Breastfeeding and Lactation Consulting

Julia Scadden

Honors Capstone Project

Fay W. Whitney School of Nursing

University of Wyoming

May 13, 2022

PICOT Question:

In postpartum women (P), how does education provided from a lactation consultant about the common problems associated with breastfeeding (I) compared to no breastfeeding education (C), affect breastfeeding duration (O)?

Introduction

Breastfeeding is a common feeding practices utilized around the world, and it has been proven to be the best source of nutrition for newborn babies. There are many benefits to breastfeeding both for the newborn and the mother. For example, benefits for the infant include the decreased risk for asthma, obesity, Type I Diabetes, sudden infant death syndrome (SIDS), and necrotizing enterocolitis (NEC) for preterm infants (Centers for Disease Control and Prevention [CDC], 2021). For mothers, breastfeeding can lower the risk of high blood pressure, Type II Diabetes, ovarian cancer, and breast cancer (CDC, 2021). Despite all of these benefits, the rates of exclusive breastfeeding are below the recommended guidelines. For this reason, the PICOT question researches the common problems associated with breastfeeding and how education on those problems provided by a lactation consultant could increase the duration of breastfeeding.

Background

Breastfeeding Guidelines

The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) created guidelines and recommendations for breastfeeding duration. The main recommendation is that "children initiate breastfeeding within the first hour of birth and be exclusively breastfed for the first 6 months of life" (World Health Organization, 2018, p. 1). Exclusive breastfeeding can be further defined as the infant is not provided any other food or

liquids including water (WHO, 2018). In addition, the World Health Organization recommends that infants should be breastfed on demand and as often as the child desires (WHO, 2018). Lastly, after the first 6 months of exclusive breastfeeding, other complementary foods can be introduced while breastfeeding can be continued for up to 2 years of age (WHO, 2018).

Another recommendation that the World Health Organization has introduced is that breastfeeding should be encouraged even during difficult circumstances. For example, some difficult circumstances for infants include low birth weight, premature birth, and malnourishment. Other circumstances in which breastfeeding is especially recommended is for adolescent mothers, mothers who are HIV positive and are receiving antiretroviral treatment (ART), and for families suffering the consequences of complex emergencies (WHO, 2018). Breastfeeding during these circumstances may be more complex and require more attention from lactation consultants.

Baby-Friendly Hospital Initiative

The World Health Organization and UNICEF have also collaborated on guidelines that are recommended to be implemented in hospitals in order to best support breastfeeding women. The guidelines are known as the "Ten Steps to Successful Breastfeeding" and they are a part of the Baby-Friendly Hospital Initiative. The Ten Steps from the World Health Organization (2018, p. 1) are:

1. a) Comply fully with the *International Code of Marketing of Breast-milk Substitutes* and relevant World Health Assembly resolutions.

   b) Have a written infant feeding policy that is routinely communicated to staff and parents.

   c) Establish ongoing monitoring and data-management systems.

2. Ensure that staff have sufficient knowledge, competence, and skills to support breastfeeding.
3. Discuss the importance and management of breastfeeding with pregnant women and their families.
4. Facilitate immediate and uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth.
5. Support mothers to initiate and maintain breastfeeding and manage common difficulties.
6. Do not provide breastfed newborns any food or fluids other than breast milk, unless medically indicated.
7. Enable mothers and their infants to remain together and to practice rooming-in 24 hours a day.
8. Support mothers to recognize and respond to their infants' cues for feeding.
9. Counsel mothers on the use and risks of feeding bottles, teats, and pacifiers.
10. Coordinate discharge so that parents and their infants have timely access to ongoing support and care.

These guidelines help to create a hospital environment that supports breastfeeding women during the start of their breastfeeding journey which has been proven to be effective in improving overall breastfeeding rates and breastfeeding duration after hospital discharge (WHO, 2018).

Types of Lactation Support

In general, there are many qualified professionals available to provide lactation support to breastfeeding women. One example of lactation support providers includes primary care providers. These healthcare providers receive unspecified breastfeeding education through their

general training programs but are still able to provide valuable breastfeeding education (Chetwynd, Wasser & Poole, 2019).

Another example of lactation support comes from peer counselors. This type of support is unique because these counselors gain skills and understanding of breastfeeding through their own personal experiences and can offer women advice and education based on their own journey with breastfeeding (Chetwynd, Wasser & Poole, 2019). Women can access this support through local breastfeeding support groups and through state funded programs like Women, Infant, and Children (WIC) (Office on Women's Health, 2021). Although this type of breastfeeding support is extremely valuable, peer counselors have a limited scope of practice because many have not received formal education on breastfeeding from a certified educator (Chetwynd, Wasser & Poole, 2019).

The third main type of lactation support being provided is from lactation specific healthcare providers. This type of lactation support can be broken down further into three types of professionals: doulas, certified lactation counselors (CLCs), and International Board-Certified Lactation Consultants (IBCLCs). A doula is a professionally trained birth support person that offers emotional and social support during pregnancy, labor, and birth, and postpartum and can be trained to provide breastfeeding support as well (Office on Women's Health, 2021). Certified lactation counselors or CLCs are another kind of lactation specific healthcare provider. These counselors are qualified to educate women on basic problems associated with breastfeeding and the challenges and questions that accompany those problems (Office on Women's Health, 2021). They receive specific breastfeeding training that is not very extensive but covers the most common issues women can face while breastfeeding. The most qualified lactation support provider is the International Board-Certified Lactation Consultants (IBCLCs). These consultants

obtain the highest level of knowledge and skill in breastfeeding support and are equipped to provide breastfeeding education and support for a variety of different lactation issues (Office on Women's Health, 2021). The PICOT question focuses on the lactation specific healthcare providers, specifically the International Board-Certified Lactation Consultants, as they have received more well-rounded education related to breastfeeding and are better qualified to provide evidence-based lactation support.

Synthesis: Common Problems Associated with Breastfeeding

Ineffective Latch

One of the most essential aspects of successful breastfeeding is ensuring there is an effective latch, but many women face a variety of challenges with this. In order to generate an adequate latch, the Women, Infant and Children (WIC) Breastfeeding Support program have created guidelines that are easy to follow (2020). To start, the environment in which a woman is breastfeeding is important to consider and being in a quiet, calm place is recommended (WIC Breastfeeding Support, 2020). Another recommendation is that the mother and baby spend time skin to skin prior to the feed which will stimulate the milk producing hormones that will increase milk supply (WIC Breastfeeding Support, 2020). After the environmental conditions have been created, the mother can then follow the steps to accomplish a good latch. First off, the mother should encourage the infant to open their mouth by gently tickling the infant's mouth and the infant's chin should be touching the breast while the nose is pointed toward the nipple (WIC Breastfeeding Support, 2020). Once a latch has been established, the infant should be fully latched onto the breast, not just the nipple, but if the mother is experiencing pain, she should break the infant's suction with her finger and attempt to relatch. Perfecting this latch may take practice and some signs of an effective latch include: the latch is comfortable and pain free, there

is an audible suckle and swallow, and the infant's jaw movement is visible (WIC Breastfeeding Support, 2020).

There are a variety of reasons a mother may experience an ineffective latch including the infant's ability to stay awake, the coordination of suck, swallow and breathe patterns, and certain medical conditions (Cincinnati Children's, 2021). Some specific signs of latch problems seen in the infant include the infant not waking up for feeds, the infant latches and let's go multiple times during the feed, the infant does not suck regularly within the first ten minutes of the feed, and the infant feeds for more than 30 minutes without acting full (Cincinnati Children's, 2021). Other signs of ineffective sucking seen in the mother involve bruised nipples or areolas, dry raw or cracked nipples, flattened, or creased nipples after a feed, and not having breast softness after feeds (Cincinnati Children's, 2021). All of these issues with latching can lead a mother to cease breastfeeding prior to the World Health Organization's 6-month postpartum recommendation.

Insufficient Milk Supply

Another common problem associated with breastfeeding is insufficient milk supply and not knowing if the infant is eating enough milk. There are a variety of different causes of low milk supply such as "waiting too long to start breastfeeding, not breastfeeding often enough, supplementing breastfeeding, an ineffective latch and use of certain medications" (Mayo Clinic, 2020, p. 3). As previously mentioned, the World Health Organization recommends breastfeeding is initiated within 1 hour of birth and if this is delayed, milk supply can be negatively impacted (WHO, 2018). Additionally, it is important that for the first few weeks, mothers should be breastfeeding at least 8 to 12 times a day or every two to three hours (Mayo Clinic, 2020). This frequency of feeding will help stimulate the necessary milk producing hormones and will allow for adequate emptying of the breast. Certain medications, like those that contain

pseudoephedrine, can decrease milk supply and should be avoided whenever possible (Mayo Clinic, 2020). Another important aspect in maintaining milk supply is to not skip breastfeeding sessions and to pump if a session is missed (Mayo Clinic, 2020).

One very important aspect of insufficient milk supply that needs to be considered is that having a low milk supply is quite rare and women actually make one-third more breast milk than their babies can typically consume (Mayo Clinic, 2020). This demonstrates how many women have the misperception of an insufficient milk supply and may require extra education on the signs that the infant is eating enough. For example, some signs of effective feeding include that the infant shows appropriate weight gain, the infant has at least 6 wet diapers a day, and the infant does not demonstrate suckling cues after feeds (WIC Breastfeeding Support, 2020).

Milk Oversupply

One area in relation to milk supply that can create issues with breastfeeding is milk oversupply. Although it may seem counterintuitive, having an oversupply of milk can cause a variety of issues for both mother and infant. Oversupply can be a natural part of a woman's lactation, but there are other outside factors that can contribute to the oversupply like frequently pumping after every feed, offering both breasts during a feeding, or having short, frequent feedings (La Leche League International, n.d.). Some of the signs that the mother has an oversupply of milk involve the infant being restless during feedings, the infant coughing or choking at the breast especially with each let-down, the infant frequently being gassy and having large spit ups, the mother's breasts never feeling empty, and the mother frequently having clogged ducts or mastitis (La Leche League International, n.d.).

There are ways in which a milk oversupply can be managed. For example, changing the position in which the mother is breastfeeding like nursing in an "uphill" manner can utilize

gravity to slow down the flow of milk (Trimeloni & Spencer, 2016). In this position, the mother is sitting upright or leaned back and the infant latches to the nipple above the breast which prevents the overflow of milk into the infant's mouth (Trimeloni & Spencer, 2016). One way to slow down milk production is to initiate block feeding. This style of breastfeeding involves fully pumping both breasts an hour before a usual feeding is to begin (La Leche League International, n.d.). Then, the mother is to only nurse from one breast for each feed in a six-hour time frame, after the six-hour time frame has been met, the mother switches to the other breast (La Leche League International, n.d.). This method of feeding slows the milk volume being produced because "there is less overall stimulation" which triggers the feedback inhibitor of lactation (FIL) and staying at the same breast will ensure the infant is receiving the calorically dense hindmilk (La Leche League International, n.d.).

Breast Engorgement

Additionally, a breastfeeding issue that is closely related to milk oversupply is breast engorgement. Engorgement can be defined as the overfilling of breasts with milk that can result in swollen, hard, and painful breasts and it is especially common in the early days postpartum when effective breastfeeding has not been established (Zakarija-Grkovic & Stewart, 2020). The pain and discomfort associated with breast engorgement along with the difficulty to feed when the breasts are engorged both contribute to the early cessation of breastfeeding. One effective treatment for breast engorgement is to maintain exclusive breastfeeding even if the mother had previously given up exclusive breastfeeding for other reasons (Wong, Leow, & He, 2021). It is important to also ensure the infant feeds at least 8 times in a 24-hour period because this will allow the breasts to be emptied often. Another treatment for engorgement that has been researched is the use of cold cabbage leaves to help soothe the breasts and reduce swelling

(Zakarija-Grkovic & Stewart, 2020). Other effective treatments include cold gel packs, herbal compresses, and massage (Zakarija-Grkovic & Stewart, 2020). Lastly, it is important that mothers are taking care of themselves by eating well, drinking plenty of fluids, and getting adequate amounts of sleep.

Clogged Ducts and Mastitis

In relation to breast engorgement, some of the consequences of failing to resolve breast engorgement include developing clogged ducts and even mastitis. Clogged ducts can occur in any part of the breast including at the nipple or further back in the ductal system and mostly occur during the first few weeks of breastfeeding, but can happen anytime during breastfeeding (Mayo Clinic, 2021). Mastitis in particular is the inflammation of the breast tissue and can be accompanied by infection. The main risk factors for clogged ducts and mastitis include stress, fatigue, anemia, and weakened immune systems (Mayo Clinic, 2021). Other risk factors are inadequate breast emptying, missed feedings, pressure on the breast, and limited time during feedings (Mayo Clinic, 2021). For mastitis, one of the risk factors is having cracked or bleeding nipples because this can serve as an entry point for infection, which is another reason why having an effective latch is important (Mayo Clinic, 2021). Symptoms of clogged ducts range from having hard, painful breasts with a localized red spot, to more systemic symptoms like fever, chills, and body aches which is associated with mastitis (Mayo Clinic, 2021). The pain that accompanies clogged ducts and mastitis contribute to the early cessation of breastfeeding.

The prevention of clogged ducts and mastitis are similar to the methods utilized to prevent breast engorgement including frequent feedings, establishing an effective latch, and breastfeeding in a variety of different positions to allow for more emptying of the breast. In some cases for women who have frequent duct clogs, a supplement of lecithin can be recommended to

reduce the stickiness of the milk and help prevent it from clogging (Mayo Clinic, 2021). Also, research has shown that probiotics can also decrease the prevalence of clogged ducts and mastitis. For mastitis, antibiotics may need to be prescribed especially when the symptoms are systemic and are not alleviating on their own (Mayo Clinic, 2021). Some nonpharmacological treatments for clogged ducts and mastitis include: "rest, increased fluids, a well-balanced diet, heat applied to the breast before feeding, breast massage, and fully emptying the breast during each feed through frequent feeding, hand expression, and pumping in different positions" (Mayo Clinic, 2021, p. 4).

Clinical Practice Recommendations

Currently, there are a variety of different clinical practice recommendations related to breastfeeding and lactation consulting. One study researched the direct impact that lactation consulting from International Board-Certified Lactation Consultants had on exclusive breastfeeding duration. The researchers performed a systemic literature review and utilized an odds ratio to quantify the strength of the association between two events, in this case, receiving lactation consulting and not receiving lactation consulting (Patel & Patel, 2016). The study found that "between 1 month and 3 months, the odds ratio for any breastfeeding versus not breastfeeding being 1.76 with a 95% confidence interval of 1.20 to 2.57" (Patel & Patel, 2016, p. 533). The odds ratio indicates that women who received breastfeeding consulting were 1.76 times more likely to continue breastfeeding between 1 and 3 months when compared to the control group who did not receive breastfeeding consulting. The rates of breastfeeding between 3 and 6 months showed similar statistical significance with the "odds ratio of any breastfeeding versus not breastfeeding being 1.29 with a 95% confidence interval of 1.05 to 1.58" (Patel & Patel, 2016, p. 533). This means that women who received lactation consulting were 1.29 times

more likely to continue breastfeeding between 3 and 6 months when compared to the control group who received no education. This demonstrates that the education provided from an International Board-Certified Lactation Consultant has been statistically proven to increase the duration of breastfeeding when compared to no lactation education.

Another research study utilized a quasi-experimental design in which the experimental group received 6 sessions with a certified lactation consultant over the course of the pregnancy and postnatally, while the control group did not have any education provided (Van Dellen, et al., 2019). This study found that the effect of the breastfeeding education provided on the duration of breastfeeding is significant with the hazard ratio equaling 0.34, the p-value < 0.001 with a confidence interval of 0.18-0.61 (Van Dellen, et al., 2019). The Hazard ratio is a measure of an effect of an intervention on an outcome over a period of time and the p-value indicates that the findings are statistically significant (Van Dellen, et al., 2019). The hazard ratio being less than 1 indicates that the women who received lactation consulting were less likely to have a shortened breastfeeding duration (Van Dellen, et al., 2019). The women in the experimental groups who received lactation consulting had on average a 66% less risk of cessation of breastfeeding before 6 months when compared to the women in the control group (Van Dellen, et al., 2019). This study demonstrates how breastfeeding support provided from a certified lactation consultant increases the duration of breastfeeding and prevents the early cessation of breastfeeding.

For specific clinical practice recommendations, the World Health Organization (WHO) has developed scientifically researched recommendations aimed at increasing the duration of exclusive breastfeeding to the recommended 6 months postpartum. In order to formulate the recommendations, the WHO assessed multiple different research trials aimed at determining the impact lactation consulting has on breastfeeding duration and then compiled the evidence into a

cohesive systematic review (WHO, 2018). The World Health Organizations clinical practice recommendations are as follows (2018, p. 4):

1. Breastfeeding counseling should be provided to all pregnant women and mothers with young children.
2. Breastfeeding counseling should be provided in both the antenatal period and postnatally, and up to 24 months or longer.
3. Breastfeeding counseling should be provided at least six times, and additionally as needed.
4. Breastfeeding counseling should be provided through face-to-face counselling. Breastfeeding counseling may, in addition, be provided though telephone or other remote modes of counseling.
5. Breastfeeding counseling should be provided as a continuum of care, by appropriately trained health-care professionals and community-based lay and peer breastfeeding counselors.
6. Breastfeeding counseling should anticipate and address important challenges and contexts for breastfeeding, in addition to establishing skills, competencies and confidence among mothers.

These recommendations highlight on the importance of lactation consulting being provided throughout the pregnancy and postnatally. Beginning lactation consulting prenatally can significantly improve breastfeeding outcomes because it allows for trust to form between mother and consultant, it lays down the foundation of understanding for the mother, and it provides mothers with the reassurance they need prior to starting breastfeeding (WHO, 2018). In addition, the frequency of lactation consulting is another important aspect to consider because mothers can

face different issues with breastfeeding throughout their breastfeeding journey, not merely in the first couple days postpartum when a significant amount of lactation support is provided by the hospital staff. The visits with lactation consultants should be predictable and scheduled with the opportunity to make extra appointments if immediate problems do arise (McFadden, et al., 2017).

The qualifications of those providing lactation support are also important to consider because in order for the education to be the most beneficial, it should come from those who have trained specifically in lactation consulting. Other additional breastfeeding support, like from a peer counselor, should supplement the support being provided from a certified lactation consultant. Lactation consultants work under specific guidelines that define their scope of practice. In addition, lactation consultants have a professional code of conduct that they base their work around which provides them with the framework for carrying out their essential duties (International Lactation Consultant Association, 2021).

One of the key functions lactation consultants have is supporting women while they are having breastfeeding problems, such as if they have an ineffective latch, insufficient milk supply, milk oversupply, breast engorgement, or clogged ducts and mastitis. For all of these common problems, lactation consultants are qualified to assess the issues, provide solutions and education, and also provide follow up to ensure the problem has resolved. One of the most important aspects of lactation consulting is that the breastfeeding goals of the mother are considered throughout the consulting process and the consultant utilizes their vast education to best support women and families with those goals (McFadden, et al., 2017).

Another clinical practice recommendation for lactation consulting and breastfeeding is that lactation consultants should cater and adapt the education they provide to the needs most

prevalent within the community they work in. For example, in lower income areas, lactation consulting should be made to be more of a common practice. Although there are federal programs that offer infant formula at a reduced cost, breastmilk is still significantly less expensive than infant formula. Interestingly enough, “socioeconomically marginalized populations with low levels of education and income are less likely to breastfeed” than those with higher education levels and incomes (Newhook, et al., 2017, p. 97). This can be attributed to the lack of understanding some mothers may have about the importance of breastfeeding and the overall health benefits breastfeeding has for both the mother and the infant. In addition, one study found that many women who are socioeconomically marginalized would prefer to breastfeed, but do not have access to the necessary support, education, and guidance in order to be successful (Newhook, et al., 2017). With this, women should have the necessary support made available to them in order to breastfeed their infant because low socioeconomic standing should not be a barrier to breastfeeding.

One way in which lactation consulting can be better implemented into practice is offering consultations to mothers during the infant’s regular checkups with their pediatricians. The American Academy of Pediatrics recommends that infants receive check ups at birth, 3 to 5 days after birth and then at 1, 2, 4, 6, 9, 12, 15, 18, and 24 moths of age (MyHealthfinder, 2022). Although the attention is mainly focused on the infant, mothers should also be supported during this time and lactation support should be offered. Implementing this type of lactation support during the infant’s visits can help ensure the common problems associated with breastfeeding are caught early and that interventions can be put in place as efficiently as possible. Lactation consulting has proven to be extremely beneficial and influential to the duration of breastfeeding which is why it needs to be implemented more often.

Impact on Nursing

In general, the impact that breastfeeding and lactation consulting has on the nursing profession is significant. Mother/Baby nurses in particular play a significant role for breastfeeding women because they provide supplemental lactation support to the education the certified lactation consultant provides. Especially in the hospital setting immediately after birth, nurses assist women with the initiation of breastfeeding, and it is important that these nurses receive guidance from certified lactation consultants in order to prevent the spread of misinformation. Also, although many hospitals have certified lactation consultants on the staff, most of the time the mother/baby nurses will be providing a significant amount of the lactation support because they spend the most time performing patient care. In many settings, the nurses directly assist with breastfeeding and if issues occur, the nurse coordinates with the certified lactation consultant on staff and together the two professionals provide the lactation support.

One of the most influential factors that impacts nurses is the Baby-Friendly Hospital Initiative because labor and delivery, postpartum, and NICU nurses are all responsible of knowing The Ten Steps to successful breastfeeding and also implementing those Ten Steps into their own nursing practice. In order for hospitals to be designated as "Baby-Friendly" all staff must have a "minimum of 15 hours of didactic breastfeeding education and 5 hours of hands-on lactation skills training" (Cassar, et al., 2020, p. 225). This training requirement is impactful to nurses because even if a nurse holds other certifications, they still need to receive this additional training in order to comply with the Baby-Friendly Hospital Initiative. The additional education and specialty certifications that nurses hold also impact the assistance they are qualified to provide to breastfeeding women postpartum. One study researched the impact that targeted breastfeeding education provided to perinatal nurses had on the rates of exclusive breastfeeding

and found that nurses who took the Breastfeeding Training Course provided by the Breastfeeding Friendly Consortium (BFC) are better equipped to support breastfeeding women than nurses who did not complete the training program (Cassar, et al., 2020). This specific training course is an online training program many hospitals implement because it is in compliance with the Baby-Friendly Hospital Initiative's 10 Steps for Successful Breastfeeding.

Lastly, one of the main qualifications International Board-Certified Lactation consultants must have is a professional medical background. This is significant for nurses because having a degree in nursing allows nurses to pursue this higher-level certification (International Lactation Consultant Association, 2021). Nurses play unique roles as certified lactation consultants because they can provide care in a variety of settings and are equipped to "make referrals to other healthcare professionals and community support resources" (International Lactation Consultant Association, 2021, p. 5). Additionally, nurses have a well-rounded understanding of the populations they serve and can adapt the education they provide accordingly.

Conclusion

Overall, breastfeeding has been proven to be the most beneficial form of nutrition for newborn infants and its positive health impacts for both mother and infant make it preferrable over infant formula. There are many barriers that can impact the duration of breastfeeding such as ineffective latch, insufficient milk supply, milk oversupply, breast engorgement, or clogged ducts and mastitis. Lactation consultants are extremely influential in the duration of breastfeeding because they are qualified to assess and diagnose these issues as well as provide education on how to resolve them. In addition to clinical support, lactation consultants are able to provide the emotional support and encouragement many women need in order to be successful with breastfeeding. Especially for women in low socioeconomic standing, additional

breastfeeding support and education can drastically improve the duration of breastfeeding and help prevent the cessation of breastfeeding and the switch to infant formula. One of the most influential factors for lactation consultants and breastfeeding in general is the Baby-Friendly Hospital Initiative that promotes conditions that are conducive for breastfeeding within the hospital. Although this has demonstrated significant improvement in the number of mothers that initiate breastfeeding, there needs to be more ongoing support made available to women throughout the 6 months of breastfeeding that is recommended, and also beyond those 6 months. Improving and expanding the access women have to lactation support should be made a priority, especially access to International Board-Certified Lactation Consultants because the education those professionals provide has been proven to increase overall breastfeeding duration.

References

Cassar, L., Bauley, C., Friesen, M., Brannon, M., Brown, L., Cross, T., & Zhou, Q. (2020). The influence of education and specialty certification on nurses' intent to support breastfeeding post-birth. *The Journal of Perinatal Education*, *29*(4), 219–227. https://doi.org/10.1891/J-PE-D-19-00039

Centers for Disease Control. (2021). Breastfeeding. *U.S. Department of Health and Human Services*. https://www.cdc.gov/breastfeeding/index.htm

Chetwynd, E. M., Wasser, H. M., & Poole, C. (2019). Breastfeeding support interventions by international board-certified lactation consultants: A systemic review and meta-analysis. *Journal of Human Lactation*, *35*(3), 424–440. https://doiorg.libproxy.uwyo.edu/10.1177/0890334419851482

Cincinnati Children's. (2021). Breastfeeding: Ineffective latch-on or sucking? *Center for Breastfeeding Medicine.* https://www.cincinnatichildrens.org/health/b/ineffective-latch

International Lactation Consultant Association. (2021). *Guiding documents for IBCLCS.* https://ilca.org/resources/

La Leche League International. (n.d). *Breastfeeding information: Oversupply.* https://www.llli.org/breastfeeding-info/oversupply/

Mayo Clinic. (2020). What causes a low milk supply during breastfeeding? *Healthy Lifestyle: Infant and Toddler Health*. https://www.mayoclinic.org/healthy-lifestyle/infant-and-toddler-health/expert-answers/low-milk-supply/faq-20058148

Mayo Clinic. (2021). Managing plugged ducts, mastitis when breastfeeding. *Speaking of Health.* https://www.mayoclinichealthsystem.org/hometown-health/speaking-of-health/managing-plugged-ducts-mastitis-when-breastfeeding

McFadden, A., Gavine, A., Renfrew, M., Wade, A., Buchanan, P., Taylor, J., Veitch, E., Rennie, A., Crowther, S., Neiman, S., & MacGillivray, S. (2017). Support for healthy breastfeeding mothers with healthy term babies. *Cochrane Database of Systematic Reviews*, *1*(2). https://doi.org//10.1002/14651858.CD001141.pub5

MyHealthfinder. (2022). Make the most of your baby's visits to the doctor. *U.S. Department of Health and Human Services.* https://health.gov/myhealthfinder/topics/doctor-visits/regular-checkups/make-most-your-babys-visit-doctor-ages-0-11-months

Newhook, J., Newhook, L. A., Midodzi, W. K., Murphy Goodridge, J., Burrage, L., Gill, N., Halfyard, B., & Twells, L. (2017). Poverty and breastfeeding: Comparing determinants of early breastfeeding cessation Incidence in socioeconomically marginalized and privileged populations in the FiNaL Study. *Health Equity*, *1*(1), 96–102. https://doi.org/10.1089/heq.2016.0028

Office on Women's Health. (2021). Finding breastfeeding support and information. *U.S Department of Health and Human Services.* https://www.womenshealth.gov/breastfeeding/learning-breastfeed/finding-breastfeeding-support-and-information

Patel, S., & Patel, S. (2016). The effectiveness of lactation consultants and lactation counselors on breastfeeding outcomes. *Journal of Human Lactation, 32*(3), 530–541. https://doi.org/10.1177/0890334415618668

Trimeloni, L. & Spencer, J. (2016). Diagnosis and management of breastmilk oversupply. *J Am Board of Family Medicine, 29*(1). https://www.jabfm.org/content/jabfp/29/1/139.full.pdf

Van Dellen, S. A., Wisse, B., Mobach, M. P., & Dijkstra, A. (2019). The effect of a breastfeeding support program on breastfeeding duration and exclusivity: a quasi-experiment. *BMC Public Health*, *19*(1), 993. https://doi.org/10.1186/s12889-019-7331-y

WIC Breastfeeding Support. (2020). Steps and signs of a good latch. *U.S Department of Agriculture.* https://wicbreastfeeding.fns.usda.gov/steps-and-signs-good-latch

Wong, B., Leow, Q. H., He, H.G. (2021). Factors contributing to discontinuation of breastfeeding prior to six month -- A mixed-methods study. *Singapore Nursing Journal*, *48*(2), 2–12.

World Health Organization. (2018). *Guideline: Counselling of women to improve breastfeeding practices*. https://www.who.int/publications/i/item/9789241550468

Zakarija-Grkovic, I., & Stewart, F. (2020). Treatments for breast engorgement during lactation. *The Cochrane Database of Systematic Reviews*, *9*(9). https://doi.org/10.1002/14651858.CD006946.pub4