

Self-efficacy and its association with breastfeeding among women in a family medicine unit in México: prospective cohort study

Abstract

Introduction: The World Health Organization (WHO) reports that in the Americas only 38% of infants are exclusively breastfed (EBF) up to 6 months. Several factors may influence the abandonment of EBF. Variables such as self-efficacy are scarcely described in EBF. In the scientific literature there are descriptive and cross-sectional studies of self-efficacy and EBF, but there are no longitudinal studies.

Objective: To associate self-efficacy and EBF abandonment in women in a medical unit in Mexico.

Methods: A prospective cohort study with follow-up at 5 days and 6 months postpartum. Multiple binary logistic regression (MLR) was used with variables including low self-efficacy, age >25 years old, and occupation employed. Odds ratio (OR) and 95% CI were calculated.

Results: Of 212 women, 53.8% were in union and 62.7% were housewives. A low final self-efficacy was obtained with a relative risk (RR) of 2.6 [95% CI (1.05 - 6.70)] for non-exclusive EBF. MLR at the end of follow-up showed low self-efficacy with an OR of 1.55 [95% CI (1.50 - 4.71)]; age >25 years old had an OR of 3.44 [95% CI (1.81 - 16.06)], and occupation employed had an OR of 1.13 [95% CI (1.6 - 3.46)].

Conclusion: Low self-efficacy is a risk factor for the abandonment of EBF, so it is relevant to include it in the dissemination and promotion of EBF by the health team at the primary health care level.

Keywords: self-efficacy, exclusive breast feeding, non-exclusive breast feeding, primary health care

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Abbreviations

WHO, world health organization; EBF, exclusive breastfeeding; BF breastfeeding; NEBF, non-exclusive breastfeeding; OR, odds ratio; RR, relative risk; MLR, multiple logistic regression; IQR, interquartile range; IMSS, Mexican institute of social security; SPSS, statistical package for social science; INEGI, national institute of statistics, geography and informatics; IgA, immunoglobulin A; IgM, immunoglobulin M; IgG, Immunoglobulin G; ICU, intensive care unit; CDC, centers for disease control and prevention; US, United States; IBM, international business machines; R2, coefficient of determination

Introduction

The World Health Organization (WHO) defines breastfeeding (BF) as the ideal way to feed newborns and infants,¹ in order to provide good growth and development, in addition to strengthening the bond

between mother and child through skin-to-skin contact. Worldwide, according to WHO data, only 38% of children are exclusively breastfed for the first 6 months of life; and only 32% continue with BF until 24 months of age.² The INEGI in Mexico reports that the average duration is more than 6 months, however, the percentage of children with EBF is still low at 11%.³

Exclusive breastfeeding is of utmost importance for optimal infant health. EBF is a form of passive immunity,⁴ since the newborn has an immature immune system. Therefore, the implementation of EBF prevents and reduces the severity of gastrointestinal diseases by providing IgA, IgM, and IgG antibodies mainly, in addition to providing immunomodulatory factors such as lactoferrin and lysozyme, properties that are transmitted from mother to child through BF.⁵ It also favors a low incidence of hospitalizations and admission to the Intensive Care Unit (ICU).⁶ The concept of breastfeeding self-efficacy is the mothers' perception of their ability to breastfeed.⁷ Adolescent, young and first-time mothers lack knowledge about the importance,

benefits and techniques of EBF.⁸ This is influenced by the experience acquired in previous pregnancies, the observation and experience of other women implementing breastfeeding and the affective state that develops between the couple.⁹ The factors that influence the implementation of exclusive breastfeeding are: the type of resolution of the pregnancy, the number of previous children, the experience with the breastfeeding technique, the low level of confidence of first-time mothers about breastfeeding compared to women with multiple pregnancies.¹⁰ As for psychological and behavioral variables, they are mainly described in chronic pathologies¹¹ and scarcely described in EBF. A protective factor for carrying out exclusive breastfeeding is the knowledge about proper breastfeeding technique practice, acquired during educational interventions, support group, and self-help in pregnancy.³

Several factors have been found to influence EBF. Among the factors involved in the abandonment of breastfeeding is the mother's formal and informal occupation. This is due to early incorporation into the work environment. Other established factors are a bad breastfeeding experience in previous pregnancies and primiparity.¹² The partner and family are important in preventing the abandonment of breastfeeding, since they can provide security and support to mothers during this period.¹³ One of the most relevant factors for abandoning EBF is maternal age. It has been shown that age under 22 years is a risk factor for abandoning exclusive breastfeeding. Women in this age group have greater difficulty breastfeeding, lack of knowledge of breastfeeding technique, misinformation about the benefits of breast milk and the appearance of clinical conditions such as cracks in the nipple, mastitis, among others.¹⁴

The abandonment and/or maintenance of exclusive breastfeeding is also modified by intrinsic, psychological, and behavioral factors. In this sense, self-efficacy, being the mothers' perception of their ability to breastfeed, may influence the maintenance of breastfeeding.¹⁵ The impact of self-efficacy on EBF is not clearly defined. Its study has been limited to review articles, descriptive studies, and cross-sectional designs.¹⁶ Therefore, the aim of the present study is to associate self-efficacy and the abandonment of EBF during the first six months of life of the infant.

Material and methods

Type of study and objective

A closed prospective cohort study with fluctuating event was carried out. During February to December 2023 at the Family Medicine Unit No. 64 "Tequesquahuac" of the Mexican Institute of Social Security. An initial measurement of the Breastfeeding Self-Efficacy Scale⁶ was made during the first postpartum visit and a final measurement in the sixth month during the subsequent well-baby visit. A telephone call was made to those women who did not attend the medical unit for the second measurement of the aforementioned instrument. There were no losses during follow-up. The main objective was to associate self-efficacy and the abandonment of EBF in women in a primary health care unit in Mexico.

The inclusion criteria were women entitled to UMF No 64, breastfeeding with children, in the immediate postpartum period, mid-postpartum, who will agree to participate in the study and allowed an initial follow-up and six months postpartum. Women with medical comorbidities, with mixed or artificial breastfeeding, with low-weight newborn children (<2500 grams), premature children or facial malformation, and twin or multiple pregnancies were excluded.

Subjects

The sample size calculation was obtained by using the Epi Info calculator version 7.2 of the U.S. Centers for Disease Control and Prevention (CDC). A modification of difference of proportions was used, for which an alpha of 0.5% and 1 - beta of 20% was considered, with a ratio of exposed/not exposed of 1:1. A prevalence of good breastfeeding practice perception associated with EBF abandonment of 21% was used.¹⁶ Alternatively, a prevalence of low self-efficacy associated with EBF abandonment of 38% was considered.¹⁶ A sample size of 212 subjects was obtained.

Ethical issues and consent

The study was approved by the Ethics and Research Committee (registration R-2023-1408-005). All the women in this project participated voluntarily, providing them with information about the research topic, as well as the main objective of the present study and the questionnaires used.

Statistics

The Statistical Package for the Social Sciences version 29 IBM program was used. For the univariate analysis of the qualitative variables (marital status, occupation, schooling, breastfeeding, and self-efficacy), frequencies and percentages were obtained. For the quantitative variable (age), the type of distribution was determined using the Kolmogorov-Smirnov test, with a $p < 0.05$, and therefore it was shown with median and interquartile ranges (IQR) 25.75.

The self-efficacy level variable (low, moderate, and high) was dichotomized as low self-efficacy (moderate and low level) and high self-efficacy (high level) for statistical treatment purposes. A ROC curve was performed to verify the performance of the transformation of the variable, obtaining an area under the curve of 0.61% [95% CI (0.47 - 0.76)].

The bivariate analysis was performed by contrasting the general characteristics of the subjects with low and high self-efficacy. For this purpose, Pearson's Chi-square test, Fisher's Exact Test or Linear Trend Test were used, based on the assumptions of qualitative variables, obtaining p values. In the case of the contrast of quantitative variables, in two groups, Mann-Whitney U was used, and p values were obtained.

A bivariate analysis of the general characteristics of women with EBF and NEBF was performed. Pearson's Chi-square test, Fisher's Exact Test or linear tendency test were used to obtain OR (initial measurement) and RR (final measurement) with 95% CI and p -value. In the case of the contrast of quantitative variables, in two groups, the Mann-Whitney U test was used, and p values were obtained.

A multiple binary logistic regression model was constructed with variables including low self-efficacy, age >25 years old, and occupation employed. Considering variables with statistical significance or biological plausibility on EBF. OR, p values, 95% CI, coefficient of determination (r^2), and the overall percentage of the model were obtained. The MLR was represented by a forest plot by using the GraphPad Software, LLC, 2365 Northside Dr., Suite 560, San Diego, CA 92108, USA.

Results

Descriptive results

Of 212 subjects, the median age was 27 years old. Of the women, 53.8% were in a free union, 62.7% were dedicated to the home, and

41.5% had a high school education. A total of 50.5% were exclusively breastfeeding and 67.3% had a high level of self-efficacy (Table 1).

Table 1 Sociodemographic characteristics of breastfeeding women

General variable	n (%) = 212
Age, median, IQR (25,75), years	27 (23,31)
Marital status	
- Single	22 (10.4)
- Free union	114 (53.8)
- Married	73 (34.4)
- Divorced	3 (1.4)
Occupation	
- Home	133 (62.7)
- Public servant	38 (17.9)
- Industrial	19 (9)
- Administrative	22 (10.9)
Schooling	
- Primary	6 (2.8)
- Secondary	49 (23.1)
- High school	88 (41.5)
- Technical college	15 (7.1)
- Bachelor's Degree	51 (24.1)
- Postgraduate	3 (1.4)
Breastfeeding implemented	
- Exclusive breastfeeding	107 (50.5)
- Mixed breastfeeding	68 (32.1)
- Artificial feeding	7 (17.5)
Level of self-efficacy	
- High	136 (67.3)
- Low	66 (32.7)

IQR, interquartile ranges; n, frequency; %, percentage

Bivariate results

General characteristics were compared with self-efficacy. High self-efficacy was obtained in 27.5% of women with high school education. High self-efficacy was found in 31.6% of women in union ($p < 0.05$). Household women had high self-efficacy at 39.6%. The implementation of exclusive breastfeeding and high self-efficacy was found in 47.2% ($p = 0.01$) (Table 2).

Table 2 Population characteristics and level of self-efficacy for breastfeeding

General Variable	High self-efficacy n=139 (65%)	Low self-efficacy n=73 (35%)	p
IQR median age (25,75), years old	27.5 (23,32)	26 (23,31)	0.45 (1)
Schooling			0.87 (2)
- Primary	4 (1.9)	2 (0.9)	
- Secondary	30 (14.2)	19 (9)	
- High school	58 (27.4)	30 (14.2)	
- Technical college	12 (5.7)	3 (1.4)	
- Bachelor's Degree	33 (15.6)	18 (8.5)	
- Postgraduate	2 (0.9)	1 (0.5)	

Table 2 Continued..

General Variable	High self-efficacy n=139 (65%)	Low self-efficacy n=73 (35%)	p
Marital status			0.05 (2)
- Single	15 (7.1)	7 (3.3)	
- Free union	67 (31.6)	47 (22.2)	
- Married	56 (26.4)	17 (8)	
- Widowed	1 (0.5)	2 (0.9)	
Occupation			0.70 (2)
- Home	84 (39.6)	49 (23.1)	
- Public servant	27(12.7)	11 (5.2)	
- Industrial			
- Administrative	12 (5.7)	7 (3.3)	
	16 (7.5)	6 (2.8)	
Breastfeeding implemented			0.01 (2)
- Exclusive breastfeeding	100 (47.2)	40 (18.9)	
- Mixed breastfeeding	31 (14.6)	21 (9.9)	
- Artificial feeding	8 (3.8)	12 (5.7)	

IQR, interquartile ranges; I, Mann-Whitney U; 2= Pearson's Chi-square

A low level of self-efficacy and NEBF was obtained in 16% in the initial measurement. In the final measurement, a low level of self-efficacy and NEBF was obtained in 4.7%. As for a high level of self-efficacy and EBF, 46.6% were present at the beginning of the project and 61.8% in the final measurement (Table 3).

Table 3 Bivariate analysis. Level of self-efficacy and breastfeeding at baseline and end of follow-up

Level of self-efficacy	NEBF	EBF	OR/ RR*	95% CI	p
Basal					
- Low	34 (16.0%)	40 (18.9%)	2.15	1.19 - 3.88	< 0.05 (1)
- High	39 (18.4%)	99 (46.6%)			
At 6 months					
- Low	10 (47%)	64 (30.1%)	2.66*	1.05 - 6.70	< 0.05 (1)
- High	7 (3.3%)	131 (61.8%)			

I= Pearson's chi-square; NEBF, non-exclusive breastfeeding; EBF, exclusive breastfeeding; OR, odds ratio; RR*, relative risk

An initial OR of 2.15 [95% CI (1.19 - 3.88)] was obtained for a low level of self-efficacy and NEBF. In the final measurement, an RR of 2.6 [95% CI (1.05 - 6.70)] was obtained for a low level of self-efficacy and NEBF (Table 3).

Multivariate outcome of risk factors for the abandonment of EBF at final follow-up

For the low self-efficacy variable, an OR of 1.55 [95% CI (1.40 - 4.71)] was obtained. The age > 25 years old had an OR of 3.44 [95% CI (1.81 - 16.06)] and being employed had an OR of 1.13 [95% CI (1.61 - 3.46)] (Table 4 and Figure 1).

Table 4 Multivariate model. Risk factors for the abandonment of exclusive breastfeeding at final follow-up

Variable	OR ^a	95% CI	p
Low self-efficacy	1.55	1.51-4.71	0.05
Age >25 years old	3.44	1.81-16.06	0.04
Employed	1.61	1.13 -3.46	0.03

^a Multivariate logistic regression; Overall percentage of the multiple model 68.4%; Nagelkerke's R2 = 0.47%

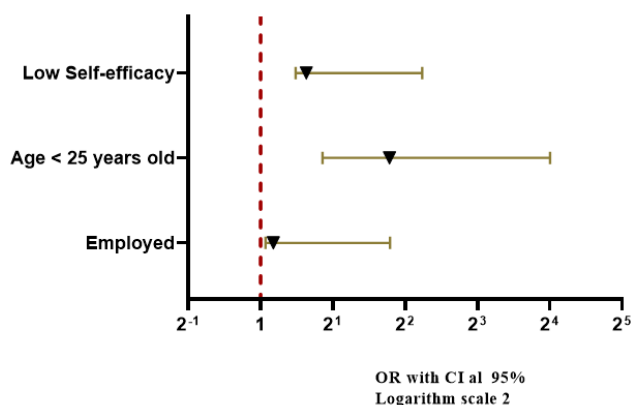


Figure 1 Forest plot of risk factors for abandonment of Exclusive Breastfeeding. Multivariate analysis.

Discussion

The present study aimed to associate self-efficacy with exclusive breastfeeding in women in a family medicine unit in Mexico by means of a prospective cohort study. From a demographic point of view, the median age of the participating women was 27 years old. According to INEGI in Mexico in 2021 there was a predominance of age in the range of 20-29 years old, which is an adequate age to carry a pregnancy in better health conditions for the couple.^{18,19} This result is similar to that of other Latin American studies, such as a study carried out in Lima, Peru, where the age range of pregnant women was 20-35 years old.²⁰ Age is an influential factor in EBF, since it has been seen that mothers under 20 years of age lack previous maternal experience, and in those over 25 years of age, the incorporation into their work activities plays a fundamental role.¹⁷

Age >25 years old was found to be a risk factor for the abandonment of EBF. This is explained by the fact that the age found coincides with economic stability and greater awareness of starting a family, thus increasing the possibilities of prolonging the time on EBF.²¹ A recent study is divergent, as it concludes that women with less breastfeeding practice were aged >35 years old.⁶ The above difference can be explained by the fact that the contrasting study was carried out in women from Bayamo, Cuba, where there is evidence of a greater suitability and availability of health and labor for the promotion of EBF.²² Studies in Mexico highlight violations of the International Code of Marketing of Breastmilk Substitutes, as well as inadequate maternal licenses and deficient training of health personnel who provide breastfeeding support.²³

High schooling was associated with high self-efficacy. A high school education implies adequate knowledge of EBF and continuity of practice.²⁴ This differs from clinical research that concludes a positive correlation between higher education (undergraduate and

graduate) and high self-efficacy.²⁵ As seen in Madrid, where there was a continuation of EBF in those women with university degrees compared to those who had studied up to primary school level.²⁶ Therefore, in underdeveloped countries such as Mexico, the majority of the population manages to complete high school, but *per se*, they manage to develop high levels of self-efficacy, and therefore a continuation in EBF.

Women who were married or had a partner showed a predominance of high self-efficacy. Women with a partner showed a high level of self-efficacy, which has a positive impact on the continuity of exclusive breastfeeding.¹⁰ Villareal and coworkers demonstrated that an associated factor for exclusive breastfeeding was having a partner because of the confidence and support that he/she can give women for the maintenance of breastfeeding.²⁷ This is similar to a study by Reyna et al., who found that partners can influence women's security, so self-efficacy levels are high.¹⁷ Both studies highlight the importance of partner support, as they provide emotional support which can influence mothers' perception of self-efficacy, feeling more secure and being able to face challenges during breastfeeding.²⁸

High self-efficacy predominated in housewives. Being a housewife is considered a protective factor for breastfeeding, since postpartum return to work is the main cause of early weaning for some mothers, in addition to anticipating complementary feeding, which may interfere with the growth and development of the child.²⁰ A research conducted in Brazil found an association between being a housewife and exclusive breastfeeding.²⁹ Thus, it has been confirmed that being employed limits the time they can spend at home and that their work environment presents obstacles and inadequate facilities to continue exclusive breastfeeding.

In the initial measurement, low self-efficacy was found to increase the risk of NEBF. Low self-efficacy, a misperception of low BF production during the first few days, may negatively influence the continuation of EBF.²¹ In Malaysia, Norkhafizah et al., studied the factors associated with non-exclusive breastfeeding and concluded an association between negative attitude and experiences with abandonment of EBF.³⁰ Both studies highlight the impact of having a low level of self-efficacy in the early postpartum period, which may be a risk factor for abandonment of EBF.

At the final follow-up, it was found that low self-efficacy persisted as a risk for NEBF. It has been observed that the level of self-efficacy is influenced by several factors such as resilience, past experiences and even the presence of pain during breastfeeding.¹⁵ A longitudinal study carried out in Greece by Economou M. et al., showed that presenting a neutral or negative position for BF as experiencing pain during breastfeeding influenced the abandonment of BF at one month of life.³¹ In both studies, a low level of self-efficacy may be determinant for the abandonment of BF; making it relevant to improve self-efficacy in BF from early stages in order to achieve continuity of BF.

Regarding the main objective, low initial and final self-efficacy were found to be a risk factor for the abandonment of EBF. A low level of self-efficacy can be influenced by multiple factors, among which early return to work, women's predominance of formal employment and low parental leave have been described as having a negative impact on self-efficacy and, consequently, on the continuity of EBF. The literature shows that in Spain, maternity and paternity leave are authorized up to 9 months postpartum, in contrast to Mexico, where paternity leave is 10-15 days postpartum.³² Consequently, maternity and paternity leave are positively associated with the level of self-efficacy with projection in the increase in breastfeeding rates,

however, in the Latin population there are still challenges in including men in the care and raising of their children and in supporting their partners in household chores.

Vázquez et al. studied the reasons why mothers in the EBF period integrate some food, drink and/or breast milk formula to their children. This is due to the belief that they are an important food for the nutrition of their children. Likewise, the belief of better satiety and low breast milk production. Drinks like tea and atole are considered better food. These beliefs are passed from generation to generation, decreasing the practice of EBF.³⁴

Limitations of the present work include the lack of measurement of women's family, partner, work and other support networks. In a cross-sectional study by Mirghafourvand et al., in 2018, they assessed that social support is a predictor of breastfeeding self-efficacy.³³ With the above, the importance of support in EBF is confirmed. Likewise, being a unicentric study, it decreases the representativeness of the findings. Follow-up studies with complex multivariate models that include confounding factors such as self-efficacy, resilience, typology, structure, and family dynamics that may influence EBF are recommended.

Another limitation of this research is that socioeconomic level and its impact on self-efficacy were not evaluated. Socioeconomic level is a social determinant of health that can decrease self-efficacy toward EBF. Breastfeeding and economically active women tend to have low self-efficacy.^{8,33} According to Arocha-Zuluaga and her collaborators, the lower the socioeconomic level increases the risk of abandoning exclusive EBF.³⁴ Results obtained in Peru concluded that medium or high socioeconomic level increases the probability of interrupting EBF due to greater access to breast milk substitutes.³⁵ Likewise, it is recognized that conducting the research in a single medical center is an important limitation. The above decreases the external validity of the results found in comparison with multicenter and multinational studies. Multicenter studies are necessary to identify whether self-efficacy impacts EBF abandonment in different contexts and age groups (public, private, charitable hospitals, greater age range, greater diversity in type of occupation, family composition, socioeconomic level, among others).

The strengths of this research are the longitudinally of the self-efficacy and EBF measurements, which allows a better approximation of the cause-effect phenomenon between the variables. In addition to obtaining measures of clinical relevance, which allow an approximation of the risk of low self-efficacy towards abandoning EBF. Additionally, the construction of a multivariate model considers several causes (multicausality) towards the abandonment of EBF. The results can be extrapolated to women with similar characteristics to the women included in the study, in the context of the IMSS in Mexico.

Conclusion

Low self-efficacy of mothers to breastfeed is a risk factor for the abandonment of EBF. The recognition and promotion of psychologic and behavioral variables is relevant for EBF in Mexican primary care medical units. Other risk factors for the abandonment of EBF are age >25 years old, and occupation employed, so working conditions for the practice of EBF should be improved and adapted.

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Conflicts of interest

The authors declare that they have no conflicts of interest.

References

1. Vera Jorge L, Guerrero C Jorge E, Esteban Vintimilla Coello. *Nivel de conocimiento de la lactancia materna en madres adolescentes*. Universidad del Azuay. Cuenca, Ecuador. 2013. p. 1–22.
2. Lasserre-Laso N, Inostroza-Saelzer V, Petermann-Rocha F, et al. Breastfeeding and its association with obesity: Mechanisms that might explain its protective role during childhood. *Rev Chil Nutr*. 2021;48(6):955–964.
3. Ríos-Saavedra IR, Alcivar-García MC, Pico-Franco MB. Prevalencia de la lactancia materna exclusiva en la alimentación complementaria. *Polo del Conocimiento*. 2018;3(9).
4. Labraña AM, Ramírez-Alarcón K, Troncoso-Pantoja C. Childhood obesity: The benefits of breastfeeding versus formula feeding. *Revista Chilena de Nutrición. Sociedad Chilena de Nutrición Bromatología y Toxicología*. 2020;47:478–483.
5. Hill DL, Carr EJ, Rutishauser T, et al. *Immune system development varies according to age, location, and anemia in African children*. Vol. 12, *Sci. Transl. Med*. 2020.
6. Meza-Salcedo R, Pérez-Valverde A. Beneficios de la lactancia materna. *Odontología Sanmarquina*. 2021;24(3):311–312.
7. Juárez Castelán MA, Rojas Russell ME, Serrano Alvarado K, et al. Diseño y validación de un instrumento para medir la autoeficacia para lactar de mujeres embarazadas mexicanas. *Psicología*. 2018;12(1):25–34.
8. Gil-Vargas M, Dorantes-Vidal X, León-López M, et al. Survey in puerperal women on self-efficacy and attitude of breast-feeding, from a tertiary care hospital. *Revista Mexicana de Pediatría*. 2020;87(4):132–136.
9. Balaguer-Martínez JV, García-Pérez R, Gallego-Iborra A, et al. Capacidad predictiva para la lactancia y determinación del mejor punto de corte de la escala BSES-SF. *An Pediatr (Engl Ed)*. 2022;96(1).
10. Gallegos Martínez J, Reyes Hernández J. Representaciones maternas sobre salud y lactancia del hijo prematuro en hospitales con y sin certificación de Hospital Amigo del Niño y de la Madre. *Acta Pediátrica de México*. 2018;39(2).
11. Olalde DJDC, Hernandez FV, Carro ES, et al. Lifestyle-associated health literacy in subjects with systemic arterial hypertension in a first-level unit. *Int J Fam Commun Med*. 2024;8(4):95–99.
12. Wormald F, Tapia JL, Domínguez A, et al. Breast milk production and emotional state in mothers of very low birth weight infants. *Arch Argent Pediatr*. 2021;119(3):162–169.
13. Santos LMDA dos, Chaves AFL, Dodou HD, et al. Autoeficácia de puérperas em amamentar: estudo longitudinal. *Escola Anna Nery*. 2022;26.
14. Vázquez-Osorio IM, Vega-Sánchez R, Maas-Mendoza E, et al. Exclusive Breastfeeding and Factors Influencing Its Abandonment During the 1st Month Postpartum Among Women From Semi-rural Communities in Southeast Mexico. *Front Pediatr*. 2022;10:1–16.
15. Muñoz Cruz R, Rodríguez Mármol M. Autoeficacia de la lactancia materna en mujeres primíparas de Madrid. *Enfermería: Cuidados Humanizados*. 2017;6(1):19.
16. Villarreal Verde C, Placencia Medina MD, Nolberto Sifuentes VA. Lactancia Materna Exclusiva y factores asociados en madres que asisten a Establecimientos de Salud de Lima Centro. *Revista de la Facultad de Medicina Humana*. 2020;20(2):115–122.

17. Sámano R. Vista de Barreras y facilitadores para la práctica de lactancia materna exclusiva en un grupo de madres de la Ciudad de México. *Arch Latinoam Nutr.* 2018;68(1):41–50.
18. Sánchez Pérez A, Velázquez Lerma R, Díaz Vargas María del Carmen Dolores Molina Nava P. Núm. 1, enero-abril. *Data and Space International of Statistics and Geography.* 2019;10(1).
19. INEGI. Mayo de 2023| A Ñ O 2. N O. 5 Boletín mensual “Ciudad de México, las mujeres y su contexto.” 2023.
20. Basadre Quiroz P, Vélez B Barrantes B, Ignacio J Taxa B, et al. Lactancia materna exitosa en puérperas de menos de 48 horas en el Hospital de Apoyo María Auxiliadora. *Horizonte Médico.* 2013;13(2):28–39.
21. Meza-Salcedo R, Pérez-Valverde A. Beneficios de la lactancia materna. *Odontología Sanmarquina.* 2021;24(3):311–312.
22. Rosada Navarro Y, Wilmar Delgado Medina, Madeline Yoanis Meireles Ochoa, et al. Risk factors that influence the abandonment of Breastfeeding 2017–2018. *Multimed Revista Médica Granma.* 2019;23(6):1278–1293.
23. Morales López S, Colmenares Castaño M, Cruz Licea V, et al. Recordemos lo im-portante que es la lactancia materna. *Revista de la Facultad de Medicina.* 2022;65(2):9–25.
24. Álvarez Villaseñor AS, García Torres O, Valle Rosas MP. Factores que influyen en la madre, en el abandono de la lactancia. *Revista CONAMED.* 2020;25(4):167–173.
25. Novillo-Luzuriaga N, Robles-Amaya J, Calde-rón-Cisneros J. Beneficios de la lactancia materna y factores asociados a la interrupción de esta práctica. *Enfermería Investiga Investigación Vinculación Docencia y Gestión.* 2019;4(5).
26. Muñoz Cruz R, Rodríguez Mármol M. Autoeficacia de la lactancia materna en mujeres primíparas de Madrid. *Enfermería: Cuidados Humanizados.* 2017;6(1):19.
27. Villarreal Verde C, Placencia Medina MD, Nol-berito Sifuentes VA. Lactancia Materna Exclusiva y factores asociados en madres que asisten a Establecimientos de Salud de Lima Centro. *Re-vista de la Facultad de Medicina Humana.* 2020;20(2):115–122.
28. Castillejo Padilla NP, Agudelo Martínez MA, Gómez Velásquez S. Breastfeeding practices and associated factors among young and adult women in the Municipality of Envigado, Antioquia-Colombia. *Nutricion Clinica y Dietetica Hospitalaria.* 2022;42(1):175–185.
29. Barbosa KIP, da Conceição SIO. Maternal socio-demographic factors associated with exclusive breastfeeding. *Revista Cuidarte.* 2020;11(1).
30. Saddki N, Mohamad N, Johar N, et al. Determinants of non-exclusive breastfeeding practice during the first 6 months after an elective caesarean birth: a prospective cohort study. *Int Breastfeed J.* 2022;17(1):36.
31. Economou M, Kolokotroni O, Paphiti-Demetriou I, et al. The association of breastfeeding self-efficacy with breastfeeding duration and exclusivity: longitudinal assessment of the predictive validity of the Greek version of the BSES-SF tool. *BMC Pregnancy Childbirth.* 2021;21(1):421.
32. Internacional de Políticas para el Crecimiento In-clusivo UNICEF — Oficina Regional para América Latina el Caribe C. *Maternidad y paternidad en el lugar de trabajo en América Latina y el Caribe — políticas para la licencia de maternidad y pater-nidad y apoyo a la lactancia materna.* 2020.
33. García-Fernández R, Rodríguez-Llagüerri S, Presado MH, et al. Breastfeeding Self-Efficacy and Social Support: A Systematic Review Study. *New Trends in Qualitative Research.* 2023;18.
34. Arocha-Zuluaga GP, Caicedo-Velasquez B, Forero-Ballesteros LC. Economic, social, and health determinants that influence exclusive breastfeeding in Colombia. *Cad Saude Publica.* 2022;38(9):e00186621.
35. Sequeiros GT, Velazco Cañari MA, Calizaya NR, et al. Factors associated with the interruption of exclusive breastfeeding: cross-sectional analysis of a Peruvian national survey. *Acta Pediatrica de Mexico.* 2023;44(4):263–275.