

TITLE: Declared reasons for cessation breastfeeding during the first year of life:
Multidisciplinary analysis based on a cohort study in northern Spain.

Authors: Carolina Lechosa-Muñiz^{1*}, María Paz-Zulueta^{2*}, Joaquín Cayón de las Cuevas³, Javier Llorca^{4**}, María J Cabero-Perez^{5**}

* Shared first authorship.

**Shared senior authorship.

Affiliations:

1 Faculty of Nursing. University of Cantabria. Avda Valdecilla s/n. C.P.: 39008-Santander, Cantabria, Spain. Breastfeeding coordinator, IBCLC. Hospital Universitario Marqués de Valdecilla, 39008 Santander, Spain. E-mail address: carolina.lechosa@scsalud.es.

2 Faculty of Nursing. University of Cantabria. Avda Valdecilla s/n. C.P.: 39008-Santander, Cantabria, Spain. IDIVAL, Grupo de Investigación en Derecho Sanitario y Bioética, GRIDES, C/ Cardenal Herrera Oria s/n. C.P., 39011-Santander, Cantabria, Spain. E-mail address: maria.paz@unican.es Phone number: 0034 677984506

3 Faculty of Law. University of Cantabria, Avda. de los Castros s/n. C.P., 39005-Santander, Cantabria, Spain. IDIVAL, Grupo de Investigación en Derecho Sanitario y Bioética, GRIDES, C/ Cardenal Herrera Oria s/n. C.P., 39011-Santander, Cantabria, Spain. E-mail address: joaquin.cayon@unican.es

4 Faculty of Medicine. University of Cantabria, Avenida del Cardenal Herrera Oria 2, 39010 Santander, Cantabria, Spain. CIBER Epidemiology and Public Health (CIBERESP), Madrid, Spain. E-mail address: javier.llorca@unican.es

5 Faculty of Medicine. University of Cantabria, Avenida del Cardenal Herrera Oria 2, 39010 Santander, Cantabria, Spain. Head of the Pediatrics Section in the Hospital Universitario Marqués de Valdecilla, 39008 Santander, Spain. IDIVAL, C/ Cardenal Herrera Oria s/n. C.P., 39011-Santander, Cantabria, Spain. E-mail address: mariajesus.cabero@unican.es

ABSTRACT

Background: It is clear that breastfeeding is the gold standard of infant feeding because of the many advantages it offers to both the child and the mother.

Objective: to identify the main reasons for cessation breastfeeding declares by the mother themselves during the first year.

Design: A prospective cohort study was conducted, recruiting 969 newborns in a third level hospital in Spain. The main maternal variables studied were: maternal age, parity, educational level, work occupation, smoking habit, gestational age, birth, weigh, feeding type, and duration of breastfeeding. All the participants were followed for a year to determinate the duration of breastfeeding and to know the reason of the abandonment.

Results: At 6 months, the percentage of maternal lactation was cut in half and only 24.6% of these mothers maintain. Mainly 15.80% of the mothers decide to give up the exclusive maternal lactation of their own free desire, and 15.41% because they suspect hypogalactia. The work cause is the third reason of abandonment in both cases.

Conclusions: Our results show the need to improve the health policies of promotion, protection and support the initiation of breastfeeding. In particular, our results show the importance of the work factor with particular emphasis on improving conciliation measures.

KEY WORDS

Breastfeeding; Evidence-based Nursing; Health Promotion; Women's Health; Newborn.

INTRODUCTION

It is clear that breastfeeding is undoubtedly the gold patron for infant feeding due to the many advantages that it offers to both, the infant and the mother [1-4].

In this way, from the perspectives of public policies, the World Health Organization (WHO) adopted both the Global Strategy on Diet, Physical activity and Health (2004) and the Action Plan to Implement the Global Strategy for Prevention and the Control of Non-Communicable Diseases (2008), including the promotion of breastfeeding and complementary feeding among the interventions to reduce the common modifiable risk factors for non-communicable diseases, highlighting maternal and child nutrition as a priority intervention area [5,6].

Likewise, the comprehensive implementation plan on maternal infant nutrition and young children (2014) includes as the World Goal nº 5 for 2005 to increase the breastfeeding rate of exclusive breastfeeding in the first 6 months of life to at least 50% [7].

Equally, in the field of national scientific societies, The Academy of Medicine, The American Academy of Pediatrics (AAP) and The Spanish Association of Pediatrics (AEP), recommend exclusive breastfeeding for up 6 months and to continue together with complementary feeding for two 2 years or more [8,9].

From the perspective of its effective implementation, according to the map published in 2016 by UNICEF, the highest rates of exclusive breastfeeding in the world are presented by the South Asian countries with 60% followed by the East and South Africa with 57% [10, 11]. In Europe, in the study carried out by Bagi Bosi, the data of 53 European Members States of the WHO were investigated, finding a wide disparity in rates. Nine out of 21 countries (a big quantity of countries did not provide any data) had an initiation rate higher than 50%. The lowest prevalence was observed in Bulgari (5%) and Serbia (8%), and the highest in Kirgizstan (Asia) where 84% of infants started the breastfeeding 1 hour after birth.

For the 4th month, the percentages are as follows: From 2% of Bulgari and 3.7% of Poland to 56.1% of Kyrgyzstan (Georgia) and 52.4 of Croatia. To the 6th month, Greece, Finland and United Kingdom only reach 1% in opposition to 49% of Slovakia and a 44% of Hungary. To the year, the highest rate was in Uzbekistan with 78%, followed by Turkmenistan with 6% and the lowest rate was for Greece with 65 and Tajikistan with 1% [12].

Regarding the current prevalence in Spain, we found limitations in its determination due to we have not an adequate official record of follow-up and monitoring of breastfeeding. The main sources of information about the percentage of breast fed children are the Health Survey by interview according to the 2017 national health survey. 74% of mothers continue to breastfeeding at six weeks. Subsequently, there is a decrease at 6 months when only 9% of them continue to breastfeed [13].

Having established these premises, numerous factors have been describe which can influence both the onset and the duration if the breastfeeding: Higher maternal education [14, 15], parity [16], delivery at term [2], vaginal delivery [17, 18], the skin to skin contact between mother and child just after the birth [21], the previous experience, the non-separation of the binomial mother-child and the breastfeeding education received [19, 21, 22].

In this way, the objective of our study was to identity the main reasons for cessation breastfeeding declares by the mother themselves during the first year, for later check it if there was a correspondence with others studies and indicate possible causes of a possible divergence.

MATERIALS AND METHODS

A prospective cohort study was carried out recruiting 970 consecutive newborns in a third level hospital in the North of Spain from 1st January, 2018 to 31th August, 2018.

Data source:

The data analyzed in this studio were obtained from the medical history of the newborn and the mother. The main maternal variables studied were maternal age, parity, educational level, work occupation and smoking habit. The neonatal variables studied were gestational age, birth weigh, feeding type and duration of breastfeeding. All the participants were followed for a year to determinate the duration of breastfeeding and to know the reason of the abandonment were classified as: maternal desire, low milk supply, weaning of the child, medical contraindication and labor cause.

Statistical analysis:

For the categorical and discrete variables, proportions with their corresponding IC, were estimated at 95% (IC 95%) using the Pearson`s Chi square test to compare, or alternatively the Fisher`s exact test if more than 20% of fields had a number of cases less than or equal to 5. For continuous variables, the mean and the standard derivation (SO) were estimated. The Kolmogorov-Smirnov`s test was used to determinate the normality of the distribution. Odds-Ratios (OR) were estimated with their 95% confidence intervals using unconditioned logistic regression. The Alpha error was 0.05 and all the values of "p" were bilateral.

Ethical-Legal Considerations:

The study was probed by the Clinical Research Ethics Committee of Cantabria the 21th July, 2017 (project identification code 2017.142). During the stay hospital after the birth, parents were informed about the existence of the study and they were also request to sign consent to participate in it. All subjects gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki. The data was pseudo-anonymized and processed in a confidential way according to the regulation (UE) 2016/679, 27th April, 2016 on the protection of natural persons with regard to personal data processing and free movement

of this data and the organic law 3/2018, 5th December about personal data protection and guarantee of digital rights. Each patient was identified with a unique specific code making compatible the confidentiality and the follow-up of medical data.

Likewise, specific security measures were taken to prevent the re-identification and the Access of unauthorized third parties.

RESULTS

The descriptive data of the cohort were previously published [20]. The age of the mothers was 33.7 ± 5.2 years, with a rank between 17 and 52 years old. 53.48 % were primiparous. 36.9% (n=350) studied at the university and about 70% were active workers. 1.5% were smokers with a consumption of approximately 7.2 cigarettes per day. In the descriptive analysis of the employment situation of the puerperal women according to the type of infant feeding method, no statistically significant differences were found [20].

In relation to the newborns 50.52% were male and 49.48% were female. The main gestational age at the birth moment was 39.09 ± 1.96 . 93.81% were delivery at term, 4.02 were late preterm deliveries and 2.17% were premature deliveries. The average weight of newborns was 3244.55 ± 572.33 grams with a rank from 870 to 4840 grams [20].

The prevalence of exclusive maternal lactation at the moment of the discharge from hospital (at 48 hours of life) was 53.40%. Following the evolution of the prevalence in 12 months studied, we can see a considerable drop of the exclusive maternal lactation between the 3-4 months leading to formula feeding. In such a way that at 6 months the percentage of maternal lactation was cut in half and only 24.6% of these mothers maintain it against 49.8% of formula feeding. At 12 months, only 24.67% of mothers continue to breastfeed their children (table 1).

The main reasons for this abandonment are shown in table 2. Mainly 15.80% of the mothers decide to give up the exclusive maternal lactation of their own free desire and 15.41% because they suspect low milk supply. If we talk about the mothers who chose a mixed feeding, the main causes are the same: 16.7% suspected low milk supply and 16.1% maternal desire. The labor cause is the third reason of abandonment in both cases.

DISCUSSION

The exclusive breastfeeding rate in the newborns at the time of hospital discharge was 54.95%, being this, lower than in other communities and also being far away from the required one by the IHAN initiative that establishes at least 75% of exclusive breastfeeding from the birth to the hospital discharge.

In Madrid, the ELOIN cohort published an exclusive breastfeeding prevalence of 77.6% [23], in Aragon the CALINA study 8.25% (24), in Guipuzcoa the INMA cohort was 84.8% [25], in Murcia 91.2% [26] and in Valencia community the Malam project was 81% [27].

Our study shows a drop in the breastfeeding between 3 and 4 months. In such a way that at 6 months, only 24.56% maintain an exclusive breastfeeding. This data agree with the ELOIN study carried out in Madrid where the exclusive breastfeeding rate was 25.4% [23]. In Aragon, CALINA study obtained a lower rate 54.3% but higher than in Guipuzcoa where the INMA study obtained only 15.4% [25].

In this case of mothers who began an exclusive breastfeeding, the main reasons of low milk supply (15.4%), labor causes (9, 83%). The percentages are very similar in the mixed feeding.

Our results do not match with the data obtained in the National Studies regarding the reasons for cessation breastfeeding. In the ELOIN study the most common reasons to abandon the breastfeeding are lack of milk (36%), and incorporation to work (25, 9%). In the INMA study the main reason is the labor one (31.1%) followed by the hypogalactia (19.4%).

The differences founded could be due to various aspects. First of all, the maternal desire to abandon breastfeeding can be influenced by the social and cultural context in which the mother lives, being grandmothers a key in the support and the intergenerational transmission of breastfeeding [28-30]. Sometimes, maternal desire is given by a lack of family and social support. More qualitative studies are needed to delve into maternal decisions.

The diagnosis of hypogalactia is the second aspect. The hypogalactia is a term frequently misinterpreted by mothers when they believe that their children are left hungry. Poor milk production can be caused by somatic and psychological factors. Morton, proposes 3-level classification: Preglandular (hormonal, nutritional or systematic causes), glandular (primary or secondary hypoplasia), postglandular (mother-child separation and inadequate emptying of the breast) [31].

The health personnel who take the real causes of hypogalactia in order to help these, others in the management and so to avoid unwanted abandonment.

Third aspects that we must not forget are the psychosocial factors which can influence milk production provoking a postglandular hypogalactia [32].

To end, in relation to the labor cause, it is really important to underline the impact that legislation has on the matter. UNICEF, has expressly highlighted the importance of the enactment of national laws reworking paid maternity leave or world breaks for

breastfeeding, protected by convention 183 of the International Labor Organization of the year 2000 [11,33].

In this way, maternity leave in Spain is 16 weeks [34]. If we compare it with other countries of Europe, we can see that in Sweden for example, the maternity leave is 180 days (16 months) where it is not only shared by the father and the mother but also they receive 80% of their salary during the first 390 days. In Bulgari, mothers have a maternity leave of 410 days receiving the full salary and having the possibility to extend it for 3 years. In this case, they will receive a percentage of their salary during the second year and nothing during the third one. Albania, United Kingdom, Bosnia and Montenegro, have 365 days (a full year). Norway has 315 days (about 10 months), Greece has 301 days (42 weeks; 10 months), Ireland has 294 days (42 weeks; Almost 10 months) [35, 36].

According to the data published in the standardized survey, the national breastfeeding initiatives committees in 11 European countries, at 6 month, the countries with the highest rate were Norway (71%), Sweden (61%) and Germany (57%) [37].

The incorporation of the mother to the world of work puts exclusive maternal lactation in risk, forcing mothers to incorporate formula milk or complementary feeding during their working hours. If mothers have a part-time work, they could do that, but if they have a full-time work they will probably have to abandon it.

It has been demonstrated in numerous previously published studies that paid maternity leave contributes to the promotion and support of exclusive breastfeeding up to 6 months [38-47]. In the studio published by Gramdahl, the maternity leave during the first 24 months ($p<0.001$) is associated with a longer duration of breastfeeding [44].

CONCLUSIONS

Our results show the need to improve the health policies of promotion, protection and support the initiation and continuation of breastfeeding. In particular, our results show the importance of the labor factor with particular emphasis on improving conciliation measures that allow mothers, if they so desire, to maintain an exclusive maternal lactation up to 6 months and also be able to continue with the supplementary feeding up to 2 years or more (maintenance of lactation).

In any case, further research into the causes of breastfeeding cessation is recommended, as it is essential for designing programmes to help these mothers to continue breastfeeding if they wish to do so.

Limitations

In studies based on secondary information (records), one of the main limitations is the lower quality of the information. This lower quality could be due to a lack of agreement in information provided through different records or to an insufficient completion of the histories required for the study. To minimize these biases, the variables that are collected in a more homogeneous, systematic and objective way in the electronic medical records were chosen a priori. Likewise, prior to the definitive inclusion of the variables, the concordance between the data from the different sources used was assessed.

Funding

This research has been subsidized by the Valdecilla Health Research Institute (IDIVAL). Project awarded as the best project to be developed in Cantabria in the 19th call for research projects "Enfermería Valdecilla". The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Acknowledgments

We are grateful to all the families who volunteered to participate in this study, and to the nurses in the maternity ward who helped gather the data: Elsa Cornejo del Rio, María Sáez de Adana and Sonia Mateo Sota.

Author Contributions

Conceptualization, Carolina Lechosa-Muñiz, María Paz-Zulueta, Joaquín Cayón De Las Cuevas, Javier Llorca and María Jesús Cabero; Data curation, Carolina Lechosa-Muñiz and María Paz-Zulueta; Formal analysis, Carolina Lechosa-Muñiz, María Paz-Zulueta and Javier Llorca; Funding acquisition, Carolina Lechosa-Muñiz and María Jesús Cabero; Investigation, Carolina Lechosa-Muñiz, María Paz-Zulueta, Joaquín Cayón De Las Cuevas, Javier Llorca and María Jesús Cabero; Methodology, Carolina Lechosa-Muñiz, María Paz-Zulueta, Joaquín Cayón De Las Cuevas, Javier Llorca and María Jesús Cabero; Project administration, Carolina Lechosa-Muñiz, María Paz-Zulueta, Javier Llorca and María Jesús Cabero; Writing – original draft, Carolina Lechosa-Muñiz, María Paz-Zulueta, Joaquín Cayón De Las Cuevas, Javier Llorca and María Jesús Cabero; Writing – review & editing, Carolina Lechosa-Muñiz, María Paz-Zulueta, Joaquín Cayón De Las Cuevas, Javier Llorca and María Jesús Cabero.

Conflict of interest

The authors declare not to have any conflict of interest.

REFERENCES

1. Gertosio, C.; Meazza, C.; Pagani, S.; Bozzola, M. Breastfeeding and its gamut of benefits. *Minerva Pediatr.* 2016, *68*, 201–212.
2. World Health Organization (WHO). Short-Term Effects of Breastfeeding: A Systematic Review on the Benefits of Breastfeeding on Diarrhoea and Pneumonia Mortality. Available online: https://apps.who.int/iris/bitstream/handle/10665/95585/9789241506120_eng.pdf?sequence=1&isAllowed=y (accessed on 1 June 2020).
3. Horta, B.L.; Loret de Mola, C.; Victora, C.G. Long-Term Consequences of Breastfeeding on Cholesterol, Obesity, Systolic Blood Pressure and Type 2 Diabetes: A Systematic Review and Meta-Analysis. Available online: <https://onlinelibrary.wiley.com/doi/epdf/10.1111/apa.13133> (accessed on 1 June 2020).
4. Islami, F.; Liu, Y.; Jemal, A.; Zhou, J.; Weiderpass, E.; Colditz, G.; Boffetta, P.; Weiss, M. Breastfeeding and breast cancer risk by receptor status—A systematic review and meta-analysis. *Ann. Oncol.* 2015, *26*, 2398–2407.
5. World Health Organization (2004). Global Strategy for Infant and Young Child Feeding (WHA57.17). Available online: <https://apps.who.int/iris/bitstream/handle/10665/42590/9241562218.pdf?sequence=1> (accessed on 1 June 2020).
6. World Health Organization (2008). Prevention and control of noncommunicable diseases: implementation of the global strategy (WHA61.14)). Available online: <https://www.who.int/ncds/governance/2008-resolution-which-endorsed-GAP.pdf?ua=1> (accessed on 1 June 2020).
7. World Health Organization (2014). Comprehensive implementation plan on maternal, infant and young child nutrition (WHO/NMH/NHD/14.1). Available online:

https://apps.who.int/iris/bitstream/handle/10665/113048/WHO_NMH_NHD_14.1_eng.pdf?sequence=1&isAllowed=y (accessed on 1 June 2020).

8. Holmes AV, McLeod AY, Bunik M. ABM Clinical Protocol #5: Peripartum breastfeeding management for the healthy mother and infant at term, revision 2013. *Breastfeed Med.* 2013;8(6):469-73.
9. Asociación Española de Pediatría (AEP) Recomendaciones sobre lactancia materna del comité de lactancia materna de la Asociación Española de Pediatría [Recomendaciones sobre lactancia materna del comité de lactancia materna de la Asociación Española de Pediatría]; Available online: <https://www.aeped.es/comite-lactancia-materna/documentos/recomendaciones-sobre-lactancia-materna-comite-lactancia-materna>. (accessed on 1 June 2020).
10. Proyecto de la UE sobre la Promoción de la lactancia en Europa. Protección, promoción y apoyo de la Lactancia en Europa: plan estratégico para la acción. 2004.
11. UNICEF. From the First Making the case for From the First. 2016. 1–104 p. Available online: <http://data.unicef.org/resources/first-hour-life-new-report-breastfeedingpractices/>
12. Bagci Bosi AT, Eriksen KG, Sobko T, Wijnhoven TM, Breda J. Breastfeeding practices and policies in WHO European Region Member States. *Public Health Nutr.* 2016;19(4):753–764.
13. Ministerio de Sanidad, Servicios Sociales e Igualdad. Instituto Nacional de Estadística. Encuesta Nacional de Salud 2017. Available online: http://www.ine.es/ss/Satellite?L=es_ES&c=INESeccion_C&cid=1259926698156&p=1254735110672&pagename=ProductosYServicios%2FPYSLayout
14. Craighead DV, Elswick RK., Jr The influence of early-term birth on NICU admission, length of stay, and breastfeeding initiation and duration. *JOGNN.* 2014;43:409–421. doi: 10.1111/1552-6909.12472. [PubMed] [CrossRef] [Google Scholar]
15. Busck-Rasmussen M, Villadsen SF, Norsker FN, Mortensen L, Andersen AM. Breastfeeding practices in relation to country of origin among women living in Denmark:

- a population-based study. *Matern Child Health J.* 2014;18:2479–2488. doi: 10.1007/s10995-014-1486-z.
16. Griffiths LJ, Tate AR, Dezateux C. The millennium cohort study child health group: The contribution of parental and community ethnicity to breastfeeding practices: evidence from the millennium cohort study. *Int J Epidemiol.* 2005;34:1378–1386. doi: 10.1093/ije/dyi162.
 17. Apostolakis-Kyrus K, Valentine C, DeFranco E. Factors associated with breastfeeding initiation in adolescent mothers. *J Pediatr.* 2013;163:1489–1494. doi: 10.1016/j.jpeds.2013.06.027.
 18. Häggkvist AP, Brantseter AL, Grjibovski AM, Helsing E, Meltzer HM, Haugen M. Prevalence of breast-feeding in the norwegian mother and child cohort study and health service-related correlates of cessation of full breast-feeding. *Public Health Nutr.* 2010;13(12):2076–2086. doi: 10.1017/S1368980010001771.
 19. Leung GM, Ho LM, Lam TH. Maternal, paternal and environmental tobacco smoking and breastfeeding. *Paediatr Perinatal Epidemiol.* 2002;16(13):236–245. doi: 10.1046/j.1365-3016.2002.00426.x.
 20. Lechosa-Muñiz C, Paz-Zulueta M, Del Río EC, Sota SM, Herrero MS, Pérez MM, et al. Impact of maternal smoking on the onset of breastfeeding versus formula feeding: a cross-sectional study. *Int J Environ Res Public Health.* 2019;16(24):4888. doi: 10.3390/ijerph16244888.

21. Bramson L, Lee JW, Moore E, Montgomery S, Neish C, Bahjri K, et al. Effect of early skin-to-skin mother-infant contact during the first 3 hours following birth on exclusive breastfeeding during the maternity hospital stay. *J Hum Lact.* 2010;26:130–137. doi: 10.1177/0890334409355779.
22. Cohen SS, Alexander DD, Krebs NF, Young BE, Cabana MD, Erdmann P, et al. Factors associated with breastfeeding initiation and continuation: A Meta-Analysis. *J Pediatr.* 2018;203:190–196.e21. doi: 10.1016/j.jpeds.2018.08.008.
23. Ramiro MD, Ortiz H, Ca CA, Jesús M, Olcina E, Cortés O, et al. Prevalencia de la lactancia materna y factores asociados con el inicio y la duración de la lactancia materna exclusiva en la Comunidad de Madrid entre los participantes en el estudio ELOIN. 2018;89(1):32–43.
24. Cuadrón Andrés L, Samper Villagrasa MP, Álvarez Sauras ML, Lasarte Velillas JJ, Rodríguez Martínez G. Prevalencia de la lactancia materna durante el primer año de vida en Aragón. Estudio CALINA. *An Pediatr.* 2013; 79(5):312–8.
25. Oribe M, Lertxundi A, Basterrechea M, Begiristain H, Marina S, Villar M, et al. Prevalencia y factores asociados con la duración de la lactancia materna exclusiva durante los 6 primeros meses en la cohorte INMA de Guipúzcoa. *Gac Sanit.* 2015; 29(1):4-9.
26. Ortega García JA, Pastor Torres E, Martínez Lorente I, Bosh Gimenez V, Quesada López JJ, Hernandez Ramon F, et al. Proyecto Malama en la región de Murcia (España): medio ambiente y lactancia materna. *An Pediatr (Barc)*, 2008; 68:447-453.
27. Rius JM, Ortuño J, Rivas C, et al. Factores asociados al abandono precoz de la lactancia materna en una región del este de España [Factors associated with early weaning in a Spanish region]. *An Pediatr (Barc)*. 2014;80(1):6–15.

28. Angelo BHB, Pontes CM, Sette GCS, Leal LP. Knowledge, attitudes and practices of grandmothers related to breastfeeding: a meta-synthesis. *Rev Lat Am Enfermagem*. 2020 Feb 14;28:e3214. doi: 10.1590/1518-8345.3097.3214. PMID: 32074204; PMCID: PMC7021479.
29. Rodriguez Vazquez R, Losa-Iglesias ME, Corral-Liria I, Jiménez-Fernández R, Becerro-de-Bengoa-Vallejo R. Attitudes and Expectations in the Intergenerational Transmission of Breastfeeding: A Phenomenological Study. *J Hum Lact*. 2017 Aug;33(3):588-594. doi: 10.1177/0890334417703062. Epub 2017 Jun 5. PMID: 28582630.
30. Negin J, Coffman J, Vizintin P, Raynes-Greenow C. The influence of grandmothers on breastfeeding rates: a systematic review. *BMC Pregnancy Childbirth*. 2016 Apr 27;16:91. doi: 10.1186/s12884-016-0880-5. PMID: 27121708; PMCID: PMC4847220.
31. Comité de lactancia materna de la Asociación Española de Pediatría. *Manual de Lactancia Materna. De la teoría a la práctica*. Madrid: Editorial Médica Panamericana; 2008.
32. Machado MC, Assis KF, Oliveira Fde C, et al. Determinants of the exclusive breastfeeding abandonment: psychosocial factors. *Rev Saude Publica* 2014;48(6):985–994.
33. International Labour Organizstion, *Maternity Protection Convention, 2000 (No. 183)* [(consultado el 14 de septiembre de 2020)]; Available online:https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C183
34. Real Decreto-ley 6/2019, de 1 de marzo, de medidas urgentes para garantía de la igualdad de trato y de oportunidades entre mujeres y hombres en el empleo y la ocupación. Available online: <https://www.boe.es/eli/es/rdl/2019/03/01/6/con>
35. *Maternity and Paternity at work: Where do mothers get more leave?* [Internet]. Available online: http://www.ilo.org/global/about-the-ilo/multimedia/maps-and-charts/WCMS_241698/lang--es/index.htm

36. OECD [Internet]. Available online: <http://www.oecd.org/gender/data/length-of-maternity-leave-parental-leave-and-paid-father-specific-leave.htm>
37. Rimes KA, Oliveira MIC, Boccolini CS. Maternity leave and exclusive breastfeeding. *Rev Saude Publica*. 2019 Jan 31;53:10. doi: 10.11606/S1518-8787.2019053000244. PMID: 30726491; PMCID: PMC6390669.
38. Theurich MA, Davanzo R, Busck-Rasmussen M, Díaz-Gómez NM, Brennan C, Kylberg E, Bærug A, McHugh L, Weikert C, Abraham K, Koletzko B. Breastfeeding Rates and Programs in Europe: A Survey of 11 National Breastfeeding Committees and Representatives. *J Pediatr Gastroenterol Nutr*. 2019 Mar;68(3):400-407. doi: 10.1097/MPG.0000000000002234. PMID: 30562307.
39. Monteiro FR, Buccini GDS, Venâncio SI, da Costa THM. Influence of maternity leave on exclusive breastfeeding. *J Pediatr (Rio J)*. 2017 Sep-Oct;93(5):475-481. doi: 10.1016/j.jped.2016.11.016. Epub 2017 Jul 21. PMID: 28734689.
40. Navarro-Rosenblatt D, Garmendia ML. Maternity Leave and Its Impact on Breastfeeding: A Review of the Literature. *Breastfeed Med*. 2018 Nov;13(9):589-597. doi: 10.1089/bfm.2018.0132. Epub 2018 Sep 25. PMID: 30256125.
41. Huang R, Yang M. Paid maternity leave and breastfeeding practice before and after California's implementation of the nation's first paid family leave program. *Econ Hum Biol*. 2015 Jan;16:45-59. doi: 10.1016/j.ehb.2013.12.009. Epub 2014 Jan 22. PMID: 24508006.
42. Steurer LM. Maternity Leave Length and Workplace Policies' Impact on the Sustainment of Breastfeeding: Global Perspectives. *Public Health Nurs*. 2017 May;34(3):286-294. doi: 10.1111/phn.12321. Epub 2017 Mar 10. PMID: 28295576.
43. Dagher RK, McGovern PM, Schold JD, Randall XJ. Determinants of breastfeeding initiation and cessation among employed mothers: a prospective cohort study. *BMC Pregnancy Childbirth*. 2016 Jul 29;16(1):194. doi: 10.1186/s12884-016-0965-1. PMID: 27472915; PMCID: PMC4966748.

44. Grandahl M, Stern J, Funkquist EL. Longer shared parental leave is associated with longer duration of breastfeeding: a cross-sectional study among Swedish mothers and their partners. *BMC Pediatr.* 2020 Apr 14;20(1):159. doi: 10.1186/s12887-020-02065-1. PMID: 32290823; PMCID: PMC7155253.
45. Cortés-Rúa L, Díaz-Grávalos GJ. Early interruption of breastfeeding. A qualitative study. *Enferm Clin.* 2019 Jul-Aug;29(4):207-215. English, Spanish. doi: 10.1016/j.enfcli.2018.11.003. Epub 2019 Jan 9. PMID: 30638896.
46. Strang L, Broeks M. Maternity Leave Policies: Trade-Offs Between Labour Market Demands and Health Benefits for Children. *Rand Health Q.* 2017 Jan 1;6(4):9. PMID: 28983432; PMCID: PMC5627638.
47. Smith HA, O'B Hourihane J, Kenny LC, Kiely M, Murray DM, Leahy-Warren P. Early life factors associated with the exclusivity and duration of breast feeding in an Irish birth cohort study. *Midwifery.* 2015 Sep;31(9):904-11. doi: 10.1016/j.midw.2015.04.015. Epub 2015 May 5. PMID: 26001950

Table 1. Prevalence of breastfeeding and its evolution during 12 months.

Moment	Type of feeding	n	%	95% CI
Hospital discharge	Exclusive breastfeeding	518	53.40	50.21 56.59
	Mixed feeding	272	28.04	25.16 30.92
	Formula feeding	174	17.94	15.47 20.40
	Human milk donated	6	0.62	0.07 1.16
2 months	Exclusive breastfeeding	427	44.06	40.89 47.24
	Mixed feeding	183	18.89	16.37 21.40
	Formula feeding	299	30.86	27.897 33.82
	missing	60	6.19	4.62 7.76
4 months	Exclusive breastfeeding	354	36.53	33.45 39.62
	Mixed feeding	64	16.93	14.51 19.34
	Formula feeding	387	39.94	36.80 43.07
	missing	64	6.61	4.99 8.22
6 months	Exclusive breastfeeding	238	24.56	21.80 27.32
	Mixed feeding	183	18.89	16.37 21.40
	Formula feeding	483	49.85	46.65 53.05
	missing	65	6.71	5.08 8.34

9 months	Exclusive breastfeeding	0	0	-	-
	Mixed feeding	318	32.82	29.81	35.83
	Formula feeding	573	59.13	55.99	62.28
	Human milk donated	77	7.95	6.19	9.70
12 months	Exclusive breastfeeding	0	0	-	-
	Mixed feeding	239	24.67	21.90	27.43
	Formula feeding	642	66.25	63.23	69.28
	missing	88	9.08	7.22	10.94

Table 2. Main reasons for cessation breastfeeding.

	Exclusive breastfeeding				Exclusive Breastfeeding /mixed feeding				
	n	%	95% CI		n	%	95% CI		
Continue breastfeeding									
Yes	205	34.50	35.20	43.20	299	37.56	34.14	40.99	
No	284	58.08	53.60	62.55	497	62.44	59.01	65.86	
Reasons for cessation									
Maternal desire	82	15.80	12.57	19.03	129	16.21	13.58	18.83	
Low milk supply	80	15.41	12.21	18.62	133	16.71	14.05	19.36	
Labour case	51	9.83	7.17	12.48	74	9.30	7.22	11.38	
Weaning Child	26	5.01	3.04	6.98	41	5.15	3.55	6.75	
Contraindication	4	0.77	0.21	1.96	5	0.63	0.20	1.46	
Missing	71	13.68	10.63	16.73	115	14.45	11.94	16.95	