

Bridging the Gap Between Lactation Care and Research in Human Lactation

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Experienced lactation support providers have likely been practicing their craft as long as humans have been giving birth and breastfeeding. Despite this, the healthcare field of lactation support by International Board Certified Lactation Consultants and other lactation support specialists has only relatively recently been introduced into healthcare systems. The integration of lactation support into healthcare has been encumbered in several ways. The lingering effects of formula marketing strategies directed at both healthcare providers and parents have conflated the process of providing infant nutrition to feeding a baby at the breast. In medical care settings, this has created a failure to differentiate between the biological, nutritional, and emotional components of direct breastfeeding at the breast, and providing human milk or commercial milk substitutes through other means (not at the breast). As a result, the loss of full feeding at the breast is not always defined as a breastfeeding problem, but can be incorrectly be construed as a change in feeding plans or patterns. This makes it more complicated to define it as an issue that requires treatment.

The goal of healthcare providers is to deliver evidence-based care. Yet, partly due to the difficulty in defining what constitutes a breastfeeding problem, the evidence base for breastfeeding support is still only partially formed. There remain challenges stemming from the prevalence of formula marketing, its relatively recent emergence as a research focus, and its roots in community-driven breastfeeding peer support groups dependent on community knowledge that has not yet been tested. This can leave clinical lactation support providers with limited or conflicting resources to guide their decision-making when caring for breastfeeding couples. Several articles in this issue of the *Journal of Human Lactation* contribute directly to the clinical evidence base for lactation support practitioners, filling this gap in clinically relevant, evidence-based practice research.

Many breastfeeding parents, particularly in countries that lack adequate family leave policies, engage in milk expression—often with the use of an electric breast pump.

An improperly fit flange (the part of the pump that fits over the breast and nipple) can contribute to pain and inefficient milk extraction, yet many lactation support providers have not received training in flange fitting. In this issue, Lisa Anders, Jeanette Mesite Frem, and Thomas McCoy investigate the impact of flange sizing on milk output and comfort during breast pumping in their article “Flange Size Matters: A Comparative Pilot Study of the Flange FITS™ Guide versus Traditional Sizing Methods” (Anders et al., 2024). In it, they highlight that traditional “standard-fit” flange sizing methods, often based on nipple base measurements, may not provide optimal results for many parents. They found that using smaller-fit flanges was associated with higher comfort levels and improved milk output compared to standard-fit flanges. Their study underscores the need for an individualized approach to flange fitting, emphasizing the importance of trialing multiple sizes during pumping sessions. This promising start to our understanding of flange fit provides a much-needed basis for the clinical care of lactating parents who are either using both pumped and at breast feeding techniques, exclusively pumping their milk for their own child, or who choose to pump so that they can provide donations of human milk to other infants.

Maya Nakamura has led a series of papers that have explored nipple trauma, and she has two papers in this issue. In “Development of Nipple Trauma Evaluation System with Deep Learning” (Nakamura, Sugimori, & Ebina, 2024) she and her team present the development of a system for deep learning that could be used for identifying and classifying

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nipple trauma in breastfeeding mothers using medical images. The Artificial Intelligence (AI) model presented in this paper was able to detect different levels of trauma—like fissures, peeling, and scabbing—with a high degree of accuracy, offering a way to assess damage that traditionally relies on subjective human evaluation. This could be particularly important for educational purposes or in areas with limited breastfeeding support available. In her second article, “Systematic Review on the Efficacy of Moisturizing Therapy in Treating Nipple Trauma and Nipple Pain” (Nakamura, Luo, & Ebina et al., 2024) she and her team categorize the different types of treatment for nipple trauma into high moisturization, moderate moisturization, and low moisturization. In their systematic review, they found that those interventions using high moisturization appeared to be associated with better results when compared to low moisturization interventions.

These studies and others in this issue serve to directly advance the field of lactation support and demonstrate what happens when we bring practitioners and researchers closer together. In order to move the field forward, practitioners must be encouraged to see their observations as valuable data, worthy of systematic study. Researchers must actively seek to collaborate with those on the front lines, ensuring their work is grounded in real-world practice and an understanding of the clinical breastfeeding problems that make up lactation support visits. Institutions and professional organizations can play a critical role by creating mentorship opportunities, providing training in research design and scientific writing, and funding studies that address gaps in lactation knowledge.

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