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Factors associated with maternal fatigue and perceived self-efficacy for breastfeeding in women and transgender men

Fatores associados à percepção da fadiga e da autoeficácia para a amamentação em mulheres e homens transexuais

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ABSTRACT

Purpose: To evaluate the perception of fatigue and self-efficacy for breastfeeding in women and transgender men. **Methods**: The survey was conducted virtually, and the participants completed the Severity of Fatigue and Self-Efficacy of Breastfeeding Scales – Short Version", and questions about sociocultural and demographic data, after signing the informed consent form. The results were analyzed by the Chi-square Test, with a significance of 5%. Values greater than 28 points on the scale used indicated the presence of fatigue and, for self-efficacy, efficacy was classified as low (score between fourteen and 32 points. **Results**: The sample consisted of 334 participants, aged between 18 and 43 years (mean: 31.74 ± 5.29). Most residents were from the northeast, and southeast of Brazil and declared having a higher education, with a complete postgraduate degree (n=182, 54.49%). Regarding maternal fatigue during breastfeeding, most of the sample shows fatigue (n=314; 94.01%). The results that revealed statistically significant differences were: schooling (p=0.002), help with the baby (p=0.013), if you stopped receiving help because of the contagion of Covid-19 (p=0.003), the number of prenatal consultations (p=0.025) and type of delivery (p<0.001). As for the results related to self-efficacy for breastfeeding, most obtained an average rating, with some variables having an impact on this perception, such as offering a bottle (p=0.018), self-efficacy paired with schooling and monthly income (p<0.001), and if stopped receiving help with the baby for fear of contagion and diagnosis of Covid-19 (p=0.018). **Conclusion:** High-intensity fatigue and the perception of self-efficacy average, highlight the need for intervention as soon as possible, in order to improve maternal mental health during breastfeeding and avoid early weaning.

Keywords: Breastfeeding; Fatigue; Self-efficacy; Speech, Language and Hearing Sciences

RESUMO

Objetivo: avaliar a percepção da fadiga e da autoeficácia para a amamentação em mulheres e homens transexuais. **Métodos**: a pesquisa foi realizada virtualmente, mediante preenchimento das escalas de Severidade da Fadiga e de Autoeficácia da Amamentação – Versão Curta e questões socioculturais e demográficas. Os resultados foram analisados pelo teste Qui-quadrado (significância de 5%). **Resultados**: participaram 334 pessoas, entre 18 e 43 anos (31,74 ± 5,29). A maioria era residente do Nordeste e do Sudeste brasileiros e possuía pós-graduação completa (n=182, 54,49%). A maior parte das lactantes (n=314; 94,01%) apresentou fadiga, estando esse fator relacionado à escolaridade (p=0,002), ao auxílio com o bebê (p=0,013), à falta de ajuda com o bebê em razão do receio de contágio por Covid-19 (p=0,003), ao número de consultas no pré-natal (p=0,025) e ao tipo de parto (p<0,001). A maioria obteve classificação média de autoeficácia, impactando esses resultados a oferta da mamadeira (p=0,018), a autoeficácia pareada com escolaridade e renda mensal (p<0,001) e se a lactante deixou de receber ajuda com o bebê por medo de contágio e diagnóstico de Covid-19 (p=0,018). **Conclusão:** a fadiga em alta intensidade e a percepção da autoeficácia média evidenciam a necessidade de intervenção interdisciplinar o mais breve possível às lactantes brasileiras, a fim de aprimorar a saúde mental materna durante a amamentação e, assim, evitar o desmame precoce.

Palavras-chave: Amamentação; Fadiga; Autoeficácia; Fonoaudiologia

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INTRODUCTION

Breastfeeding is essential for the mother-baby dyad, as breast milk is the ideal food for the child in terms of nutrition, immunity, and psychological development. Additionally, it strengthens the bond between mother and child and is recommended as the sole and exclusive source of nutrition until the sixth month of life. From that point on, it is advised to supplement breastfeeding with other nutritional sources[1]. In this context, breastfeeding can reduce infant morbidity and mortality and positively impact maternal and child health[2].

For breastfeeding to be successful, both maternal confidence in the practice, which is a broader belief in the ability to breastfeed, and self-efficacy, which relates to specific skills associated with breastfeeding, is essential. The use of questionnaires that assess self-efficacy is justified since low self-efficacy has been associated with failure to achieve exclusive breastfeeding[3].

Success in breastfeeding has been attributed to multimodal variables, among which knowledge, expectations, and experiences about the process, as well as strategies used to overcome intervening factors, both initially and for its maintenance, stand out. The role of trained professionals in this regard is also noteworthy[4]. Furthermore, challenges faced by transgender men who wish to breastfeed must be considered, particularly in the educational, institutional, and management realms, which, when combined with personal and social factors, perpetuate the stigmas and inequities experienced, especially in healthcare for this population[5].

Thus, instruments that assess self-efficacy are relevant for planning actions aimed at breastfeeding, justifying the present research. Breastfeeding self-efficacy is based on four sources of information: 1) personal experiences, as when someone has previously experienced breastfeeding and had a good experience, they will feel more secure in their performance. On the other hand, if the practice is harmful, they may feel hesitant and, consequently, less confident in their ability to breastfeed; 2) observation of experiences, as observing the performance of other breastfeeding individuals, asking questions, and having discussions can make them feel more confident and secure; 3) professional guidance, through adequate guidelines and information, so that the breastfeeding individual can take control of this new skill and believe in their potential; 4) emotions, as these can physically manifest as anxiety, fear, fatigue, and pain, which negatively affect the perception of self-efficacy[6].

Various factors can cause fatigue, including emotional factors, which are interconnected with fears about the quantity and sufficiency of milk for infant nutrition. This can influence aspects of breastfeeding self-efficacy. One of the scales that evaluate this is the Fatigue Severity Scale (FSS), an instrument composed of nine items that assess the severity of fatigue, as high levels of maternal-infant fatigue cause parental stress, feelings of incapacity, dissatisfaction, high irritability, and hopelessness, as well as failures in communication between the mother and the baby[7]. In cases without intervention and in chronic conditions, this can be associated with depression, stress, and signs of maternal anxiety[8].

In light of the above, the present study aimed to evaluate the perception of fatigue and self-efficacy for breastfeeding in women and transgender men.

METHODS

This is a descriptive, cross-sectional, quantitative study conducted with individuals (women and transgender men) who were breastfeeding, selected by convenience sampling.

The recruitment of participants was carried out over a two-month period using the Snowball technique[9], a non-probabilistic sampling method based on convenience. In this method, a respondent suggests and refers the research to new participants.

To initiate this technique, the researchers invited participants from their social circles who had babies and breastfed. Each participant received the survey link and was instructed to invite/distribute it to another breastfeeding individual who had given birth and breastfed or was breastfeeding during the COVID-19 pandemic from their social network until a significant sample size was reached.

To increase the number of participants, the research was disseminated through various media channels (email, Instagram, Facebook, the institutional page of the Federal University of Sergipe (UFS), WhatsApp, an article broadcasted on Rede Record, via podcast, and on the institutional page of the Regional Council of Speech, Language and Hearing Sciences of the 4th Region).

The eligibility criteria were: Brazilian women and transgender men who had given birth during the data collection period, with full-term newborns with adequate birth weight; over 18 years old, and who had been breastfeeding since maternity. The exclusion criteria were: women or transgender men with conditions that either prevented or posed a risk to the presence of the newborn (NB) at their side in the hospital, such as severe mental illness or infectious diseases; preterm births; or babies who required special care and(or) presented with any anomalies or malformations.

Data collection was carried out through an electronic form created using Google Forms. This form contained sociodemographic, cultural, obstetric, and postnatal data[10,11]. To assess self-efficacy, the Breastfeeding Self-Efficacy Scale – Short Form (BSES-SF)[12] was used, which was shortened and translated into Brazilian Portuguese[13] and validated for appropriate participant completion[14].

The BSES-SF[12] consists of fourteen items (a maximum of 70 points and a minimum of 14 points) divided into two domains: technique, with eight items (Questions: 1. I always know when my baby is getting enough milk; 3. I always feed my baby without using formula as a supplement; 4. I always notice if my baby is latching on correctly throughout the feeding; 6. I can always breastfeed even if my baby is crying; 11. I always breastfeed my baby from one breast and then switch to the other; 12. I always continue breastfeeding my baby at each feeding; 13. I always manage to adjust my needs to my baby's needs [I organize my needs for bathing, sleeping, and eating with the baby's breastfeeding schedule]; 14. I always know when my baby is finished feeding) and intrapersonal thoughts, with six items (Questions: 2. I always successfully manage breastfeeding in the same way I manage other challenges [I overcome breastfeeding and different life situations successfully]; 5. I always handle breastfeeding in a way that satisfies me; 7. I always feel like continuing to breastfeed; 8. I can always comfortably breastfeed in front of my family members; 9. I am always satisfied with my breastfeeding experience; 10. I can always deal with the fact that breastfeeding takes time [even

though it consumes my time, I want to breastfeed]). Responses were scored on a Likert scale, where 1 point was assigned to the reaction "strongly disagree", 2 points to "disagree", 3 points to "sometimes agree", 4 points to "agree", and 5 points to "strongly agree". Based on the sum of the points[14], efficacy was classified as low (a score between 14 and 32 points, corresponding to a range between 20% and 46%), medium (between 33 and 51 points, equivalent to 47% to 73%); and high (between 52 and 70 points, equivalent to 74% to 100%). Using a rule of three, the percentages of the overall classification were used to measure the specific domains of the test, allowing for classification as low, medium, or high by domain.

The Fatigue Severity Scale (FSS)[15], translated and validated for Brazilian Portuguese (PT-BR)[16], was applied. The scale offers nine affirmative statements with the possibility of responses on a 7-point Likert scale, where 1 means the subject completely disagrees, 4 means neither agrees nor disagrees, and 7 means entirely agrees. The instrument allows for a score between 9 and 63 points, with a score greater than or equal to 28 indicating the presence of fatigue, and the higher the score, the greater the fatigue[15].

For statistical analysis, the data were tabulated and processed using the open-access statistical software The Jamovi Project. Absolute and relative frequencies were obtained, as well as tests of statistical significance, which were later analyzed using the Chi-square test, adopting a statistical significance level of 5%.

The research was initiated only after receiving the necessary approval from the Human Research Ethics Committee of the Federal University of Sergipe – CEP/UFS (CAAE 42381821.9.0000.5546 and Opinion number 4.852.383). An explanatory letter was provided for review along with an online Informed Consent Form (ICF) for signature, in strict compliance with all guidelines and regulatory norms described in Resolution 466/12 of the National Health Council and its complementary provisions. This rigorous ethical approval process ensures the highest standards of confidentiality and data privacy in human research ethics.

Participants received a link to review the explanatory letter and the ICF and to fill out the research forms. Upon completing the data collection instruments, participants received, via email, a booklet on Breastfeeding During the COVID-19 pandemic, developed by the authors of this research, along with a guidance manual for working women and breastfeeding women.

RESULTS

A total of 475 participants responded, of which 334 were included and 141 were excluded. The reasons for exclusion were not having had children during the Covid-19 pandemic (n=46); 13 did not breastfeed since the maternity ward, 10 presented a risk factor for continuing breastfeeding (such as tube feeding, or medical care for congenital, neurological anomalies, or disabilities), 4 respondents resided abroad (Canada, Germany, and the USA), 7 babies were not born full-term, 3 babies had inadequate birth weight, 1 respondent was under 18 years old, and 1 did not sign the ICF.

Regarding the characterization of the sample, in terms of the Brazilian region of residence, most were from the Northeast (58.4%) and the Southeast (35%), with smaller percentages for the other areas: South (4.5%), Central-West (1.5%), and North (0.6%). It is important to note that there were no responses from breastfeeding individuals residing in Acre, Amapá, Amazonas, Pará, and Roraima. The age of respondents ranged between 18 and 43 years (mean: 31.74 ± 5.29), and regarding self-declared ethnicity, 50% of the sample consisted of Caucasians. The majority had a higher education level with a postgraduate degree (n=182, 54.49%), a family income above three minimum wages (n=181, 54.19%), underwent a cesarean delivery (n=198, corresponding to 59.28%), and most of the babies were male (n=182, 54.49%). The babies' age ranged from 12 days to 19 months (mean: 6 months and 6 days ± 4 months and 76 days), and the weight ranged from 2,295 g to 4,850 g (mean: 3,358.07 g ± 406.02).

Regarding marital status, the majority of the sample consisted of individuals living with partners, corresponding to 319 participants (95.51%), and most had planned the current pregnancy (n=304, 91.02%). The average number of children was 1.40 (± 0.59), and the average number of pregnancies was 1.62 (± 0.81). The average number of prenatal visits was 10.28 (± 2.46).

Table 1 contains the sample data related to breastfeeding. All the mothers who had more than one child (n=105; 31.44%) had breastfed their other children previously, meaning they had prior breastfeeding experience. Among the breastfeeding individuals who experienced breastfeeding complications, the main reasons were: breast problems (mastitis, breast candidiasis, nipple issues such as fissures, engorgement, presence of nodules, hyperlactation, and pain) – n=85, 62.96%; problems with the baby (short frenulum, incorrect latch, lack of strength to suck, etc.) – n=48, 35.56%; returning to work – n=1, 0.74%; and no justification – n=1, 0.74%. Of the mothers who received professional guidance on breastfeeding during prenatal care, most (n=98, 51.58%) also received guidance on the precautions needed to breastfeed during the COVID-19 pandemic. The others either did not receive any guidance (n=74, 41.58%) or did not respond (n=13, 6.84%).

In the context of COVID-19, the majority of participants did not contract the virus (n=246, 73.65%) and had help with baby care (n=306, 91.62%), with most of this help coming from family members (n=279, 91.18%). Most participants reported fear of receiving help due to the possibility of contagion by the SARS-CoV-2 virus (n=204, 61.08%).

The study included a diverse range of professions among the participants. The majority were either working at the time or on maternity leave (n=240, 70.06%). The professions mentioned were: humanities (n=97, of these, 59 had technical training), health fields (n=71, of these, 62 had higher education), teaching (various levels, n=29), exact sciences (n=9), and biological and natural sciences (n=2). Some participants did not specify their profession (n=19).

The results of self-efficacy from the BSES-SF are presented in Table 2, fatigue results (from the FSS) in Table 3, and the relationship between self-efficacy and fatigue is in Table 4.

DISCUSSION

This study aimed to assess maternal fatigue using the FSS and the perception of breastfeeding self-efficacy using the BSES-SF in breastfeeding individuals residing in Brazil, utilizing validated scales to analyze Brazilian women and transgender men. It was found that the majority of the sample lived in the Northeast and Southeast regions of Brazil, most likely due to

Table 1. Sample Data Related to Feeding

Studied Variables	Obtained Results
Breastfeeding in the first hour of life	N=222 (66.47%)
Duration of EBF	
Less than one month	N=15 (4.49%)
Between one and three months	N=23 (6.89%)
Between four and six months	N=55 (16.47%)
Still exclusively breastfeeding	N=177 (52.99%)
Still breastfeeding	N=329 (98.50%)
Bottle-feeding	
Yes	N=89 (26.65%)
Reasons for bottle-feeding:	N=05 (5.62%)
Exclusive offering of water	N=30 (33.71%)
Offering of water, juices, teas, and/or breast milk	
Offering of water, juices, teas, supplements (starches), and/or other milks, such as formula or cow's milk	N=54 (60.67%)
Timing of complementary food introduction	
Less than one month	N=02 (0.60%)
Between one and three months	N=07 (2.10%)
Between four and six months	N=55 (16.47%)
More than six months	N=125 (37.43%)
Have not introduced complementary foods by the date of the research	N=145 (43.41%)
Breastfeeding complications	
Yes	N=135 (40.42%)
Received prenatal guidance on breastfeeding	N=190 (56.89%)

Caption: N = number; % = percentage; EBF = exclusive breastfeeding
Source: Authors

Table 2. Classification of Breastfeeding Self-Efficacy and its Relationship with Study Variables, by Chi-Square Test

Analysis Variables	Analysis Variables				p-value
	High	Moderate	Low	Total	
Race					
White	61	104	2	167	0.575
Brown	58	68	2	128	
Black	14	12	1	27	
Asian	6	5	0	11	
Indigenous	0	1	0	1	
Education					
Postgraduate Higher Education	65	113	4	182	0.361
Complete High School	36	32	1	69	
Complete Higher Education	31	39	0	70	
Complete Elementary School	6	6	0	12	
Complete Technical Education	1	0	0	1	
Marital Status					
With Partner (boyfriend/girlfriend, fiancé/fiancée, married)	130	184	5	318	0.615
Single	8	6	0	14	
Separated, estranged, or divorced	1	0	0	1	
Monthly Income					
More than three minimum wages, i.e., above R$ 3,300.00	69	109	3	180	0.479
Between one and three minimum wages, i.e., between R$ 1,110.00 and R$ 3,300.00	61	68	1	130	
Less than one minimum wage, i.e., less than R$ 1,100.00	9	13	1	23	
COVID-19 Diagnosis					
Yes	37	50	1	88	0.947
No	102	140	4	246	
Help with Baby					
Yes	103	151	5	259	0.247
No	36	39	0	75	
Paid Work					
Yes	57	95	2	154	0.125
No	48	52	0	100	
On Maternity Leave	34	43	3	80	

* with statistical significance
Caption: EBF = exclusive breastfeeding

Table 2. Continued...

Analysis Variables	Analysis Variables				p-value
	High	Moderate	Low	Total	
Previous Breastfeeding Experience					
Yes	58	56	1	115	0.05
No	81	134	4	219	
Planning of Current Pregnancy					
Yes	77	107	1	185	0.272
No	62	83	4	149	
Number of Prenatal Consultations					
Seven or more	132	174	5	311	0.551
Four to six	6	14	0	20	
Type of Delivery					
Cesarean	83	114	2	199	0.696
Vaginal	56	76	3	135	
Baby's Gender					
Male	79	100	1	180	0.359
Female	60	88	4	152	
Prefer not to say	0	2	0	2	
Currently Using a Bottle					
Yes	26	62	1	89	0.018*
No	113	128	4	245	
Breastfeeding Complications					
Yes	47	86	2	135	0.112
No	92	104	3	199	
Prenatal Guidance on Breastfeeding					
Yes	76	110	4	190	0.486
No	63	80	1	144	
Breastfeeding in the First Hour of Life					
Yes	93	126	3	222	0.948
No	46	64	2	112	
EBF					
Between 1 and 3 months	8	15	0	23	0.372
Between 4 and 6 months	21	41	2	64	
More than 6 months	24	30	1	55	
Less than 1 month	5	9	1	15	
Still breastfeeding	81	95	1	177	
Method of Breastfeeding					
On demand (i.e., whenever my child wants)	131	174	5	310	0.661
By scheduled time	1	6	0	7	
Other method	7	10	0	17	
Age of Introduction to Complementary Feeding					
Have not introduced other foods yet	68	74	3	145	0.311
More than 6 months	51	72	2	125	
Between 4 and 6 months	16	39	0	55	
Between 1 and 3 months	2	5	0	7	
Less than 1 month	2	0	0	2	
Stopped Receiving Help with Baby Due to Fear of Contagion					
Yes	80	120	4	204	0.40
No	59	70	1	130	

* with statistical significance
Caption: EBF = exclusive breastfeeding

Table 3. Relationship between the Presence or Absence of Fatigue, by Chi-Square Test, with Study Variables

Variables/Fatigue	With fatigue		Without fatigue		Total	p-value
	N	%	N	%		
Race						
White	159	47.60	8	2.39	167	0.561
Brown	117	35.03	11	3.29	128	
Black	26	7.78	1	0.30	27	
Asian	11	3.29	0	0	11	
Indigenous	1	0.30	0	0	1	
Subtotal	314	94.01	20	5.99	334	
Education	176	52.69	6	1.79	182	
Postgraduate Higher Education	66	19.76	4	1.19	70	
Complete Higher Education	63	18.86	6	1.79	69	
Complete High School	8	2.39	4	1.19	12	
Complete Elementary School	1	0.29	0	0	1	
Subtotal	314	93.99	20	5.96	334	
Marital Status						
With partner (boyfriend/girlfriend, fiancé/fiancée, married)	1	0.29	0	0	1	0.784
With partner (boyfriend/girlfriend, fiancé/fiancée, married)	298	89.22	20	5.98	318	
Single	14	4.19	0	0	14	
Separated, estranged, or divorced	1	0.29	0	0	1	
Subtotal		93.99		5.98		
Monthly Income						
More than three minimum wages, i.e., above R$ 3,300.00	1	0.29	0	0	1	0.260
Between one and three minimum wages, i.e., between R$ 1,100 and R$ 3,300.00	118	35.32	12	3.59	130	
More than three minimum wages, i.e., above R$ 3,300.00	173	51.79	7	2.09	180	
Less than one minimum wage, i.e., less than R$ 1,100.00	22	6.58	1	0.29	23	
Subtotal		93.99		5.97		
Covid-19 Diagnosis						0.087
Yes	86	25.74	2	0.59	88	
No	228	68.26	18	5.38	246	
Subtotal	314	94	20	5.97	334	
Help with Baby						
Yes	248	74.25	11	3.29	259	0.013*
No	66	19.76	9	2.69	75	
Subtotal	314	94.01	20	5.98	334	
Stopped Receiving Help Due to Fear of Contagion						0.003*
Yes	198	59.28	6	1.79	204	
No	116	34.73	14	4.19	130	
Subtotal	314	94.01	20	5.98	334	
Previous Breastfeeding Experience						0.589
Yes	107	32.03	8	2.39	115	
No	207	61.97	12	3.59	219	
Subtotal	314	94	20	5.98	334	
Planning of Current Pregnancy						
Yes	173	51.79	12	3.59	185	0.669
No	141	42.21	8	2.39	149	
Subtotal	314	94	20	5.98	334	
Number of Prenatal Consultations						0.025*
Seven or more	295	89.12	16	4.8	310	
Four to six	16	4.83	4	1.2	20	
Subtotal	311	93.9	20	6	331	

* with statistical significance
Caption: N = number; % = percentage; < = less than
Source: Authors

Table 3. Continued...

Variables/Fatigue	With fatigue		Without fatigue		Total	p-value
	N	%	N	%		
Type of Delivery						<.001*
Cesarean	187	55.98	11	3.29	198	
Vaginal	127	38.02	8	2.39	135	
Cesarean	0	0	1	0.29	1	
Subtotal	314	94	20	5.97	334	
Baby's Gender						0.392
Male	172	51.49	8	2.39	180	
Female	140	41.91	12	3.59	152	
Prefer not to say	2	0.59	0	0	2	
Subtotal	314	93.99	20	5.98	334	
Currently Using a Bottle	234	70.05	11	3.29	245	
No	80	23.95	9	2.69	89	
Yes	314	94	20	5.98	334	
Subtotal						0.327
No	185	55.38	14	4.19	199	
Yes	129	38.62	6	1.79	135	
Subtotal	314	94	20	5.98	334	
Prenatal Guidance on Breastfeeding						
No	139	41.61	5	1.4	144	0.092
Yes	175	52.39	15	4.49	190	
Subtotal	314	94	20	5.89	334	
						0.525
Exclusive Breastfeeding	22	6.58	1	0.29	23	
Between 1 and 3 months	57	17.06	7	2.09	64	
Between 4 and 6 months	52	15.56	3	0.89	55	
More than 6 months	15	4.49	0	0	15	
Less than 1 month	168	50.29	9	2.69	177	
Subtotal	314	93.98	20	5.96	334	

* with statistical significance
Caption: N = number; % = percentage; < = less than
Source: Authors

Table 4. Relationship Between Maternal Fatigue and Maternal Perception of Breastfeeding Self-Efficacy in the Studied Sample, by Chi-Square Test

Fatigue Severity Scale	Breastfeeding Self-Efficacy Classification			Total	P-value
	High	Moderate	Low		
With fatigue	128	181	5	314	
Without fatigue	11	9	0	20	0.414
Total	139	190	5	334	

Source: Authors

the sampling technique used, with lower percentages from the South, Central-West, and North.

The South and Southeast regions present a greater number of unfavorable factors for breastfeeding (BF), especially the Southeast, probably due to The inclusion of women from these regions in the workforce favoring the enrollment of babies in early childhood education institutions, leading to early weaning[17].

Maternal education was an essential factor in adherence to and maintenance of exclusive breastfeeding (EBF) until the child was two years old or older. A higher educational level facilitates access to scientific knowledge and the practice of breastfeeding[18]. In the present study, the most prevalent educational level was higher education with postgraduate studies, followed by complete higher education. Considering that more than 50% of the mothers interviewed were breastfeeding, their level of education may have positively impacted breastfeeding maintenance, which should be regarded as an important aspect in conjunction with public policies related to maternal and child health programs.

However, marital status, race, and monthly income did not show significant statistical relevance regarding perceived fatigue among breastfeeding individuals, most likely due to the sample's configuration, differing from the results in the literature[19]. A study[20] associated marital status with

breastfeeding, reporting that individuals living with partners have greater support in the breastfeeding process, corroborating the findings of the present research. After all, strengthening the support network for breastfeeding individuals is vital to ensure emotional stability during this period[21]. Nevertheless, the presence of fatigue was noted, suggesting that the pandemic may have influenced the perception of maternal fatigue. Therefore, longitudinal multidisciplinary support is urgently needed for both breastfeeding individuals and infants.

Prenatal care is a medical service provided by the Brazilian Unified Health System (SUS), which women and transgender men are entitled to during pregnancy, aimed at preventing and detecting maternal and infant conditions early, reducing risks during this period, and providing better health conditions for both. A study[6] stated that the number of consultations may be associated with the need to provide information about the benefits of breastfeeding (BF) and the importance of breastfeeding safely, which can occur as early as the first hour of the baby's life.

Additionally, the amount and quality of information, combined with adequate psycho-emotional support from the family and the multidisciplinary team, are fundamental to minimizing the woman's anxiety. In the present study, most participants attended prenatal care, with a considerable number of follow-up consultations during the period. According to the literature[22], the Prenatal and Birth Humanization Program (PBHP) recommends at least six consultations to enable laboratory tests and provide guidance on BF. This substantial contact between the pregnant woman and the healthcare team can improve maternal self-efficacy, which may favor exclusive breastfeeding (EBF).

Most of the participants received guidance on breastfeeding during prenatal care. Of those who received such advice, the majority also received information on the precautions needed for breastfeeding during the pandemic. A study[23] highlighted that the healthcare professional who assists families can enhance self-efficacy for BF. In light of this, prenatal guidance and longitudinal follow-up of breastfeeding individuals seem to be of utmost importance to prevent fatigue or, when already present, offer possibilities for minimizing it. In addition, the pandemic itself contributed to an increase in emotional stress in postpartum women. Another period that deserves attention, according to the literature, is the postpartum phase, which is considered a sensitive and stressful time that can be accompanied by fatigue, mood changes, and sleep disorders[24].

Researchers[25] evaluated the factors associated with breastfeeding during the first hour of life. A total of 8,397 births were analyzed, and as a result, only 16.1% of newborns (NBs) were breastfed during the first hour of life, reinforcing the need for breastfeeding guidance during this period, which also aids in strengthening the bond between mother and baby and should be addressed starting from prenatal care. In the present study, most breastfeeding individuals breastfed during the first hour of life, showing a significant value compared to those who did not offer their milk in that first hour. This highlights both the knowledge of the participants in the study and the importance of breastfeeding during this moment, as well as the role of the professionals who supported them.

High levels of maternal fatigue cause parental stress, feelings of incapacity and dissatisfaction, high irritability, hopelessness, and impaired communication between parents and babies[7]. Moreover, postpartum fatigue is one of the most commonly cited reasons for early weaning. A study[26] found no correlation between fatigue and maternal self-efficacy for breastfeeding; however, while maternal self-efficacy for BF increased in the last weeks of the postpartum period, fatigue levels decreased. Therefore, it is assumed that by reducing fatigue levels in the early postpartum weeks, breastfeeding self-efficacy can be increased, highlighting the importance of social support for breastfeeding individuals. In the present study, aspects of fatigue were more prominent in the sample, suggesting that for this reason, they may have been related to the perception of self-efficacy (which was classified as moderate), as there was no statistically significant difference in the overall analysis between the two scales.

Given this, several factors influence maternal self-efficacy for breastfeeding (BF), making it essential to provide guidance during prenatal care on the importance of breastfeeding and to clarify the factors that may lead to early weaning, such as anxiety, stress, and fatigue[27]. To minimize such effects, the present study included the distribution of a manual aimed at breastfeeding individuals to provide information on breastfeeding during the COVID-19 pandemic and address any potential questions.

It is known that the maintenance of BF can be influenced by clinical, cultural, social, and psychological factors, as well as by the reduction of fatigue. In this regard, having previous breastfeeding experience for 24 months or more increases the likelihood of repeating prolonged BF by 7.32 times[28]. In the present study, 115 mothers reported having prior experience, and of these, only one demonstrated low self-efficacy. Additionally, most breastfeeding individuals with more than one child had breastfed their other children. Thus, those with previous breastfeeding experience showed higher scores on the BSES-SF, suggesting the importance of previous successful experiences in developing breastfeeding self-efficacy. Therefore, both primiparous and multiparous individuals should receive professional guidance with appropriate information to take control of this new skill, especially primiparous individuals, as they are at higher risk for discontinuing exclusive breastfeeding (EBF) due to insecurity, inexperience, and doubts that arise at the beginning and during breastfeeding.

A relevant factor that must be considered regarding the influence of bottle-feeding and breastfeeding self-efficacy is the difficulty breastfeeding individuals face in managing a child's crying and hunger. This often leads them to believe that the quantity and quality of breast milk are insufficient to meet the baby's needs. This habit of associating the child's crying with hunger can decrease self-efficacy and prompt the individual to stop EBF. Therefore, individuals with higher breastfeeding self-efficacy feel less need to offer a pacifier or bottle to the child, are less influenced by those who encourage this practice and tend to experience greater satisfaction with EBF, according to the literature[23]. In the present study, at the time of the research, the majority reported not using bottles; however, this aspect influenced participants' perception of moderate self-efficacy, which may explain the significant number of mothers who were breastfeeding, as the introduction of this utensil can lead to early weaning. In this context, the academic background of the sample may have contributed to the results obtained.

The literature has argued that the type of delivery influences BF. Researchers[19] analyzed 577 deliveries, where the percentage of cesarean deliveries was 27.9%. Demographic, reproductive, prenatal care, and childbirth assistance characteristics were considered. In the cited study, 93.1% of the women who attended prenatal care received guidance on BF. The prevalence

of breastfeeding in the first hour of life was 43.9%. The factors that contributed to breastfeeding during the first hour of life included being non-Black, multiparity, attending prenatal care, vaginal delivery, the baby's appropriate birth weight, and assistance with BF from the team in the delivery room. Based on these findings, the study concluded that these factors favored breastfeeding during the first hour of life.

Overall, the perception of breastfeeding self-efficacy was considered moderate. Researchers[29] demonstrated that 77.9% of mothers exhibited high breastfeeding self-efficacy, suggesting a lower likelihood of ceasing breastfeeding before the baby reached twelve months of age. In another study[30], 77% of women felt highly confident about breastfeeding even before starting, and after three and six months postpartum, 85% believed they were highly capable. The longer the breastfeeding practice, the higher the BSES-SF score, with sociodemographic characteristics and prenatal care not affecting breastfeeding confidence.

In another study[11], the majority of women (n=188, 83.9%) showed a high level of self-efficacy, while 15.6% presented a moderate level, and 0.4% exhibited low self-efficacy. Self-efficacy was associated with the type of delivery and postpartum complications. It was identified that the type of delivery, postpartum complications, religion, and assistance with baby care increased maternal confidence in breastfeeding ability.

During the pandemic, the maternal-infant population became vulnerable due to recommendations and restrictions imposed to prevent mother-to-child transmission and infant mortality in suspected and confirmed cases of COVID-19. As a result, it was expected that breastfeeding difficulties, management challenges, anxiety, and doubts would be further exacerbated due to the fear of contagion by the novel coronavirus. In the current study, fear of contagion was evident, mainly because most breastfeeding individuals stopped receiving help due to the pandemic. The presence of family and support should begin during pregnancy and extend to the time of delivery and labor itself, as they promote greater security and quality of care, even during a pandemic. It is also known that the pandemic triggered, on a global scale, the emotion of fear: the fear of contracting and(or) spreading the virus to others, as well as the fear of death, which weakened human relationships and affected individual and collective mental health. Probably for these reasons, and considering that COVID-19 did not infect the majority of the sample, fear may have emerged despite most participants receiving help with baby care, predominantly from family members.

Unfortunately, few studies have been found in the literature regarding maternal fatigue among breastfeeding individuals during the COVID-19 pandemic. The application of validated scales allows healthcare professionals to understand which aspects need to be addressed both individually with the breastfeeding person and at the community level, highlighting the importance of these tools for the singular therapeutic planning of breastfeeding individuals. It also enables an understanding of the reality of this patient group and the implementation and execution of specific actions for this population.

The limitations of the study relate to the unequal distribution of respondents by region in Brazil. If there had been more uniformity, distinctions could have been drawn in this regard. However, this aspect indicates that even in more favorable financial and educational conditions, issues related to self-efficacy and maternal fatigue must be addressed from the prenatal stage in an interprofessional manner.

CONCLUSION

The perception of breastfeeding self-efficacy, considered moderate, highlights that certain variables impact this perception, such as bottle-feeding, educational level, monthly income, and fear of COVID-19 contagion, creating a need to address these conditions to improve maternal mental health during breastfeeding. Additionally, the high levels of fatigue reported by most of the sample may decrease breastfeeding self-efficacy, lead to early weaning, and increase depression among breastfeeding individuals. Therefore, preventive measures and longitudinal follow-up of breastfeeding individuals help minimize the risks of breastfeeding fragility, especially in primiparous individuals whose inexperience may hinder the maintenance of breastfeeding.

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