

<http://dx.doi.org/10.5546/aap.2017.eng.412>

**To cite:** Otero P. Sharenting... should children's lives be disclosed on social media? *Arch Argent Pediatr* 2017;115(5):412-413.

## REFERENCES

1. Ammari T, Kumar P, Lampe C, et al. Managing children's online identities: How parents decide what to disclose about their children online. Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems; 2015: ACM. [Accessed on: May 19<sup>th</sup>, 2017]. Available at: [http://yardi.people.si.umich.edu/pubs/Schoenebeck\\_ManagingChildrensIdentities15.pdf](http://yardi.people.si.umich.edu/pubs/Schoenebeck_ManagingChildrensIdentities15.pdf)
2. Duggan M, Lenhart A, Lampe C, et al. Parents and Social Media. Pew Research Center. Internet & Technology; 2015. [Accessed on: May 19<sup>th</sup>, 2017]. Available at: <http://www.pewinternet.org/2015/07/16/parents-and-social-media/>.
3. Jacobs R, Boyd L, Brennan K, et al. The importance of social media for patients and families affected by congenital anomalies: A Facebook cross-sectional analysis and user survey. *J Pediatr Surg* 2016;51(11):1766-71.
4. Blum-Ross A, Livingstone S. Sharenting, parent blogging, and the boundaries of the digital self. *Popular Communication* 2017;15(2):110-25.
5. American Academy of Pediatrics. Researchers Caution About Potential Harms of Parents' Online Posts about Children. 2016. [Accessed on: May 15<sup>th</sup>, 2017]. Available at: <http://www.aap.org/en-us/about-the-aap/aap-press-room/pages/researchers-caution-about-potential-harms-of-parents-online-posts-about-children.aspx>.
6. Grupo de Trabajo de Informática. Los pediatras, los padres, los niños e Internet. Sociedad Argentina de Pediatría. [Accessed on: May 15<sup>th</sup>, 2017]. Available at: [http://www.sap.org.ar/docs/ninos\\_internet.pdf](http://www.sap.org.ar/docs/ninos_internet.pdf).
7. Holloway D, Green L, Livingstone S. Zero to eight. Young children and their internet use. London: EU Kids Online; 2013. [Accessed on: May 19<sup>th</sup>, 2017]. Available at: [http://eprints.lse.ac.uk/52630/1/Zero\\_to\\_eight.pdf](http://eprints.lse.ac.uk/52630/1/Zero_to_eight.pdf)
8. Council On Communications and Media. Media Use in School-Aged Children and Adolescents. *Pediatrics* 2016;138(5):e20162592.
9. Lupton D, Williamson B. The datafied child: The dataveillance of children and implications for their rights. *New Media Society* 2017;19(5):780-94.
10. Keith BE, Steinberg S. Parental Sharing on the Internet: Child Privacy in the Age of Social Media and the Pediatrician's Role. *JAMA Pediatr* 2017;171(5):413-4.

---

## Breastfeeding as a biological dialogue

When we were writing up the first article in the 2016 Lancet Breastfeeding Series, my colleague Simon Murch (a British pediatrician) came up with a remarkable sentence: *"breast milk is the ultimate personalized medicine"*.<sup>1</sup> Since then, I have been referring to the mother-infant interaction during breastfeeding as a *"biological dialogue"*, in which the child passes information to the mother about its needs, and the mother responds by altering the quantity and composition of her milk. Multiple mechanisms are involved in this exchange of information, and we are still scratching the surface of the biology of lactation. The article by Pannaraj and colleagues, in *JAMA Pediatrics*,<sup>2</sup> fills a gap in the literature by quantifying how bacteria present in breast milk and in areolar skin contribute to the development of the infant's microbiota, and how the latter is specific to the microbial communities in the infant's mother, when compared to other nursing women.

For quite some time, we have known about the anti-infective properties of breast milk –lactoferrin, lysozymes, antibodies, oligosaccharides are only a few of the components that help prevent and fight infections in the

infant. Recent studies show the presence of microRNA, stem cells, cortisol and tens of other biologically active pathways.<sup>1</sup> If such compounds and cells are present in breast milk, they must play a role that was shaped during evolution –even though we may not yet know how these operate.

Breast milk certainly has epigenetic effects, although again we are yet to understand who these operate, and what is their importance.<sup>3</sup> The early initiation of breastfeeding, within one hour of birth, has important effects on survival that are independent of the duration of exclusive breastfeeding,<sup>4</sup> and that may well be explained at least in part by its effects on gene activation and on the oral and gut microbiome. Regarding the latter, we are only starting to understand how the microbiome of breastfed infants may affect their immune and neurological systems, the latter through pathways that include serotonin, cytokines and bacteria-produced metabolites.

Thus, we know many ways through which the mother can communicate with the infant through breastmilk, but do infants also communicate with mothers? They certainly do so, at least regarding how strongly they suckle and how

much milk they drink, as milk production is largely determined by feeding intensity. More recently, it has been proposed that at infant saliva –containing microRNA among other substances– may be sucked back into the nipple through a vacuum effect created by the mouth, thus providing a feedback loop to the mother. While this is still speculative, I would not be at all surprised if this is yet another way through which the child communicates back to its mother during breastfeeding. ■

*Cesar Victora, M.D.*

Universidade Federal de Pelotas, Brasil

<http://dx.doi.org/10.5546/aap.2017.eng.413>

**To cite:** Victora C. Breastfeeding as a biological dialogue. *Arch Argent Pediatr* 2017;115(5):413-414.

## REFERENCES

1. Victora CG, Bahl R, Barros AJ, et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet* 2016;387(10017):475-90.
2. Pannaraj PS, Li F, Cerini C, et al. Association between breast milk bacterial communities and establishment and development of the infant gut microbiome. *JAMA Pediatrics* 2017;171(7):647-54.
3. Hartwig FP, Loret de Mola C, Davies NM, et al. Breastfeeding effects on DNA methylation in the offspring: A systematic literature review. *PLoS One* 2017;12(3):e0173070.
4. NEOVITA Study Group. Timing of initiation, patterns of breastfeeding, and infant survival: prospective analysis of pooled data from three randomised trials. *Lancet Glob Health* 2016;4(4):e266-75.