



Proficiency, Attitudes, and Practices in Breastfeeding of Participants in a Pediatric Congress

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Authors' contributions

All authors acted in the conception of the article, read and approved the final manuscript.

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ABSTRACT

Objective: To investigate the proficiency, practices, and attitudes about breastfeeding of participants in a Pediatrics Congress.

Methods: Cross-sectional study in which an online questionnaire was applied, using a specific QRcode, for each study participant, in June 2018. The questions were formulated according to the World Health Organization (WHO). Among the 39 questions, 13 identified the profile of the participants, 19 questions assessed the proficiency in breastfeeding and 7 questions the practices and attitudes.

Results: Responses to 296 questionnaires were evaluated, 62.5% of which were health professionals and 37.5% were undergraduate health students. In assessing proficiency, the global average did not reach the expected minimum of 70%. But the highest proficiency averages were found among health professionals (p: 0.0136), among professionals with more recent degrees (p

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<0.0001), and those who performed most of their activity in the public sector (p: 0.018). 77% of health professionals and 73% of students assessed attitudes and practices about breastfeeding as appropriate.

Conclusion: The low proficiency in the population studied points to the need for periodic training of professionals in breastfeeding and greater emphasis on undergraduate curricula in the health area on the subject.

Keywords: Breastfeeding; human milk; clinical practice guide; medicine.

1. INTRODUCTION

Despite the innumerable benefits of breastfeeding (BF) for mothers and their children, which makes it the gold standard for infant feeding and nutrition, its prevalence rates are highly variable across countries [1]. The rates of exclusive breastfeeding (EBF), in the first six months of the baby's life and its maintenance, in addition to the child's first year of life, are still far below the recommendations of the World Health Organization (WHO). According to scientific evidence, which demonstrates the benefits of breastfeeding, child nutrition should be considered a public health issue and not just a choice or lifestyle [1,2].

The determinants of early weaning have been extensively explored and, among the factors, most related to it is the lack of maternal information on breastfeeding [3]. Some studies concluded that this lack of adequate information is related to the deficient knowledge of health professionals on the subject. In a retrospective study between the years 2004 and 2013, 889 health professionals (doctors and nurses) and medical students were assessed for their knowledge and attitudes towards BF. The study concluded that, despite the growing scientific and social support for breastfeeding in the past 10 years, the basic knowledge of the evaluated professionals did not demonstrate important changes [4]. Esselmont et al. assessed the knowledge, perception, and practices of 201 pediatric resident physicians and found a low score in the domain of knowledge related to breastfeeding, therefore there is significant space to improve this issue [5]. Similarly, Pound et al. [6] identified several areas with a knowledge deficit concerning BF among 780 pediatricians, family doctors, and Canadian residents, showing that an improvement in knowledge in this area would result in better care for mothers and children.

A common approach should be adopted by the entire team responsible for BF, facilitating the

provision of information to the breastfeeding mother [7-11]. Therefore, investigating the knowledge of health professionals about BF and their ability to properly guide pregnant women/breastfeeding women should be one of the references used to implement strategies that reduce weaning rates. This study aimed to investigate the proficiency, practices, and attitudes about breastfeeding among participants in a regional Pediatrics congress.

2. METHODOLOGY

This is a cross-sectional and observational study, developed during a Congress of Pediatrics, held from June 6 to 8, 2018, in Belo Horizonte, Minas Gerais, Brazil. The event had 1,272 registered participants, of which 316 accepted to participate in the research. The participants were approached, randomly, in a sample format for convenience, during the interval of the lectures, by undergraduate students of the Medicine course at the Federal University of Minas Gerais (UFMG) under the supervision of a pediatrician. The interviewers approached the participants at the entrance to the auditorium, inviting them to participate.

The study included participants who agreed to sign the free and informed consent form and who answered the questionnaire completely. Participants who did not meet these criteria were excluded, according to Fig. 1.

Participants had access to the QRcode from which they were directed to answer the questionnaire online, on tablets and smartphones. The specific QRcode ensured that responses would only be obtained once from each participant [12,13].

The structured questionnaire comprised questions about the profile, proficiency in breastfeeding, in addition to their attitudes and practices previously validated by a group of experts. Different profiles of researchers contributed to the construction of the

questionnaire, such as two neonatologists who are experts in breastfeeding, a gastroenterologist pediatrician with experience in research, and a general pediatrician with experience in the subject in question, based on the WHO guidelines [1,2] for BF.

To test the questionnaire, we carried out a pilot study with 20 doctors, who assessed the quality of the items and corrected the possible flaws. Questions 1 to 13 addressed the participant's profile (age, gender, place of graduation, profession, specialty, place of medical residence, and current scenario of professional practice); questions 14, 15, 20, 21, and 33 to 35 addressed practices and attitudes related to breastfeeding and proficiency in the topic was addressed in questions 16 to 19, 22 to 32 and 36 to 39. According to the profile, whether student or professional, the participant was directed to the specific questions of each one. The 5-point Likert scale was used to evaluate the answers to question 14 [14].

In the data analysis, the participants' profile-related variables were considered as independent variables, the outcomes were proficiency, practices, and attitudes about BF.

For the analysis of the answers to the questions on proficiency in breastfeeding, all questions received equal weight, for scoring purposes; questions that had more than one correct alternative were considered totally or partially correct, depending on the answers (one point for each right answer and the total of points, when all the right answers were scored). The cut-off point considered for the assessment of good proficiency was 70% or more as proposed by Pound et al. [6]. This is the minimum score that pediatricians must achieve, in the specialty exam, to receive the certification from the Royal College of Physicians and Surgeons of Canada. Esselmont et al. [5] also proposed this minimum score of 70% as it is the cutoff point used in national medical research on breastfeeding in Canada.

The methodology presented above followed the standard of the STROBE checklist for observational studies [15].

Despite being a non-probabilistic sample, a post-hoc power calculation was performed using the number of participants in the Congress (1,272), the total number of participants included in the study (296), and a type 1 error rate of 5%, obtaining a 95% statistical power, showing that

the sample was representative [16]. The Cronbach's Alpha test was used to assess the internal consistency of the items in the questionnaire [17]. Data analysis was performed using the statistical software R Foundation for Statistical Computing [18]. Descriptive statistics were used for continuous variables and categorical variables. The Shapiro Wilk test was used to analyse the normality of the data and after observing the result, nonparametric approach was taken. Wilcoxon's [19] nonparametric comparison tests were performed and, for multiple comparisons, Kruskal Wallis [20] nonparametric test and Nemenyi ad-hoc were used [21]. In all analyses, a significance level of $\alpha = 0.05$ was adopted.

3. RESULTS

In total, 316 participants completed the questionnaire, and the reasons for exclusion are shown in Fig. 1. The 296 participants included constituted two groups: 185 health professionals (62.5%) and 111 undergraduate students (37.5%). The demographic profile of the participants is shown in Table 1.

The following variables were evaluated: degree and area of practice in pediatrics, time of students' course, institution of graduation, year of graduation for professionals, place of medical residency, place of work, and age group.

The average proficiency in breastfeeding of the total number of participants was 65.7%. Proficiency in minimum breastfeeding of 70% was achieved in only 39.6% and 54% of students and professionals, respectively, with a significant difference ($p = 0.01$). Having completed a medical residency ($p = 0.02$), health professionals who perform most of their professional activity in the public sector ($p = 0.01$) and having graduated in more recent years ($p < 0.0001$) were found statistically significant. Health professionals were more proficient at breastfeeding than students ($p = 0.01$), as shown in Table 1. In the remaining items assessed, no statistically significant difference was observed.

The classification of professionals according to the year of graduation was made according to the quartiles of the years of graduation: 1969-1987, 1988-2001, 2002-2012, and 2013-2017. The average proficiency of the professionals trained until the year 2001 showed the same variance (group A) and this was different and smaller than the patterns verified in later years

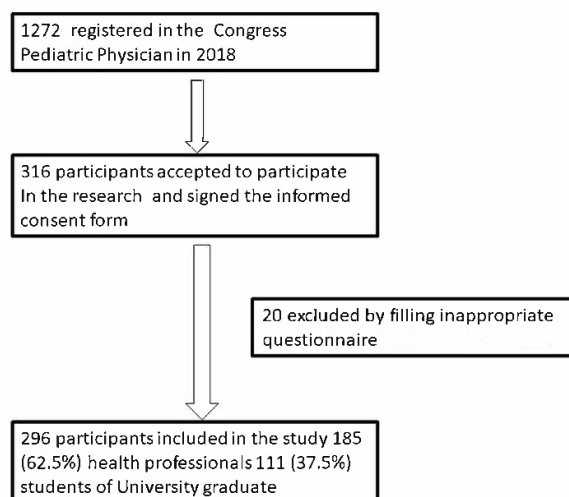


Fig. 1. Recruitment of participants - flow diagram according to the STROBE checklist

(groups B and C; average proficiency group C > B), as shown in Table 2, with statistically significant ($p < 0,0001$).

Regarding the attitudes and practices of the participants, both breastfeeding content they received during graduation and the content studied related to the topic in the last 6 months were assessed as adequate. In addition to the majority agreeing that the Public Policies to encourage breastfeeding in the country, are effective. In addition to these statements, most participants stated that advertising of infant formulas at medical congress doesn't influences their decision to stop breastfeeding and there was no consensus on respect for media due to Brazilian Standart for the Marketing of Food for Infants and 1st children Childhood, Nipples, Pacifiers and Baby bottles (NBCAL), as shown in Table 3.

Fig. 2 shows the percentage of correct answers in questions regarding the practices of students, general pediatricians, and specialists concerning difficulties related to breastfeeding. These questions are related to difficulties encountered by lactating women, such as small milk production (question 22), flat or inverted nipples (question 25), breast engorgement (question 26), and consequences of reduction mammoplasty (question 27).

4. DISCUSSION

The participants of a medical congress in pediatrics had low proficiency in BF. The gaps in

knowledge about BF, among health professionals, were made explicit in the study by Pound et al. [6], whose proficiency in BF was 67% among professionals who worked in child care, very similar to what was found in this study. When investigating the same subject and also the attitudes and practices related to BF, Pound et al. [6] concluded that health professionals are not satisfactorily performing their role in educating mothers about breastfeeding.

Esselmont et al. [5] observed that, although pediatric resident physicians had proficiency slightly above the acceptable minimum of 70%, there is still significant space to increase knowledge about breastfeeding. Despite recognizing that they play an important role in supporting breastfeeding, most Canadian pediatric residents lack the knowledge or training to deal with breastfeeding difficulties but feel motivated to learn more [5].

A probable explanation for a proficiency above the minimum acceptable among resident physicians [5] would be the most recent contact of this group with the subject in question, since they are exposed in some way to this content during their medical residency. In addition to the implementation of promotion actions, support and protection for BF and contact with these actions during a medical residency in hospitals that implement these policies.

One of these actions was the Baby-Friendly Hospital Initiative (BFHI), a highly impactful strategy in the history of BF in Brazil, launched in

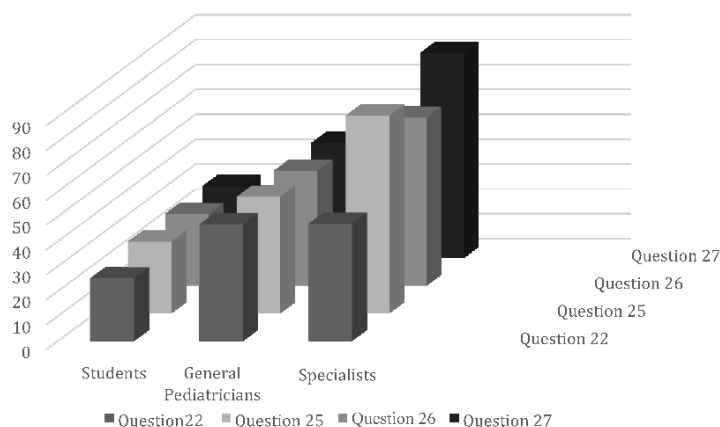


Fig. 2. Right answers (by percentage) in questions related to practices (numbers: 22, 25, 26, and 27) of students, general pediatricians, and specialists concerning difficulties related to breastfeeding

1991-1992, as a global WHO program, in partnership with the United Nations Fund for Childhood (UNICEF - United Nations Children's Fund), to encourage maternity hospitals to adhere to the "Ten Steps to Successful Breastfeeding" and comply with the "International Code for the Marketing of Breast Milk Substitutes" [22]. Since then, studies have demonstrated the benefits of this initiative, concerning the rates of BF in several countries [23,24]. Therefore, with the progressive dissemination of this initiative and its adherence by institutions linked to universities, doctors with training after its implementation, were probably better oriented on the theme.

The greater proficiency found among professionals who work preferentially in the public sector is ratified by the data presented by Victora et al. [25] that showed that the prevalence of BF is higher in the lower-income population, so these professionals working in the public sector are more likely to be exposed to breastfeeding issues. Therefore, professionals working in the public sector would be influenced by the policy adopted in their workplace, favoring their proficiency in BF, which, although below expectations, was higher among this group compared to the group that worked preferentially in the private sector.

Regarding the attitudes and practices of the participants, concerning BF, it was found that, despite the low proficiency presented by most of the participants, the majority considered access to information about BF during the

undergraduate course to be adequate, as Public Policies were effective to encourage the practice of breastfeeding and stated that, in the last 6 months, BF was a subject studied by them. This behavior is probably related to family values previously acquired by these participants or to their own experience with breastfeeding.

Most of the participants stated that the advertising of infant formulas does not influence their decision to suspend BF, despite this, as mentioned by Wood et al. [26], the vast majority of resident physicians believe that such promotion methods used by the pharmaceutical industry would affect the prescription practices of other doctors.

The high prevalence of the lack of knowledge about the management of breastfeeding difficulties was evidenced by the low proficiency of the participants in issues that considered low milk production, the existence of flat or inverted nipples, breast engorgement, and the consequences of reduction mammoplasty. These results are compatible with other studies on the lack of knowledge of health professionals regarding the techniques and management of difficulties concerning BF [7,8] and can be explained by studies that point out flaws in pediatric medical residency curricula [5,6,9,27] and undergraduate medical courses [28,29]. This lack of knowledge in the management of BF of professionals who work directly in child care is one of the causes responsible for early weaning and, consequently, the increase in infant morbidity and mortality [25].

Table 1. Demographic profile of study participants

Category	N (%)	Average median proficiency		Interquartile range	P-value
Title					
Health professionals	185(62,5)	22,2(67,2%)	23	(20-25)	0,01
Undergraduate student	111 (37,5)	21,1(63,9%)	21	(19-24)	
SW: 8.158e-07					
Pediatric Residency					
No	3 (1,7)	18,3(55,5%)	20	(16-21,5)	0,02
Yes	177 (98,3)	22,4(67,9%)	23	(20-25)	
SW: 5.917e-06					
Practice area in pediatrics					
General Pediatrics	143 (80,8)	22,5(68,2%)	23	(20-25,5)	0,82
Other specialties	34 (19,2)	21,8(66%)	23	(20,8-25)	
SW: 1.03e-05					
Medical student					
Private institution	43 (38,8)	20,3(61,5%)	20	(18-23)	0,08
Public institution	68 (61,2)	21,6(65,5%)	22	(20-24)	
SW: 5.917e-06					
from 1 ^o to 6 ^o period	80 (72,7)	20,1(60,9%)	21	(18-23)	0,13
6 ^o to 12 ^o period	30 (27,1)	21,6(65,5%)	21	(20-24)	
SW:0.01277					
Graduation institution					
Private	76 (41,1)	22,4(67,9%)	23	(20-26)	0,33
Public	109 (58,9)	22,1(67%)	23	(20-25)	
SW: 8.158e-07					
Graduation year:					
1969-1987	44 (23,8)	20,5(62,1%)	21	(19-23,5)	<0,000
1988-2001	48 (25,9)	20,6(62,2%)	21	24)	1
2002-2012	44 (23,8)	22,8(69%)	23,5	(21-25,3)	
2013-2017	49 (26,5)	24,7(74,8%)	26	(23-27)	
SW: 5.917e-06					
Place where you obtained the title of resident					
Municipalities with more than 1 million inhabitants	109 (61,6)	22,3(67,6%)	23	(20-25)	0,34
Municipalities with less than 1 million inhabitants	61 (34,5)	22,9(69,4%)	23	(21-26)	
I don't know how to answer	7(3,9)				
SW:1.03e-05					
Workplace					
Capital metropolitan area	105 (56,8)	22,1(67%)	23	(20-25)	0,57
Inside	80 (43,2)	22,8(69%)	23	(20-25,5)	
SW:5.917e-06					
Public	107	22,8(69%)	23	(20,3-26)	0,01
Private	105	20,7(62,7%)	21	(18-24)	
SW: 2.320e-06					
Age groups					
18 – 32	164 (55,4)	22,5(68,2%)	23	(20-26)	0,06
33 – 47	62 (20,9)	21,5(65,2%)	22	(19-24)	
48 – 62	53 (17,9)	20,8(63%)	22	(19-24)	
63 – 75	17 (5,8)	20,6(62,4%)	20	(20-23)	
SW: 8.158e-07					

Wilconxon test to compare means

Table 2. Comparison of the average proficiency in breastfeeding of health professionals according to the year of graduation

Graduation year	Average proficiency	Group
1969-1987	20,5 (62,1%)	A
1988-2001	20,6 (62,4%)	A
2002-2012	22,8 (69%)	B
2013-2017	24,7 (74,8%)	C
P-value	<0,0001	

Nemenyi ad-hoc test to multiple comparisons between averages

Table 3. Participants' attitudes and practices regarding breastfeeding

		Students		Professionals	
		n	%	n	%
During the undergraduate course information about the breastfeeding to which you had access was sufficient for your practice in care	Strongly disagree	5	4.5	19	10.3
	Partially disagree	5	4.5	28	15.1
	Indifferent	6	5.4	3	1.6
	Partially agree	42	37.8	74	40.0
	I totally agree	53	47.8	61	33.0
In the last six months, I have studied issues related to breastfeeding.	Strongly disagree	5	4.5	7	3.8
	Partially disagree	15	13.5	9	4.9
	Indifferent	0	0.0	2	1.1
	Partially agree	32	28.8	49	26.5
	I totally agree	59	53.2	118	63.8
Public Health Policies that support breastfeeding are effective in Brazil	Strongly disagree	0	0.0	13	7.0
	Partially disagree	31	27.9	60	32.4
	Indifferent	8	7.2	5	2.7
	Partially agree	65	58.6	93	50.3
	I totally agree	7	6.3	14	7.6
The media (newspapers, magazines, television, radio and the internet) respect the Brazilian Standard for the Marketing of Food for Infants and 1st children Childhood, Nipples, Pacifiers and Baby bottles (NBCAL)	Strongly disagree	20	18.0	29	15.7
	Partially disagree	36	32.4	68	36.8
	Indifferent	30	27.0	13	7.0
	Partially agree	25	22.5	60	32.4
	I totally agree	0	0.0	15	8.1
Advertising of infant formulas at medical congresses influences their decision to stop breastfeeding	Strongly disagree	55	49.6	145	78.4
	Partially disagree	11	9.9	16	8.7
	Indifferent	19	17.1	12	6.5
	Partially agree	16	14.4	11	6.0
	I totally agree	10.0	9.0	1.0	0.5

The evaluation of participants in a scientific event, such as a medical congress, can be considered as a possible limitation of the study since the population analyzed is composed of people interested in recycling their knowledge. However, knowing these deficiencies, especially the lack of knowledge about the management of breastfeeding difficulties, points to the need for intervention. And, more surprising is to note this deficiency precisely among professionals who are supposed to have the competence to address such a significant issue; to assist families in making informed infant feeding

choices, health care professionals must remain cognizant of current evidence and best practices, particularly regarding breastfeeding [4].

Despite the significant advances already achieved in promoting breastfeeding, through political and educational actions, there are still gaps in the knowledge and attitudes of health professionals involved in the management of breastfeeding. The result of this study demonstrated the need for periodic training and constant reassessments by health professionals.

In addition to review the approach to this important subject in the curriculum of health courses. Knowing the physiology of breastfeeding and the appropriate approach to the difficulties related to it, constitute the fundamental points for the support, promotion, and prevention of weaning. More studies, similar to this one, should be carried out periodically to assess the knowledge of health professionals and undergraduate students in health courses concerning BF.

5. CONCLUSION

The participant proficiency in breastfeeding did not reach the expected minimum. This competence was influenced by the participant profile (if health professional or undergraduate student), by the predominant scenario of professional activity (whether public or private), by the conclusion of the medical residency in Pediatrics, and by the time elapsed since graduation.

The study finding point to the need for continuing education in this important public health issue.

CONSENT

All authors declare that 'written informed consent was obtained from the participants for publication of this article'.

ETHICAL APPROVAL

The Research Ethics Committee approved the study of the Federal University of Minas Gerais.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Johnston M, Landers S, Noble L, et al. Breastfeeding and use of human milk policy statement. *Pediatrics*. 2012;129: 827–841.
2. World Health Organization (WHO). Global nutrition targets 2025: policy brief series. World Health Organization, Geneva; 2014.
3. Cockerham-Colas L, Geer L, Benker K, et al. Exploring and influencing the knowledge and attitudes of health professionals towards extended breastfeeding. *Breastfeed Med*. 2012;7: 143-150.
4. Sigman-Grant M, Kim Y. Breastfeeding knowledge and attitudes of Nevada health care professionals remain virtually unchanged over 10 years. *J Hum Lact*. 2015;1-5.
5. Esselmont E, Moreau K, Aglipay M, et al. Residents breastfeeding knowledge, comfort, practices, and perceptions: results of the Breastfeeding Resident Education Study (BRES). *BMP Pediatr*. 2018;18:170-177.
6. Pound CM, Williams K, Grenon R, et al. Breastfeeding knowledge, confidence, beliefs, and attitudes of Canadian physicians. *J Hum Lact* 2014;30:298-309.
7. Artantas AB, Tetik BK, Kilic M, et al. Knowledge level, attitude and own experience of health professionals about breastfeeding and breast milk in a city of Turkey: a cross-sectional study. *Arch Argent Pediatr*. 2016;114:514-520.
8. Feldman-Winter L, Szucs K, Milano A, et al. National trends in pediatricians' practices and attitudes about breastfeeding: 1995 to 2014. *Pediatrics*. 2017;140:e20171229.
9. Gonzalez AP, Palmer J, Downes K, Young C. Attitudes and knowledge about breastfeeding among obstetrics and gynecology residents. *Obstet Gynecol* 2014;123:17-18.
10. Melin A, Björklund P, Zwedberg S. Pediatrician's experiences of working with breastfeeding: an interview study. *Sex Reprod Health* 2018;16:218-223.
11. Taveras EM, Li R, Grummer-Strawn L, et al. Mothers' and clinicians' perspectives on breastfeeding counseling during routine preventive visits. *Pediatrics* 2004;113:405-411.
12. Lonsdale C, Hodge K, Rose EA. Pixels vs. paper: comparing online and traditional survey methods in sport psychology. *J Sport Exerc Psychol*. 2006;28:100-108.
13. Hibberts M, Johnson RB, Hudson K. Common survey sampling techniques. In: *Handbook of Survey Methodology for the Social Sciences*, Gedeon L, ed., Springer, New York, 2012.
14. Barua A. Methods for decision-making in survey questionnaires based on the Likert scale. *J Asian Sci Res*. 2013;3:35-38.
15. Equator Network. Checklist STROBE cross-sectional.

- Available:<https://www.equatornetwork.org/>
Accessed 14 Jan. 2020.
16. Ryan TP. Sample size determination and power. New York; 2013.
 17. Hair Jr. JF, Black WC, Babin BJ, et al. Multivariate data analysis; 2009.
 18. R Foundation for Statistical Computing. R: a language and environment for statistical computing. R Core Team, Vienna, 2019.
 19. Wilcoxon F. Probability tables for individual comparisons by ranking methods. Biometrics. 1947;3:119-122.
 20. Kruskal WH, Wallis WA. Use of ranks in one-criterion variance analysis. J Am Stat Assoc. 1952;47:583-621.
 21. Nemenyi PB. Distribution-Free Multiple Comparisons [Ph.D. Thesis]. Princeton University, Princeton; 1963.
 22. World Health Organization (WHO). Baby-Friendly Hospital Initiative: Background and Implementation. UNICEF and WHO; 2009.
 23. Abolyan LV. The breastfeeding support and promotion in Baby-Friendly Maternity Hospitals and Not-as-Yet Baby-Friendly Hospitals in Russia. Breastfeed Med. 2006;1:71–78.
 24. Forster DA, McLachlan HL. Breastfeeding initiation and birth setting practices: a review of the literature. J Midwifery Women's Health. 2007;52:273–280.
 25. Victora CG, Bahl R, Barros AJD, et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. Lancet. 2016;387:475-490.
 26. Wood SF, Podrasky J, McMonagle MA, et al. Influence of pharmaceutical marketing on Medicare prescriptions in the District of Columbia. Plos One. 2017;12(20).
 27. Leavitt G, Martínez S, Ortiz N, et al. Knowledge about breastfeeding among a group of primary care physicians and residents in Puerto Rico. J Community Health. 2009;34:1-5.
 28. Moukarzel S, Mamas C, Warstadt MF, et al. A case study on breastfeeding education in Lebanon's public medical school: exploring the potential role of social networks in medical education. Med Educ Online. 2018;23:1527629.
 29. Gary AJ, Birmingham EE, Jones LB. Improving breastfeeding medicine in undergraduate medical education: a student survey and extensive curriculum review with suggestions for improvement. Educ Health. 2017;30:163-168.

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