualitative variables. Data normality was assessed using the Shapiro–Wilk test, boxplot graphs, histograms, and quantile–quantile plots.

Comparisons between sample characteristics and the outcome group (EBF up to 6 months) were performed using the chi-square test or Fisher's exact test for qualitative variables, and Student's t-test or Mann–Whitney test for quantitative variables, depending on data distribution. Statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS), version 26.0, adopting a significance level of 5%.

RESULTS

A total of 357 patients were initially included in the database; 17 were excluded due to gestational age <37 weeks, and 113 were excluded due to lack of available information

on breastfeeding, as they did not answer telephone calls or respond to WhatsApp messages sent by the researcher. Ultimately, 227 patients were included in the analysis (Figure 1).

Figure 2 shows the prevalence of women who maintained exclusive breastfeeding according to the evaluation time points: within the first hour of life (92%), until hospital discharge (89.6%), and after discharge, considering a six-month period (49.3%). The following tables present the characteristics of the sample and the comparison according to the study's variable of interest, exclusive breastfeeding after discharge.

Table 1 presents the maternal characteristics of the sample. The mean age was 30.2 years, with a standard deviation of 6.1, ranging from 16 to 45 years. When categorized, the predominant age group was 26 to 39 years (66.4%, n=148). The predominant level of education was high school (42.4%, n=95). All mothers attended prenatal care visits, although information was unavailable for two of them, and the median number of consultations was 10, ranging from one to 21 visits. It was observed that most mothers did not have private health insurance (64.4%, n=143), while 61.7% (n=124) had access to a health plan. The predominant city of residence was Bento Gonçalves (80.2%, n=182). Regarding delivery, 63% of patients (n=143) underwent cesarean section, with the main indication related to maternal factors (64.7%, n=88), such as maternal preference, elective scheduling, previous cesarean sections, tubal ligation, or maternal clinical condition. When comparing maternal characteristics according to the group of interest (exclusive breastfeeding for six months), no evidence of significant differences was found (p-values > 0.05).

Regarding gestational age, the median was 39 weeks, ranging from 37 to 41 weeks. Most women were in their first pregnancy (42.5%, n=96). The outcome of most deliveries was rooming-in, with this information available for 192 patients.

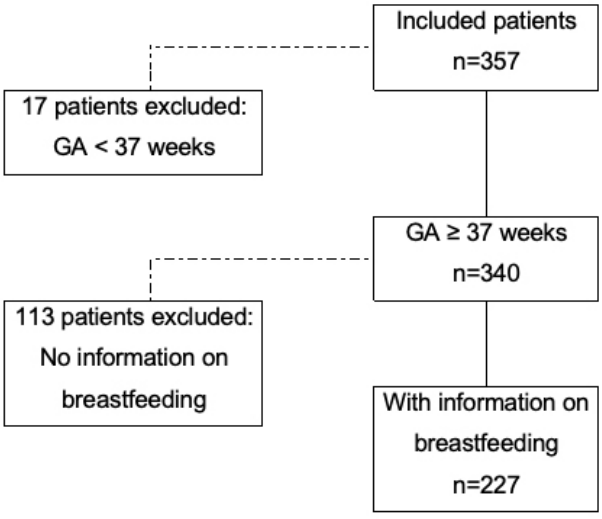


Figure 1. Patient inclusion flow

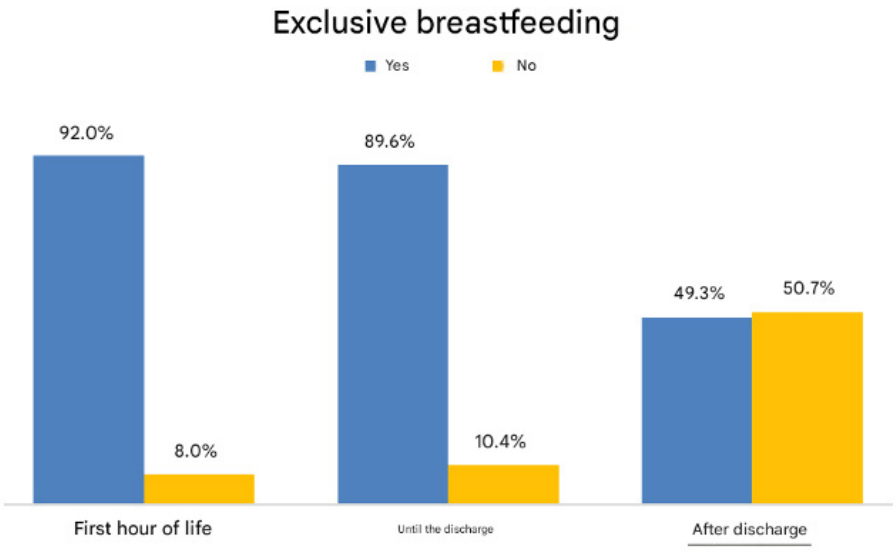


Figure 2. Prevalence of exclusive breastfeeding, by time point

Table 1. Maternal sociodemographic characteristics (n=227)

	Total (n=227)	**Exclusive breastfeeding at 6 months**		**p-value**
		Yes (n=112)	**No (n=115)**	
Variable	Total	Exclusive breastfeeding: No	Exclusive breastfeeding: Yes	p-value
Age				0.338[c]
Mean (Standard deviation)	30.2 (6.1)	29.8 (6.4)	30.5 (5.9)	
Minimum - Maximum (n)	16 - 45 (223)	17 - 45 (109)	16 - 43 (114)	
Median [Quartiles]	30 [25; 35]	30 [25; 34]	30 [26; 35]	
Age group				0.439[a]
Up to 25 years	59 (26.5)	33 (30.3)	26 (22.8)	
26 to 39 years	148 (66.4)	69 (63.3)	79 (69.3)	
40 years or older	16 (7.2)	7 (6.4)	9 (7.9)	
Education level				0.954[a]
Elementary education	68 (30.4)	34 (30.6)	34 (30.1)	
High school	95 (42.4)	46 (41.4)	49 (43.4)	
Higher education	61 (27.2)	31 (27.9)	30 (26.5)	
Received prenatal care?				-
Yes	225 (100)	111 (100)	114 (100)	
No	0 (0)	0 (0)	0 (0)	
No. of prenatal consultations				0.607[d]
Mean (Standard deviation)	10.7 (3.3)	10.8 (3.3)	10.6 (3.2)	
Minimum - Maximum (n)	1 - 21 (224)	3 - 21 (110)	1 - 21 (114)	
Median [Quartiles]	10 [9; 13]	10 [9; 13]	10 [9; 13]	
Has health insurance?				0.088[a]
Yes	79 (35.6)	32 (29.9)	47 (40.9)	
No	143 (64.4)	75 (70.1)	68 (59.1)	
Was guidance on BF provided during pregnancy?				0.755[a]
Yes	124 (61.7)	64 (62.7)	60 (60.6)	
No	77 (38.3)	38 (37.3)	39 (39.4)	
City of residence				-
Serafina Correa	2 (0.9)	0 (0)	2 (1.7)	
Bento Gonçalves	182 (80.2)	95 (84.8)	87 (75.7)	
Guaporé	2 (0.9)	0 (0)	2 (1.7)	
Farroupilha	1 (0.4)	1 (0.9)	0 (0)	
Carlos Barbosa	26 (11.5)	9 (8)	17 (14.8)	
Veranópolis	1 (0.4)	1 (0.9)	0 (0)	
Garibaldi	4 (1.8)	2 (1.8)	2 (1.7)	
Monte Belo do Sul	1 (0.4)	1 (0.9)	0 (0)	
Salvador do Sul	1 (0.4)	0 (0)	1 (0.9)	
Marata	1 (0.4)	0 (0)	1 (0.9)	
Bom Princípio	1 (0.4)	1 (0.9)	0 (0)	
Caxias do Sul	2 (0.9)	1 (0.9)	1 (0.9)	
Tupandi	2 (0.9)	0 (0)	2 (1.7)	
Santa Tereza	1 (0.4)	1 (0.9)	0 (0)	

	Total (n=227)	Exclusive breastfeeding at 6 months		p-value
		Yes (n=112)	No (n=115)	
Type of delivery				0.691[a]
Vaginal	84 (37)	40 (35.7)	44 (38.3)	
Cesarean section	143 (63)	72 (64.3)	71 (61.7)	
Indication				0.772[b]
Maternal	88 (64.7)	42 (60.9)	46 (68.7)	
Clinical	10 (7.4)	5 (7.2)	5 (7.5)	
Labor	12 (8.8)	8 (11.6)	4 (6)	
Fetal	23 (16.9)	12 (17.4)	11 (16.4)	
Others	3 (2.2)	2 (2.9)	1 (1.5)	

[a] Chi-square test: n (%)
[b] Fisher's exact test: n (%)
[c] Student's t-test: mean (standard deviation)
[d] Mann–Whitney test: median [quartiles]

Regarding the number of children, 50.9% of women (n=114) had no children, 29% (n=65) had one child, and 20.1% (n=45) had two children, with most having exclusively breastfed their previous children (58%, n=58). Regarding other types of feeding, 33% (n=31) used formula and 11.5% (n=10) used cow's milk.

When these characteristics were compared according to exclusive breastfeeding, having a history of exclusive breastfeeding in previous pregnancies was associated with exclusive breastfeeding in the current pregnancy (p-value = 0.008). In addition, the longer the breastfeeding duration in previous pregnancies, the higher the proportion of mothers breastfeeding in the current pregnancy, factors that were also associated (p-value = 0.012). Formula use in previous pregnancies was also associated, with a higher proportion of women who maintained exclusive breastfeeding and had not used formula in previous pregnancies (80.9%; p-value = 0.004). The other comparisons were not significant (p-values > 0.050). The results are presented in Table 2.

Regarding the current pregnancy, almost the entire sample reported a desire to breastfeed, with this information available for 225 participants. It was observed that 92% of mothers (n=207) breastfed within the newborn's first hour of life; among those who did not breastfeed, 55.6% were due to maternal factors (absence of colostrum/milk, mother using oxygen, HIV-positive mother, mother feeling unwell after cesarean section, tachypnea, uterine bleeding/postpartum hemorrhage, retained placenta, resistant mother), and 44.4% were due to newborn-related factors (difficulty latching, sleeping newborn, newborn using oxygen, newborn with hypothermia). It was observed that most mothers maintained exclusive breastfeeding until discharge (89.6%, n=199), and among those who introduced formula while still in the hospital, 56.5% were due to newborn-related factors (difficulty breastfeeding due to twin pregnancy, absence of colostrum/milk, suspected puerperal hemorrhage, premature infant, weight loss, difficulty latching, newborn in the ICU), and 43.5% were due to maternal factors (hypoglycemia, injured breast, HIV-positive mother, maternal request/resistant mother, mother in the ICU, maternal anxiety). A nipple shield was indicated in the hospital for 4.5% of mothers (n=10), and formula was offered by cup or syringe to 9% (n=20).

When comparing these characteristics with exclusive breastfeeding up to 6 months, an association was found with breastfeeding within the first hour of life (p-value = 0.004), with the proportion of women who maintained exclusive breastfeeding at 6 months and breastfed within the first hour of life (97.3%) being higher than those who did not breastfeed (2.7%). Exclusive breastfeeding until discharge was also associated (p-value = 0.017). It was observed that the proportion of exclusive breastfeeding up to 6 months among mothers who did not introduce other types of milk before discharge (94.5%) was higher than among those who used another type of milk (5.5%). Having been offered formula by cup or syringe was also associated (p-value = 0.019), and a higher proportion of exclusive breastfeeding up to 6 months was observed among mothers who did not receive this offer (95.5%). The results are presented in Table 3.

Finally, Table 4 presents the breastfeeding characteristics of newborns after discharge. For these characteristics, comparison testing between groups does not apply.

It was observed that the predominant breastfeeding duration among mothers was longer than 150 days (51.9%, n=111), and formula after discharge was used by 47.2% of mothers (n=103). The predominant time of formula introduction was between 90 and 150 days (34.3%, n=35), and among those who used formula, the most frequent reasons for introduction were maternal factors (46.5%). The proportion of mothers who used cow's milk in the sample was 2.3% (n=5).

Table 2. Characteristics of previous pregnancies (n=227)

	Total (n=227)	Exclusive breastfeeding at 6 months		P value
		Yes (n=112)	No (n=115)	
Variable	Total	Exclusive breastfeeding: No	Exclusive breastfeeding: Yes	p-value
Gestational age				0.423[d]
Mean (Standard deviation)	38.8 (1.1)	38.7 (1.1)	38.8 (1.2)	
Minimum - Maximum (n)	37 - 41 (227)	37 - 41 (112)	37 - 41 (115)	
Median [Quartiles]	39 [38; 40]	39 [38; 39.5]	39 [38; 40]	
No. of previous pregnancies				0.963[a]
None	96 (42.5)	48 (43.2)	48 (41.7)	
One	69 (30.5)	33 (29.7)	36 (31.3)	
Two or more	61 (27)	30 (27)	31 (27)	
Delivery outcome				>0.999[b]
NICU	2 (1)	1 (1)	1 (1)	
Rooming-in	190 (99)	95 (99)	95 (99)	
Other children?				0.893[a]
Yes	112 (49.6)	55 (49.1)	57 (50)	
No	114 (50.4)	57 (50.9)	57 (50)	
How many other children?				0.956[a]
None	114 (50.9)	57 (51.8)	57 (50)	
One	65 (29)	31 (28.2)	34 (29.8)	
Two or more	45 (20.1)	22 (20)	23 (20.2)	
Exclusive breastfeeding in a previous pregnancy?				0.008[a]
Yes	58 (58)	35 (71.4)	23 (45.1)	
No	42 (42)	14 (28.6)	28 (54.9)	
Mean breastfeeding duration in previous pregnancy				0.012[b]
<30 days	7 (7.8)	0 (0)	7 (15.6)	
30 to 90 days	6 (6.7)	2 (4.4)	4 (8.9)	
91 to 150 days	22 (24.4)	10 (22.2)	12 (26.7)	
>150 days	55 (61.1)	33 (73.3)	22 (48.9)	
Formula use in previous pregnancy?				0.004[a]
Yes	31 (33)	9 (19.1)	22 (46.8)	
No	63 (67)	38 (80.9)	25 (53.2)	
Mean duration of formula use				0.516[b]
30 to 90 days	15 (57.7)	5 (62.5)	10 (55.6)	
91 to 150 days	4 (15.4)	2 (25)	2 (11.1)	
>150 days	7 (26.9)	1 (12.5)	6 (33.3)	
Cow's milk use in previous pregnancy?				>0.999[b]
Yes	10 (11.5)	5 (10.9)	5 (12.2)	
No	77 (88.5)	41 (89.1)	36 (87.8)	
Mean duration of cow's milk use				0.286[b]
<30 days	2 (20)	2 (40)	0 (0)	
30 to 90 days	6 (60)	2 (40)	4 (80)	
91 to 150 days	1 (10)	1 (20)	0 (0)	
>150 days	1 (10)	0 (0)	1 (20)	

[a] Chi-square test: n (%)
[b] Fisher's exact test: n (%)
[d] Mann–Whitney test: median [quartiles]

Table 3. Breastfeeding characteristics (n=227)

	Total (n=227)	Exclusive breastfeeding at 6 months		P value
		Yes (n=112)	No (n=115)	
Variable	Total	Exclusive breastfeeding: No	Exclusive breastfeeding: Yes	p-value
Desire to breastfeed?				>0.999[b]
Yes	224 (99.6)	111 (100)	113 (99.1)	
No	1 (0.4)	0 (0)	1 (0.9)	
Breastfed within the first hour of life?				0.004[a]
Yes	207 (92)	108 (97.3)	99 (86.8)	
No	18 (8)	3 (2.7)	15 (13.2)	
Reason for not breastfeeding within the first hour of life				0.069[b]
Newborn	8 (44.4)	3 (100)	5 (33.3)	
Maternal	10 (55.6)	0 (0)	10 (66.7)	
Maintained exclusive breastfeeding until discharge?				0.017[a]
Yes	199 (89.6)	104 (94.5)	95 (84.8)	
No	23 (10.4)	6 (5.5)	17 (15.2)	
Reason for formula introduction in the hospital				0.179[b]
Newborn	13 (56.5)	5 (83.3)	8 (47.1)	
Maternal	10 (43.5)	1 (16.7)	9 (52.9)	
Was a nipple shield indicated in the hospital?				0.748[b]
Yes	10 (4.5)	4 (3.6)	6 (5.4)	
No	213 (95.5)	107 (96.4)	106 (94.6)	
Was formula offered by cup or syringe?				0.019[a]
Yes	20 (9)	5 (4.5)	15 (13.5)	
No	202 (91)	106 (95.5)	96 (86.5)	

Table 4. Breastfeeding characteristics after discharge (n=227)

	Total (n=227)	Exclusive breastfeeding at 6 months	
		Yes (n=112)	No (n=115)
Variable	Total	Exclusive breastfeeding: Yes	Exclusive breastfeeding: No
Duration of exclusive BF after discharge			
151–180	107 (96.4)	107 (96.4)	
>180	4 (3.6)	4 (3.6)	
Breastfeeding duration			
<30 days	26 (25.2)		26 (25.2)
30 to 90 days	45 (43.7)		45 (43.7)
91 to 150 days	32 (31.1)		32 (31.1)
Total breastfeeding duration			
<30 days	26 (12.1)	0 (0)	26 (25.2)
30 to 90 days	45 (21)	0 (0)	45 (43.7)
91 to 150 days	32 (15)	0 (0)	32 (31.1)
>150 days	111 (51.9)	111 (100)	0 (0)
Formula use after discharge?			
Yes	103 (47.2)	0 (0)	103 (97.2)
No	115 (52.8)	112 (100)	3 (2.8)

	Total (n=227)	Exclusive breastfeeding at 6 months	
		Yes (n=112)	No (n=115)
Duration of formula use after discharge (days)			
<30 days	4 (3.8)	0 (0)	2 (1.9)
30 to 90 days	42 (40)	0 (0)	42 (40.8)
91 to 150 days	32 (30.5)	0 (0)	32 (31.1)
>150 days	27 (25.7)	0 (0)	27 (26.2)
Time of formula introduction (days)			
<30 days	29 (28.4)	0 (0)	27 (27)
30 to 90 days	31 (30.4)	0 (0)	31 (31)
91 to 150 days	35 (34.3)	0 (0)	35 (35)
>150 days	7 (6.9)	0 (0)	7 (7)
Reason for formula introduction after discharge			
Sociodemographic	29 (29.3)	0 (0)	29 (29.3)
Newborn-related	24 (24.2)	0 (0)	24 (24.2)
Mother-related	46 (46.5)	0 (0)	46 (46.5)
Which formula was used?			
Formula A	46 (45.5)	0 (0)	46 (45.5)
Formula B	49 (48.5)	0 (0)	49 (48.5)
Others	6 (5.9)	0 (0)	6 (5.9)
Cow's milk use after discharge?			
Yes	5 (2.3)	0 (0)	5 (4.8)
No	210 (97.7)	111 (100)	

DISCUSSION

Scientific evidence confirms the superiority of breastfeeding over other forms of feeding young children; however, most Brazilian children are not breastfed for two years or more and do not receive exclusive breast milk during the first six months of life, as recommended by the WHO and the Brazilian Ministry of Health[7].

Breastfeeding is the wisest natural strategy for bonding, affection, protection, and nutrition for the child, and constitutes the most sensitive, economical, and effective intervention for reducing infant morbidity and mortality. It also has a major impact on promoting the comprehensive health of the mother–infant dyad and benefits society as a whole[8,9]. According to the Brazilian National Survey on Child Nutrition (ENANI)[8], published in 2021 in Brazil, 96.2% of children under two years of age had been breastfed at some point, and 62.4% were breastfed within the first hour of life. The EBF rate within the first hour of life was 92%, corroborating that breastfeeding promotion practices in this hospital generally exceed expectations when compared with the literature. According to ENANI data, the prevalence of EBF among children under 6 months was 45.8% in Brazil, with the highest prevalence in the South region (54.3%), followed by the Southeast (49.1%), Midwest (46.5%), North (40.3%), and Northeast (39.0%), with no statistically significant differences between regions[8]. In this study, it was found that six months after hospital discharge, 49.3% of these children remained exclusively breastfed, in agreement with recently published ENANI data. However, 50.7% of these children were weaned over these six months, for various reasons, most often due to return to work after the end of maternity leave. This raises an important issue: it is essential to encourage public agencies and employers to rethink, together with society, the extension of maternity leave, as already occurs in high-income countries such as Denmark, Canada, and others.

In Brazil, a middle-income country, a systematic review found an association between higher maternal education level and the practice of EBF in almost half of the reviewed studies, and also indicated that in high-income countries, breastfeeding is more common among women with higher socioeconomic status[10]. This study, however, showed that pregnant women who did not have private health insurance—which may suggest lower socioeconomic status and prenatal care through the public health system (SUS)—were those who most frequently maintained EBF for 6 months, showing no association with the literature. However, what can be concluded here is that the guidance/support provided by the team until maternity discharge prevailed and may have contributed to the favorable results, outweighing the effect of the lower socioeconomic status of the studied population.

Another relevant issue observed in this study was that having a history of EBF in previous pregnancies reinforces exclusive breastfeeding in the current pregnancy

(p-value=0.008), and the longer the breastfeeding duration in the previous pregnancy, the longer the duration in the current one (p-value=0.012). There is consensus in the literature that accumulated previous breastfeeding experience may determine the maintenance of this practice in the current pregnancy[9].

The mean age of the breastfeeding mothers was another factor analyzed and showed that ages between 26 and 39 years were those most associated with sustained breastfeeding, that is, an intermediate age range. A study by Boccolini et al.[10] also concluded that, regarding maternal age, intermediate ages seem to be protective for EBF, since both adolescent mothers and those aged 35 years or older were more likely to interrupt breastfeeding. Some very young mothers face breastfeeding difficulties due to physical, emotional, social, and even cultural factors. It is not a rule that young mothers are unable to breastfeed, but some challenges are more common in this age group, such as lack of information and guidance, limited support from healthcare services or family, insecurity and fear of "not having milk," aesthetic and social pressures, early use of formula, and lack of emotional preparedness. Among older mothers, the reasons are different, such as hormonal and physiological issues, greater physical exhaustion, anxiety and pressure to do everything perfectly, and a history of unsuccessful breastfeeding in previous pregnancies.

Several studies have shown that vaginal delivery was not a protective factor for BF for 12 months or more[10], which is somewhat surprising, since vaginal delivery contributes to timely initiation of BF, making it possible to assume that it may also support its exclusive maintenance. In this study, the predominant mode of delivery was cesarean section, which contrasts with the literature and supports the hypothesis that the type of delivery does not determine the maintenance of EBF, but rather the mother's willingness to promote breastfeeding combined with adequate support and guidance received until maternity discharge.

It was also observed that, although not statistically significant in our sample, there was a predominance (62.7%) of mothers who received guidance on BF during prenatal care and practiced EBF until the newborn reached six months of age compared with those who were not counseled (39%) and weaned before the child's sixth month of life. Therefore, we can conclude that counseling pregnant women should be part of prenatal consultations, demonstrating at each visit the importance of breastfeeding. Knowledge about the advantages of EBF only reinforces how important breastfeeding is for the child. Although this study showed that those who breastfed the most were those who had been better counseled during prenatal consultations, we cannot measure the quality of this guidance or whether it was effectively addressed throughout pregnancy. Perhaps what should be concluded is that counseling pregnant women should be a mandatory component of prenatal care, showing all the advantages of breastfeeding. It is important that they understand that, in the first days postpartum, it is normal for the puerperal woman to produce a smaller amount of milk, and that this is due to a combination of hormonal and physiological factors. This low amount, however, does not indicate that the milk "is weak" or "has not come in," but rather that the woman's body is simply adapting to the new hormonal rhythm and to the baby's demand. Production will gradually increase according to the frequency and effectiveness of feeding. These explanations should be provided to pregnant women before delivery and are essential for them to be prepared for the breastfeeding process

The weaning period identified ranged from 90 to 150 days, coinciding with the maternity leave period and suggesting a relationship between return to work and EBF[10]. It is therefore extremely important that governmental actions create better conditions so that mothers can remain on maternity leave for a longer period, as already observed in other countries, such as Canada or France, where maternity leave may reach two years, favoring the practice of EBF. In Brazil, maternity leave still lasts 120 days; however, in this study, six months was considered for the maintenance of EBF. Nevertheless, which time point would better reflect the effect of all the work developed from prenatal care until discharge of the mother and infant from the maternity hospital: 6 months (the ideal period for maintaining EBF) or 4 months (when maternity leave ends)? If 4 months had been chosen as the cutoff point, could the results possibly have been better? Furthermore, with the end of maternity leave, new opportunities for intervention arise—different from those required in the maternity setting—such as beginning milk expression and storage 14 days before the end of leave to build a frozen milk supply; guidance for the mother on manual expression, combined or not with an appropriate breast pump, to express milk in the workplace; implementation of milk expression or breastfeeding rooms in the workplace; among others.

In the hospital where the study was conducted, it was found that 92% of the analyzed sample received breast milk within the first hour of life and maintained it until hospital discharge (89.6%), clearly demonstrating that actions promoting EBF, as well as teamwork involving physicians, nurses, speech therapists, and breastfeeding consultants, and practices followed according to the Baby-Friendly Hospital guidelines, are part of this hospital's routine. These figures place this referral hospital in the Serra Gaúcha region at a differentiated level, since other studies, such as ENANI itself, did not obtain the same results within the maternity setting. The "Golden Hour" encompasses a set of evidence-based practices that contribute to physiological stabilization of the mother–newborn dyad after birth. Elements that contribute to the "Golden Hour" include timely umbilical cord clamping, skin-to-skin contact for at least 1 hour, newborn assessment on the mother's chest or abdomen, and early initiation of breastfeeding. It should be emphasized that all these practices are performed by this hospital's team and are responsible

for these highly expressive results. Some analyses are also warranted here, since only 49.3% of these mothers maintained exclusive breastfeeding six months after maternity discharge, which shows that several external factors contribute to this reduction in EBF rates, such as: lack of a support network for the mother; influence of family members regarding the quality of breast milk and the newborn's satiety; economic factors, such as early return to work, especially among self-employed mothers who depend on their work to support the family; maternal education level (the lower the level, the higher the weaning rate); and breastfeeding guidance during childcare consultations, as well as pediatrician support regarding the importance of maintaining EBF and avoiding pacifier use during this period.

When analyzing the number of prenatal consultations, we observed no statistical difference between the two groups analyzed, that is, exclusive breastfeeding versus non-exclusive breastfeeding, with both groups having a mean of 10 consultations. However, as reviewed in the literature, a low number of prenatal consultations is a risk factor for early weaning. Santo et al.[11] and Vieira et al.[12] considered that low adherence to prenatal care may represent women who are less attentive to their health; on the other hand, Demétrio et al.[13] considered that this low adherence may reflect limited access to sources of information about BF.

It was also evident that newborns who received formula during hospitalization for various reasons (difficulty breastfeeding, twin pregnancy, newborn using oxygen, lack of colostrum, maternal health-related reasons, maternal resistance, among others), or who had an indication for the use of a silicone nipple shield, known as an intermediate nipple shield (due to flat nipples or difficulty with newborn latch), or who received formula by cup, were those who least sustained exclusive breastfeeding up to six months after hospital discharge. This suggests that this type of practice may somehow interfere with the maintenance of EBF. However, the use of these practices does not determine breastfeeding duration, but should serve as an alert to the team that this puerperal woman may require a longer hospital stay to better address breastfeeding-related aspects and, thus, feel more secure in this process. It is also important to emphasize that, according to the good practices recommended for Baby-Friendly Hospitals, the newborn should remain in contact with the mother throughout the entire stay in the maternity hospital, reinforcing breastfeeding on demand.

The authors therefore conclude that breastfeeding within the first hour of life and maintaining breastfeeding until newborn discharge were important points demonstrated here and serve as encouragement for this referral hospital, as they place it at a differentiated level. The major goal, however, should be the maintenance of breastfeeding after the first six months, since external factors proved to be determinant for the decline in EBF. The study of determinants of EBF is therefore of vital importance for public health, and epidemiological studies increasingly play a fundamental role in understanding this topic in Brazil.

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