

Supporting Mothers to Breastfeed with Peer Support Via Facebook[®]

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Abstract

Breastfeeding provides significant health benefits for mothers and infants, but many women fall short of the breastfeeding goals set by the Healthy People initiative. National guidelines such as the American Academy of Pediatrics, the American College of Obstetrics and Gynecology, the Academy of Breastfeeding Medicine, and the American Academy of Family Physicians recommend exclusive breastfeeding through six months of age. Peer support and education are key components in helping women achieve their breastfeeding goals and improve breastfeeding self-efficacy. A private obstetrics and gynecology office in the Southwestern United States did not routinely provide breastfeeding support. As the number of people using online peer support groups has grown in popularity and with the project site having an existing active Facebook[®] page, a project was created utilizing a private Facebook[®] group for breastfeeding mothers to receive peer support and evidence-based education. Over 12 weeks, evidence-based education postings and discussion prompts were created to encourage conversation upon participants. Sixteen participants made 30 discussion posts. After 11 weeks, three completed the confidential survey and the Breastfeeding Self-Efficacy Scale Short Form, which showed significant levels of breastfeeding self-efficacy. One hundred percent (n=3) of participants accessed the education handouts and found them helpful. Education and peer support results in high breastfeeding self-efficacy which in turn increases breastfeeding duration and exclusivity.

Keywords: breastfeeding, breastfeeding self-efficacy, Facebook[®], peer support, postpartum, postnatal education, postnatal support, self-efficacy

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Exclusive breastfeeding not only is beneficial for the mother, but for the infant as well. Difficulties with breastfeeding typically arise within the first few weeks postpartum. Many times, this leads to cessation of breastfeeding. Postnatal education and having support are two ways for women to achieve their breastfeeding goals. Therefore, it is important for obstetrics and gynecology (OB/GYN) offices to offer a system of support such as with peer support.

Problem Statement

While many women start off their lactation journeys strong, there is a sharp fall of the number of women meeting the breastfeeding goals set by the Healthy People initiative. Breastfeeding has several benefits to the mother and infant. Breastfeeding promotes bonding and emotional development in infants. For mothers, breastfeeding can help lessen the risk of ovarian and breast cancer, type II diabetes, high cholesterol, metabolic syndrome, hypertension, and cardiovascular disease (Binns et al., 2016). When infants are breastfed, it decreases the rate of infections and lowers the risk of atopic dermatitis, gastrointestinal infections, sudden infant death syndrome, acute otitis media, severe lower respiratory disease, asthma, type II diabetes, and obesity (American College of Obstetricians and Gynecologists [ACOG], 2018; Bibbins-Domingo et al., 2016; Binns et al., 2016). Sixty percent of mothers do not breastfeed as long as they intend to and 24.9% of infants born in 2015 were breastfed exclusively through six months of age (Centers for Disease Control and Prevention [CDC], 2020; U.S. Department of Health and Human Services, 2020). A mother's decision to stop breastfeeding is influenced by many factors including problems with latching and lactation, concerns about infant weight and nutrition, taking medications while breastfeeding, unsupportive parental leave and work environments,

lack of family support, cultural norms, and unsupportive hospital policies and practices (Feltner et al., 2018; Odom et al., 2013; Sriraman & Kellams, 2016).

Purpose and Rationale

The World Health Organization (WHO), the Academy of Breastfeeding Medicine (ABM), the American Academy of Pediatrics (AAP), the American Academy of Family Physicians (AFP), and the American College of Obstetricians and Gynecologists (ACOG) recommend exclusive breastfeeding through the first six months of age (ABM, 2008; AFP, 2015; AAP, 2012; ACOG, 2018; WHO, 2018). The WHO (2018) defines exclusive breastfeeding as an infant only receiving breastmilk either on the breast, expressed, or out of a bottle and that no other food or drink including water is given within the first six months of life. Although most infants receive some breast milk, most are not exclusively breastfeeding per the recommended guidelines. Only half of the mothers in the United States exclusively breastfeed up to three months, and only 25.6% at six months (CDC, 2020). Arizona has similar averages to the national average of 24.6% exclusive breastfeeding rate at six months, but this has dropped from recent years (CDC, 2018; CDC, 2020).

By exclusive breastfeeding, families can save on average \$1,500 per year in infant milk formula costs (Association of Women's Health, Obstetric and Neonatal Nurses, 2015).

Additionally, because exclusive breastfeeding decreases infections in infants, families have the potential to miss less work to care of an ill infant (La Leche League International, 2021). In the United States, it is projected that if 90% of families exclusively breastfed for six months, there would be a \$13 billion annual savings from reduced medical and other costs (Bartick, 2011).

Background and Significance

Women Intending to Breastfeed

Intention to breastfeed is an important predictor of actual breastfeeding practices. Awareness, previous experiences, self-efficacy, and barriers all play a role (Brockway et al., 2017; Feenstra et al., 2018). Also, a pregnant women's intention is manifested by maternal knowledge, social norms, sociodemographic status, and attitudes about infant feeding (Raissian & Su, 2018). A mother is more successful not only when intending to breastfeed but values breastfeeding as well. Women who are pregnant and informed about the benefits of exclusive breastfeeding during prenatal visits will more likely value it. Women valuing the benefits to exclusive breastfeed are more likely to exclusively breastfeed for longer durations (Nnebe-Agumadu et al., 2016). Partner support, maternal education, no plans to return to work, and nonsmoking status result in longer durations of exclusive breastfeeding (Nnebe-Agumadu et al., 2016).

Women who previously breastfed have a higher likelihood to breastfeed in subsequent pregnancies with up to 92% of women breastfeeding a second born infant (Bentley et al., 2016; Nnebe-Agumadu et al., 2016). Factors such as lower socioeconomic status and smoking are correlated with a change from breastfeeding in the first pregnancy to formula only feeding in the second pregnancy (Bentley et al., 2016). When women only formula feed a first born, there are less intentions to breastfeed a second born with about 66% of these infants being formula fed (Bentley et al., 2016). By targeting key factors that are associated with the intention to breastfeed, interventions can aim at increasing the prevalence of breastfeeding.

Breastfeeding Barriers

Although the value of breastfeeding is understood, there are many barriers that can make it difficult for women to continue to breastfeed. Lactation problems account for the greatest barrier including cracked and sore nipples, difficulty latching, and perception of insufficient milk

supply causing concerns about infant weight and nutrition (Feenstra et al., 2018; Gianni et al., 2019). Other barriers include lack of knowledge, taking medications while breastfeeding, poor family support, unsupportive hospital policies, cultural norms, and having to return to work (Feltner et al., 2018; Odom et al., 2013; Sriraman & Kellams, 2016). Furthermore, lower self-efficacy and being a first-time mother contributes to breastfeeding obstacles (Feenstra et al., 2018). While experiencing difficulties, only half of women feel support from healthcare providers (Gianni et al., 2019). Healthcare providers may have inadequate knowledge about breastfeeding and their own attitudes and experiences may influence recommendations.

Interventions to Promote Breastfeeding

Many types of interventions have been implemented to increase breastfeeding duration and exclusivity. To help support breastfeeding mothers, many national organizations have action steps including *The Surgeon General's Call to Action to Support Breastfeeding* and Healthy People 2030, which have an objective to increase breastfeeding exclusively through six months of age to 42.4% (U.S. Department of Health and Human Services, 2011; U.S. Department of Health and Human Services, 2020). Women receiving support and breastfeeding education before and after delivery, such as with peer support, antenatal and postnatal classes, and/or meeting with a lactation consultant or healthcare provider, have a higher likelihood to initiate and continue to breastfeed (Cohen et al., 2018). The United States Preventive Services Task Force (USPSTF) recommends interventions by professional support, peer support, and/or formal education (Bibbins-Domingo et al., 2016). Professional support is one-on-one counseling delivered by a healthcare professional (usually in prenatal visits), peer support is one-on-one counseling delivered between mothers going through similar situations, and formal education is

group education classes that can include electronic interventions, telephone support, and/or print and video material (Bibbins-Domingo et al., 2016).

Decision making is highly influenced by social networks. The CDC (2013) supports peer support programs for breastfeeding women. Peer support includes emotional support, reassurance, education, and assistance to help solve problems. New mothers prefer information about child rearing from other mothers making peer support groups a good strategy to encourage breastfeeding (Wright et al., 2004). Increases in initiation, duration, and exclusivity in breastfeeding were noted among women who receive support through peers (Moudi et al., 2016).

Online peer support groups have been gaining momentum to promote breastfeeding as they are more appealing due to being available 24/7 and in-person groups can be more intimidating (Regan & Brown, 2019; Wagg et al., 2019). Telecommunication can also be used to increase contact among peer groups. Researchers have found that belonging to a group helps mothers obtain information, normalizes breastfeeding, and is a way to feel empowerment, reassurance, and have a sense of belonging (Regan & Brown, 2019; Skelton et al., 2018). Online support groups are also beneficial when mothers have lack of support from a partner, family, or healthcare provider. Peer support groups also help women breastfeed longer and help positively impact breastfeeding behavior, understanding, and attitude (Skelton et al., 2018). Online peer support groups are a cost-effective way to provide an infrastructure for breastfeeding education and support. One of the CDC's strategies to support breastfeeding mothers and infants is to create and maintain a sustainable foundation for mother-to-mother support groups (CDC, 2013).

Current Situation of Breastfeeding

Exposure to breastfeeding knowledge occurs during prenatal visits, and once a mother delivers, education occurs in the hospital. During a mother's hospital stay, nurses and lactation

consultants help support breastfeeding. The Affordable Care Act requires most insurance plans to cover recommended breastfeeding support and supplies (like breast pumps), at no cost (Health Resources & Services Administration, 2020). In Arizona, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) offers breastfeeding support, supplementary foods, and nutrition education for low-income pregnant and postpartum women, infants, and children under five years of age. However, in 2017, WIC estimated that there were 280,829 eligible participants, but only 136,852 were enrolled in services (Arizona Department of Health Services, 2019). The federal Family and Medical Leave Act (FMLA) protects eligible employees up to 12 weeks of unpaid leave. Forty percent of the United States workforce is not eligible for FMLA and many women return to work quickly after delivery as they cannot afford to take unpaid time off work (Glynn & Farrell, 2012). When returning to work, many states have regulations to support breastfeeding mothers including providing a sanitary place for mothers to pump and store breastmilk.

Improving Breastfeeding Duration Outcomes

Clinical practice guidelines by the USPSTF, ABM, and ACOG are accessible for all healthcare providers to review and promote breastfeeding in clinical practice. Healthcare providers should educate about the benefits of breastfeeding, provide resources, and include family members in education (Bibbins-Domingo et al., 2016; Crowe & Hanley, 2016; Vanguri et al., 2021). Additionally, ACOG recommends healthcare providers discuss lactation early in pregnancy, gather a breastfeeding history, perform a breast assessment, and counsel on potential breastfeeding complications during prenatal visits (Crowe & Hanley, 2016). Healthcare providers should be a continued resource for breastfeeding assistance during the entire breastfeeding timeframe and utilize a collaborative care model postpartum (Crowe & Hanley,

2016). A collaborative care model means that healthcare providers should be aware of community resources to help women to breastfeed such as with lactation consultants and know when to refer to breastfeeding specialists. A breastfeeding friendly office can be created by educating staff to support, protect, and promote breastfeeding, include artwork and posters supporting breastfeeding, have a written breastfeeding policy, and do not offer literature or samples of artificial infant formula (Vanguri et al., 2021). By using these guidelines, breastfeeding education and support can be implemented into clinical practice.

Internal Evidence

A private OB/GYN office in Southwestern United States reports no standardized practice for providing breastfeeding education prenatally or postpartum. With a lack of maternity care policy and practices that support breastfeeding, patients were not receiving optimal breastfeeding support during prenatal care and after birth. The associated two delivering hospitals does provide a breastfeeding class, but the office itself does not offer antenatal support classes. After delivery, the office schedules patients to return to the office postpartum for a follow-up visit, but there is not a lactation provider on site. Lactation consultants are not available in the office and the office does not advertise itself as breastfeeding friendly. There is not a postnatal breastfeeding support class at the office or at the delivering hospital. But the office has an active social media presence on both Facebook[©] and Instagram[©].

PICOT Question

With the lack of standardized prenatal and postpartum breastfeeding education, lactation staff, and accommodations for breastfeeding patients, patients in the private OB/GYN practice do not get adequate breastfeeding support or education to meet their breastfeeding goals. Therefore, this inquiry has led to the clinically significant PICOT question, in women intending

to breastfeed (P), how does antenatal and/or postnatal education and support (I) compare to only discussing breastfeeding during prenatal visits (C) affect breastfeeding duration (O)?

Search Strategy

To answer the PICOT question, a thorough review of PubMed, CINAHL, and Cochrane Reviews took place. Initial keywords in the searches included terms such as *pregnant women*, *antepartum*, *postpartum*, *education*, *support*, *prenatal visits*, and *breastfeeding*. A broad search on PubMed, CINAHL, and Cochrane Reviews yielded 1,016, 1,798, and 425 results, respectively. Limits were then set to research articles and publication dates from 2015 to 2020. In addition, by adding MESH words such as *maternal*, *mother*, *antenatal*, *antenatal support*, *antenatal education*, *postnatal*, *postnatal support*, *postnatal education*, *breastfeeding duration*, and *breastfeeding success*, lower yields resulted. With limits and the combination of initial terms and MESH terms, PubMed yielded 64 to 171 studies, CINAHL yielded six to 87 studies, and Cochrane Reviews yielded 40 to 106 studies. Review of the grey literature included inquiries from USPSTF, ACOG, CDC, ABM, AFP, AAP, Surgeon General, WHO, and Healthy People. Review of the references in the literature occurred, but the studies were either not relevant to the PICOT or older than 2015.

After evaluating the studies procured in the three database searches, there were 50 relevant studies to the PICOT topic. By using inclusion and exclusion criteria, the studies further reduced to 30. Inclusion criteria included quantitative studies, antenatal and postnatal interventions for breastfeeding, either related to education and/or support, and breastfeeding length, exclusivity, and/or behavior. Exclusion criteria included qualitative studies, studies that did not measure breastfeeding length, exclusivity, or behavior, and studies that did not discuss

breastfeeding related to antenatal or postnatal interventions. By using additional inclusion of high-level of evidence studies, 10 studies resulted.

Critical Appraisal and Synthesis of Evidence

The rapid critical appraisal created by Melnyk and Fineout-Overbolt (2019) facilitated strength and quality of the selected 10 studies. All studies are high quality evidence with five having a level of evidence of I and five having a level of evidence of II. The studies consist of one meta-analysis (MA), one systematic review (SR), three combinations of a SR and MA, and five randomized-control trials (RCT) (see Appendix A, Table A1). The studies are current, from 2016 to 2020. Only one of the 10 studies has bias (see Appendix A, Table A1). None of the researchers stated the framework used in the studies, but it was inferred to be either the integrated theory of health behavior change, social cognitive theory, or the theory of self-efficacy (see Appendix A, Table A1). The tools to measure and analyze the data are heterogenous. For measuring data, the researchers in the 10 studies used strategies such as interviews, surveys, questionnaires, and various tests and scales (see Appendix A, Table A1). Sample demographics were homogenous with the researchers including singleton pregnancies, the mother and infant having no medical problems, and the age range of the mothers from 25 to 35 years old (see Appendix A, Table A1). In six of the 10 studies, researchers included primiparous women in the sample demographics. Additionally, in four of the 10 studies, researchers included women intending to breastfeed. Weaknesses varied between the studies with no commonality (see Appendix A, Table A1). Overall, all the studies are strong and reliable. They have powerful validity noted by high level of evidence and statistically significant outcomes (see Appendix A, Table A1).

The interventions were heterogenous across the studies but had homogenous components. The different interventions occurred in the antenatal and/or postnatal period with education and support either in a home visit, healthcare facility, and/or by telephone (see Appendix A, Table A2). The homogeneous components included peer counseling, telephone calls, breastfeeding counselors, videos, booklets, International Board-Certified Lactation Consultants (IBCLC), professional counseling, or four postnatal interactions. The studies displayed a combination of these interventions to achieve outcomes (see Appendix A, Table A2).

The outcomes were homogenous and included breastfeeding behaviors, attitudes, and breastfeeding at different time frames (see Appendix A, Table A2). All the studies resulted in an increase in breastfeeding duration (see Appendix A, Table A2). Furthermore, of the two studies including breastfeeding behavior and of the three studies that included maternal satisfaction, those improved too. Due to the heterogeneity of the actual interventions, it is difficult to conclude which type of intervention was most helpful in increasing breastfeeding duration and improving breastfeeding behavior and maternal satisfaction. But it is reasonable to assume that receiving either postnatal education and support alone or a combination of antenatal and postnatal education and support makes a significant difference. Antenatal education and support alone were not helpful (see Appendix A, Table A2).

Conclusion from Evidence

To increase breastfeeding duration and exclusivity and provide support to mothers, it is a multicomponent approach with various interventions and team members. Even though there are numerous ways to achieve breastfeeding at different time frames, based on the findings from the literature, either postnatal education and support or a combination of antenatal and postnatal education and support is key. The literature reviewed validates the variety of interventions

studied to improve breastfeeding duration. Not one intervention is better than another. With that said, six of the 10 studies included peer support to improve breastfeeding duration in combination of other interventions, so it warrants further investigation (see Appendix A, Table A2). Therefore, fostering peer support and supplying evidenced-based information and resources should occur to help mothers achieve breastfeeding goals.

Implementation Framework

The implementation framework, Rosswurm and Larabee (1999) model is an evidence-based framework that aims for practice change (see Appendix B). This model was determined to best fit the project due to its simplicity and linear model. The model is valuable because it recognizes the necessity for change, examines the problem by researching evidenced-based evidence, investigates the evidence, looks at the benefits and risks of enacting the change, incorporates creating a strategy for altering current practice, applies the change, assimilates, and continues the change, and assesses if the change was successful (Rosswurm & Larabee, 1999). The project site recognized the need for change to include more breastfeeding support. Thorough review of evidence occurred, where key findings emerged to support the need for change. Based on the evidence, peer support in the postnatal period significantly impacts mother's duration and exclusivity to breastfeed. Due to the project site having an active social media presence and the benefits to breastfeeding with online platforms, the design of the project was created to include a private Facebook[®] breastfeeding peer support group. In fall 2020, the project was implemented and lasted 12 weeks. Outcomes were then evaluated, findings were presented, and sustainability suggestions were offered thus achieving the Rosswurm and Larabee (1999) model.

Theoretical Framework

The theoretical framework most appropriate for the project is the theory of self-efficacy (Bandura, 1997). Self-efficacy is what a person recognizes as the individual capacity to accomplish ambitions and responsibilities (Bandura, 1997). Breastfeeding self-efficacy is a mother's confidence in her ability to breastfeed and has been positively associated with breastfeeding duration and exclusivity. Circumstances, earlier successes and failures, beliefs of breastfeeding, and supposed obstacles can impact whether a mother continues to breastfeed or not (Bandura, 1997). Attainable goals should be set utilizing guidance and examples from peers (Bandura, 1997). Additionally, verbal/written persuasion, vicarious experience, and performance achievement improves self-efficacy (Bandura, 1997).

With verbal/written persuasion, a mother can receive encouragement and positive affirmation through peer support. With vicarious experience, a mother will hear and observe other mothers having a positive breastfeeding experience. Finally, performance achievement occurs when mothers perceive other mothers having success with breastfeeding. Furthermore, Bandura (1997) describes that positive outcome expectations helps improve self-efficacy. For instance, if information provided to mothers and knowledge heard from peers positively highlights the positive advantages to breastfeeding, mothers have a higher likelihood to achieve breastfeeding self-efficacy. Because of this, this theory will be beneficial to not only promote breastfeeding with peer support, but for outcomes measured.

Applying Evidence to Practice

After thorough review of the literature, applying the theory of self-efficacy, and due to feasibility and accessibility, a private Facebook[®] group promoting breastfeeding peer support was created. Peer support improves breastfeeding self-efficacy, which is a strong indicator of women continuing to breastfeed (Bandura, 1997; Dennis, 2003; Minas & Ganga-Limando,

2016). Additionally, the private Facebook[®] group serves as a way for mothers to have access to resources and evidence-based education about breastfeeding.

Project Methods

The purpose of this project was to evaluate breastfeeding self-efficacy after initiation of a breastfeeding peer support group via a private Facebook[®] group. Expedited approval from Arizona State Institutional Review Board (IRB) was received September 2020 (see Appendix C). The setting for the project site was a private OB/GYN office in Southwestern United States. The OB/GYN office has a midwife team that created a brand within the practice with a strong social media presence. Due to the project site having an active Facebook[®] page and evidence showing that online platforms can support breastfeeding, a private group was created to offer peer support and education for breastfeeding mothers. Inclusion criteria included women who are patients of the project site, over the age of 18 years old, speak and write in English, have access to a Facebook[®] account, and be 36 weeks gestation or over or less than 12 weeks postpartum. Before participants could be approved to join the private Facebook[®] group, they answered three questions. This was to verify that participants met the inclusion criteria (see Appendix D, Figure D1). Potential participants were recruited through a recruitment flyer (see Appendix D, Figure D2) and cover letter (see Appendix D, Figure D3) at the project site. Recruitment occurred throughout the entire project timeline. The project team approved members during the project timeframe. The private Facebook[®] group had a disclaimer and group rules which included a statement that advice in the group is by peers and does not substitute medical advice (see Appendix D, Figure D4). As a social media site, Facebook[®] cannot be considered secure or private so by the participant requesting to join the group, they needed to take proper steps to protect their personal information.

To develop the project intervention, three International Board-Certified Lactation Consultants (IBCLC) who are not affiliated with the project site were consulted. The cost of the project intervention was time based. Conducting searches for appropriate breastfeeding education and resources and organizing the information for the Facebook[®] group took on average 46 hours. The creation and set up of the private Facebook[®] group took approximately 30 hours. For 12 weeks, the private Facebook[®] group was moderated, including approving membership, posting educational topics and discussion prompts, and moderating group content, totaling seven hours.

Prior to recruitment, the project sites' staff received information about the project. Individual sessions with the medical assistants (MAs) and healthcare providers occurred at the project site. During the individual sessions, a PowerPoint[®] presentation was reviewed. The presentation provided an overview of the project, participant eligibility, when to handout the cover letter and recruitment flyer, and how to contact the project team. Individual sessions abided by social distancing, CDC SARS-CoV-2 (COVID-19) guidelines, and all individuals wore personal protective equipment. During the rooming process at a patients' already scheduled visit with their healthcare provider, those that met inclusion criteria received a recruitment flyer and cover letter from the MA or healthcare provider. Additionally, the recruitment flyer and cover letter were posted on the project sites' already existing Facebook[®] and Instagram[®] page with a direct link to join the private Facebook[®] group.

Pre-Intervention

The private Facebook[®] group page was created by the project team. The group was a private group on Facebook[®] meaning that non-members could not see who was in the group or what information was shared. Non-members could not join the group without permission from

the project team, see who members were, or see what was posted. Once approved in the group, members could see who was in the group and what was posted, group rules, administrators and moderators, how many posts there were, who members were, and when the group was created. As a social media site, Facebook[®] cannot be considered secure as participants' Facebook[®] name was visible to all members. So, by the participant requesting to join the group, they needed to take the proper steps to protect their personal information. Prior to participants joining, the project team posted themed albums including a resource list and educational topics (see Appendix D, Figure D5). Educational topics included breastfeeding basics, milk supply, latching, common breastfeeding problems, and back to work/pumping/breast milk storage guidelines. These were always available to participants.

Intervention

The project intervention was a peer support breastfeeding Facebook[®] group. The project intervention did not start until at least two participants were enrolled into the private Facebook[®] group. Individuals who were interested in participating self-enrolled by answering the three qualifying questions. These questions were developed to make sure the participants met the inclusion criteria. The project team members accepted or denied participants into the private group. By self-enrolling into the private Facebook[®] group, participants consented to participate in the project. This was stated on the cover letter.

Upon acceptance into the private Facebook[®] group, participants had instant access to the group. They were able to see the information in the about section including the Facebook[®] page disclaimer and the group rules. The disclaimer addressed privacy and security and that the page would be moderated for conversational tone and content. If a medical question were asked, the participants were referred to contact their healthcare provider and no medical advice would be

given by any member of the project team. The group rules were preset rules created by Facebook[®]. A welcome post was posted on the discussion section periodically as new members joined that received face validity.

Participants had access to post and comment on the discussion board. They were able to see an announcement tab, who other members were, and a media section with photos and albums. Themed albums were available that correlated with weekly educational topic discussion posts. A resource list was also posted as a supplemental source for participants (see Appendix D, Figure D6). The resource list received face validity. The resource list and themed educational albums were available for participants to access at any time starting week one. The content was developed based on discussion with three IBCLCs. Educational handouts that were included in this project came from the Office on Women's Health and Lactation Education Resources. Both sites contain disclaimers that these resources can be copied and freely duplicated.

Week one of recruitment, the project team only approved participants when they requested membership and moderated the page. No educational topics were posted week one. The rationale for this was to allow time for participants to join the private Facebook[®] group.

Starting week two, the project team posted weekly educational topics over five weeks every Monday. Each weekly topic included a post on the private Facebook[®] group discussion section to prompt discussion and handouts from the associated album. The weekly educational topics include breastfeeding basics, latching, milk supply, common breastfeeding problems, and back to work/pumping/breast milk storage guidelines. The verbiage that was posted received face validity.

Four weeks into the project intervention, an IRB modification was requested and approved in October and November 2020 to include bi-weekly discussion prompts (see

Appendix D, Figure D7). This was created because no discussion in the private Facebook[®] group had occurred. An IBCLC reviewed the discussion prompts prior to the IRB modification request. The bi-weekly discussion prompts were posted weeks five through 12 and were related to the educational topics such as breastfeeding problems, returning to work, and breastfeeding basics.

Eleven weeks after recruitment started, an anonymous survey link through QuestionPro[®] was posted on the private Facebook[®] group discussion section. The verbiage posted received face validity. The same post was posted again five days later, and then again 10 days after the initial post. Survey participation was voluntary, confidential, and took approximately 10 minutes to complete.

The survey contained questions regarding perceived peer support, demographic data, and breastfeeding self-efficacy. The experience of the Facebook[®] group, delivery information, general information about breastfeeding, and demographic data questions were developed based on studies that used social media to provide breastfeeding peer support (Holtz et al., 2015; Niela-Vilén et al., 2014; Regan & Brown, 2019; Robinson et al., 2019; Skelton et al., 2018). Face validity was obtained. The breastfeeding self-efficacy questions were from a validated tool called the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) created by Dr. Cindy-Lee Dennis (Dennis, 2003). Permission to use was implied as there is no statement in the publication that permission needs to be given by the author prior to use (Dennis, 2003). To assess breastfeeding self-efficacy, Dennis (2003) created a BSES-SF that is 14-item and consists of a 5-point Likert scale where one implies “not at all confident” and five implies “always confident” (see Appendix E). The 14 questions have a positive tone and begin with the phrase “I can always” (Dennis, 2003). The total score of the BSES-SF ranges from 14 to 70, with the greater the score indicating increased breastfeeding self-efficacy (Dennis, 2003). The BSES-SF has strong reliability and

validity. For reliability, the BSES-SF had a Cronbach's alpha coefficient of 0.94, a scale mean of 55.88 (SD = 10.85), and at one, four, and eight weeks postpartum an r value equal to 0.99 (Dennis, 2003). For validity, Dennis (2003) tested construct validity with correlations, group comparisons, and factor analysis and all demonstrated elevated validity of the BSES-SF.

Post-Intervention

The participants were not contacted for a follow up. All data was entered into statistical analysis software Intellectus Statistics™ on a password protected laptop. Descriptive and crosstabulation statistics were ran. After data analysis, all data was deleted and was not banked for future use. The outcomes are measured from the survey data only and include breastfeeding self-efficacy, perceived peer support on the private Facebook® group, and demographic data. In addition, when a participant requested to join the Facebook® group, the information answered to request to join the Facebook® group were copied and pasted into an Excel® spreadsheet with no identifying information. The number of participants and discussion posts were collected but no other data was collected through the discussions on the private Facebook® group page.

The purpose of the information collected was used to determine if peer support via Facebook® was a beneficial method for the project site to provide support for their patients to meet breastfeeding goals. No compensation was given to participants and no additional costs were needed for participation.

Results

Over 12 weeks, 16 participants joined the Facebook® group with a total of 30 discussion posts. Of the 16 participants, three took the confidential survey.

Age, race, ethnicity, work situation, marital status, and breastfeeding experience were homogenous among those that completed the confidential survey (n=3). Homogenous samples

tend to be small and made up of similar cases (see Appendix F, Figure F1). All (n=3) had a singleton, full-term, vaginal delivery, were on maternity leave from full time work, were married, and had a bachelor's degree. None (n=0) had a neonatal intensive care unit (NICU) stay. One participant (n=1) reported health difficulties and was neutral on peer support being helpful with confidence in breastfeeding. The age range of the participants (n=3) was from 21 to 29 years old with all (n=3) the infants being two months of age. Sixty-seven percent (n=2) reported the baby was their first baby, but none (n=3) previously breastfed.

Even with a small homogenous sample, results were clinically significant. All the participants (n=3) were exclusively breastfeeding for two months at the time of the survey. All (n=3) agreed the group was helpful for breastfeeding regardless of it being their first baby, no matter how often they accessed the group, and no matter how long they were in the group. All (n=3) participants accessed the educational handouts and agreed or strongly agreed the handouts were helpful. Sixty-seven percent (n=2) of the participants asked questions, gave advice, responded to peers, and read what others wrote and agreed peer support was helpful for confidence with breastfeeding. Sixty-seven percent (n=2) of the participants accessed the group one to three days a week which was associated with receiving peer support.

The average score on the BSES-SF was 59. This correlates to 100% (n=3) of the participants having a high score reflecting significant levels of breastfeeding self-efficacy ($SD=2.65$; Min= 56; Max= 61). High BSES-SF scores are predictive of longer breastfeeding duration and exclusive breastfeeding patterns. Findings were limited in that breastfeeding initiation was not examined and baseline self-efficacy was not obtained. All the participants (n=3) answered the BSES-SF questions as confident or very confident (see Appendix F, Figure F2). For instance, all (n=3) felt confident to successfully cope with breastfeeding, to manage breastfeeding to their

satisfaction, to keep wanting to breastfeed, to continue to breastfeed even when breastfeeding is time consuming, and to continue to breastfeed the baby for every feeding. Thirty-three percent (n=1) felt confident, and 67% (n=2) felt very confident knowing when the baby was finished breastfeeding.

Discussion

Timing of this private Facebook[®] group was important. Breastfeeding support groups are especially helpful in the first few days after childbirth, although many mothers benefit from longer term participation. Being an online peer support platform, it was easily accessible and cost-effective. Multifaceted interventions with peer support as a main component are an effective way to increase breastfeeding duration (Azimi & Nasiri, 2020; Gupta et al., 2019; Huang et al., 2019; Kim et al., 2018; Laliberté et al., 2016; McFadden et al., 2017; McFadden et al., 2019; Meedya et al., 2017; Puharić et al., 2020; Wouk et al., 2016). This project also has the potential to have a bigger impact among groups with low breastfeeding rates (CDC, 2013). Online peer support platforms create an environment where women can support each other with their feelings about breastfeeding and shared experiences (Wagg et al., 2019). Many women will join online peer support platforms not just for emotional support, but for information, and are more likely to socialize and identify with others with similar backgrounds (Wagg et al., 2019). Being a part of an online peer support platform increases breastfeeding duration and exclusivity (Skelton et al., 2018).

The findings in this project suggest that peer support and evidence-based education have a significant impact on maternal breastfeeding self-efficacy. High levels of breastfeeding self-efficacy are seen within this project's private peer support Facebook[®] group. High self-efficacy scores are associated with longer breastfeeding exclusivity and duration. Breastfeeding self-

efficacy was not only felt for first time mothers, but with mothers who had previous children as well, although those moms did not breastfeed prior. Based on the theory of self-efficacy, interventions designed to enhance breastfeeding self-efficacy will help improve breastfeeding duration and exclusivity. Peer support is helpful with this. When receiving encouragement and perceiving others having success and a positive experience with breastfeeding, self-efficacy will increase. By continuing breastfeeding, bonding occurs and there are long-term health benefits to both the mother and infant. When mothers have strong self-efficacy, there is a greater chance that at five months, mothers are still exclusively breastfeeding (Minas & Ganga-Limando, 2016). This aligns with the Health People 2030 goal of increasing exclusive breastfeeding rates at six months and national organization recommendations by ACOG, AAP, and ABM to exclusively breastfeed through six months of age. Therefore, there is a good probability that because the participants had high breastfeeding self-efficacy scores, they will continue to exclusively breastfeed.

Participants perceived to receive peer support the longer they were in the group and the more times they accessed the group. Even participants that did not access the group often found the private Facebook[®] group helpful to achieve their breastfeeding goals. This shows that an online peer support platform is a sustainable intervention and is not limited to a timeframe. Having access to an online group can be less intimidating, create a sense of belonging, and positively impact breastfeeding behavior, attitude, and knowledge. In the discussion postings, there were emotional support and information exchanged between the participants which was encouraging. Because peer support was received (n=2) and all participants (n=3) reported they found the group helpful for breastfeeding, the use of online peer support platforms can be beneficial for use in clinical practice.

For the first four weeks, none of the participants commented on the educational weekly posts so it could be deduced that the participants just read the information. Participants (n=3) felt that the evidence-based education was helpful for breastfeeding. Healthcare providers can play a role in online peer support groups by providing evidence-based information. Evidence-based education should include topics related to breastfeeding basics, latching, milk supply, breastfeeding problems, and returning to work as 100% (n=3) of participants accessed the handouts. The evidence-based information should stay up to date and come from sources that are reputable such as from Office on Women's Health and Lactation Education Resources.

Overall, the project was impactful. At the end of the intervention, all participants (n=3) had a high breastfeeding self-efficacy score and were exclusively breastfeeding two months postpartum. The project also revealed that healthcare providers can use online platforms such as Facebook[®] to provide breastfeeding support and education. But a group such as Facebook[®] should be an additional supplement, not a replacement. It is important that healthcare providers educate about breastfeeding during office visits and offer additional support such as a referral to an IBCLC as needed. As a system, using an online peer support platform such as Facebook[®] is cost-effective. By offering peer support, this is another service clinical practices can provide which can increase patient satisfaction, reassure patients to continue to be seen at the clinical practice, help gain new patients, and encourage existing patients to have additional pregnancies. Because the results were clinically significant, it also endorses that the project site should become breastfeeding friendly by offering a breastfeeding peer support group.

Limitations in the project exist. The small sample size limits results. Further research with larger samples is needed to understand if there are significant differences in self-efficacy among ethnic groups. Also, the results are homogenous. With a larger sample size, there could

be more heterogeneity in the participants which has potential to distinguish differences. For instance, it is unknown if mothers would be exclusively breastfeeding if the baby was older than two months, if age, education, or marital status impacts breastfeeding, or if mothers would have been exclusively breastfeeding if they had a cesarean section or multiple delivery. Even though the results are homogenous, they represent a specific demographic and can be applied to the same demographic. However, the homogenous results cannot be assumed for others. In addition, there is no baseline data. The benefit of baseline data would have provided an initial breastfeeding self-efficacy score to see if there was an impact from the private Facebook[®] group, peer support, and evidence-based education. The project was also a 12-week timeframe, so it is unknown for how long the participants continue to exclusively breastfeed beyond the project timeframe. While all participants worked full time, everyone was on maternity leave and therefore it is unknown if returning to the workplace would have an impact on breastfeeding self-efficacy. It is unknown whether the mothers will continue to breastfeed once they return to work. Another limitation is unclear commitment to sustain the intervention at the project site. The private group has gained members since the project intervention has stopped but there have been no postings by members. So, it is important for moderators of the group to maintain an active presence.

One challenge during the first four weeks of the project timeframe was no one posted on the discussion board or replied to the weekly evidence-based educational prompts. This could be due to another limitation that Facebook[®] does not allow members to be anonymous in a group. Bi-weekly discussion prompts (see Appendix D, Figure D7) started conversations between participants. Therefore, a recommendation to sustain the intervention would be for the project site's healthcare providers to moderate the private group to routinely post discussion prompts to

help facilitate discussion. Other factors critical to success of peer support programs are leadership by moderators, adequate supervision of the group, and access to IBCLCs and other experts.

Another challenge encountered during the project timeframe was recruitment. It is uncertain how often the recruitment flyer and cover letter were given to eligible potential participants. It is also unclear if the healthcare providers followed up with those who received the recruitment flyer or cover letter to answer additional questions about the group. Additionally, it is unknown how many patients of the project site received information about the page and if they did, why they decided to not request to join. Thus, another recommendation to sustain the project intervention would be for the healthcare providers of the project site to continuously advertise the private Facebook[®] group during office visits, the offices webpage, and/or on the office's active social media page.

There are several opportunities for future research. One potential study could examine mothers breastfeeding self-efficacy returning to the work force. Future research should also look at women that had a difficult delivery, a multiple delivery, or a cesarean section delivery. These factors could possibly have an impact on breastfeeding self-efficacy. For instance, mothers of multiples have a higher incidence of difficulties during pregnancy and birth than those with singletons which can affect breastfeeding. One participant reported to have health difficulties and was neutral with receiving peer support, therefore additional work is needed to find interventions that support this subside population.

In conclusion, healthcare providers should educate and support women to breastfeed. This aligns with multiple national organization recommendations. Peer support and education during the postnatal period has shown to provide support for breastfeeding which in turn can

increase breastfeeding duration and exclusively (Azimi & Nasiri, 2020; Gupta et al., 2019; Huang et al., 2019; Kim et al., 2018; Laliberté et al., 2016; McFadden et al., 2017; McFadden et al., 2019; Meedy et al., 2017; Puharić et al., 2020; Wouk et al., 2016). Promoting peer support and providing education helps breastfeeding self-efficacy which provides confidence to extend breastfeeding duration and exclusively. Healthcare providers can create peer support programs and provide breastfeeding education in clinical practice such as through online platforms. Researchers have found that online platforms help women to feel supported and breastfeed longer (Regan & Brown, 2019; Skelton et al., 2018; Wagg et al., 2019). Healthcare providers can create an online platform that provides education and a safe place to connect breastfeeding women to other breastfeeding women. An online platform such as Facebook[®] is easily accessible and represents a cost-effective approach to promote and support breastfeeding.

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Appendix A

Evaluation and Synthesis Tables

Table A1

Evaluation Table Quantitative Studies

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Azimi, N., & Nasiri, A. (2020). The effect of peer counseling on breastfeeding behavior of primiparous mothers: A randomized controlled field trial.	Inferred to be Integrated Theory of Health Behavior Change	Design: RCT (questionnaire after childbirth at 15 days, 1 mn, 2 mn, and 3 mn) Purpose: Examine how peer counseling in the PP	N: 80 n: 40 (EG) n: 40 (CG- received routine prenatal care) Setting: EG received peer-led counseling in person and the counselor contacted the participant every wk by telephone call Sample Demographics:	IV: Peer counseling DV1: BF behaviors at 15 days DV2: BF behaviors at 1 mn DV3: BF behaviors at 2 mn DV4: BF behaviors at 3 mn Peer Counseling- taught anatomy, BF principles and skills, misinformation and problems related to BF, and face-to-face BF of infant through practice	McNemar's test used to assess mothers' BF behavior in EG prior to and following intervention. Version 19 SPSS software.	Fisher's exact test, independent t test, Chi-square	DV1: p< .001 Mean BF behavior Pre: 13.5 Post: 25.1 DV2: p< .001 Mean BF behavior Pre: 13.5 Post: 25.92 DV3: p< .001 Mean BF behavior Pre: 13.5 Post: 25.97 DV4: p< .001 Mean BF behavior Pre: 13.5 Post: 25.97	LOE: II Strengths: RCT design, and description of EG and CG. Detailed description of picking peer counselors. Weaknesses: Attrition not mentioned. Did not mention breastfeeding exclusivity. Findings in the study can be cultural bound so future studies should look at communities w/ similar cultures.

Key: #- number; **ACG-** active control group; **bc-** because; **BF-** breastfeeding; **BFHI-** baby friendly hospital initiative; **BPNI-** Breastfeeding Promotion Network of India; **BSES-** Breastfeeding Self-Efficacy Scale; **CG-** Control Group; **CI-** confidence interval; **combo-** combined; **cont-** continue; **d/c-** discharge; **decr-** decrease; **DS-** database searched; **DV-** dependent variable; **EBF-** exclusive breastfeeding; **educ-** education; **EG-** Experimental Group; **f/u-** follow-up; **hr-** hour; **IBCLC-** international board-certified lactation consultant; **ICU-** Intensive Care Unit; **IG-** Intervention Group; **incr-** increase; **IV-** independent variable; **LC-** lactation consultant; **LOE-** level of evidence; **MA-** meta-analysis; **min-** minute; **mn-** months; **N-** number of studies (if SR) or participants in study; **n-** number of participants (if SR) or number of participants in subset; **OR-** odds ratio; **PP-** postpartum; **RCT-** Randomized Control Trial; **RD-** risk difference; **RN-** registered nurse; **RR-** risk ratio; **SCG-** standard care group; **SD-** standard deviation; **SR-** systematic review; **SIDA-** Swedish Agency for International Development Agency; **wk-** week **w/-** with; **w/in-** within; **x-** times; **WHO-** World Health Organization; **y.o.-** years old; **yr-** year

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
<p>Funding: Authors did not receive financial support for authorship, research, or publication.</p> <p>Bias: None recognized</p> <p>Country: Iran</p>		<p>period impacts primiparous women's BF behaviors.</p>	<p>Primiparous Iranian women w/ singleton newborn. EG mean age 25.72 +/- 3.4. CG mean age 26.27 +/- 4.29.</p> <p>Inclusion Criteria: willingness to participate, accessibility to counselors, literacy of reading and writing in Persian, singleton newborn, primiparous, no none breast problem or disabling disease, absence of oral or congenital</p>	<p>and video clips. Mothers could contact counselors anytime up to 3 mn PP</p> <p>BF behaviors include suckling style, emotional bond, hugging status, feeding ending, and reactions.</p>				<p>Conclusions: In-person peer counseling PP at 15 days, 1 mn, 2 mn, and 3 mn are an effective way for mothers to have improvement in BF behaviors and BF techniques. Peer counseling is also beneficial. These behavioral changes can help prevent breastfeeding problems.</p> <p>Feasibility/Applicability to population: This study examined a small amount of people, but the success in the EG w/ peer counselors is similar to other studies done previous to this study. Peer counselors PP can be an effective intervention to positively change a mothers BF behavior.</p>

Key: #- number; **ACG-** active control group; **bc-** because; **BF-** breastfeeding; **BFHI-** baby friendly hospital initiative; **BPNI-** Breastfeeding Promotion Network of India; **BSES-** Breastfeeding Self-Efficacy Scale; **CG-** Control Group; **CI-** confidence interval; **combo-** combined; **cont-** continue; **d/c-** discharge; **decr-** decrease; **DS-** database searched; **DV-** dependent variable; **EBF-** exclusive breastfeeding; **educ-** education; **EG-** Experimental Group; **f/u-** follow-up; **hr-** hour; **IBCLC-** international board-certified lactation consultant; **ICU-** Intensive Care Unit; **IG-** Intervention Group; **incr-** increase; **IV-** independent variable; **LC-** lactation consultant; **LOE-** level of evidence; **MA-** meta-analysis; **min-** minute; **mn-** months; **N-** number of studies (if SR) or participants in study; **n-** number of participants (if SR) or number of participants in subset; **OR-** odds ratio; **PP-** postpartum; **RCT-** Randomized Control Trial; **RD-** risk difference; **RN-** registered nurse; **RR-** risk ratio; **SCG-** standard care group; **SD-** standard deviation; **SR-** systematic review; **SIDA-** Swedish Agency for International Development Agency; **wk-** week **w/-** with; **w/in-** within; **x-** times; **WHO-** World Health Organization; **y.o.-** years old; **yr-** year

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
			abnormalities in newborn, ICU admission, and participation in other PP classes Exclusion Criteria: unwillingness to participate, unable to answer phone calls from the counselor and the mother relocating. Attrition: Not disclosed					But to be done on a large scale can be difficult because these peer counselors cannot be paid, so they would need to volunteer their time.
Gupta et al., (2019). Skilled counseling in enhancing early and exclusive breastfeeding rates:	Inferred to be Theory of Self-Efficacy	Design: RCT Purpose: Evaluate effect of BF support and BF counseling	N: 300 n: 150 (IG) n: 150 (CG- routine prenatal care) Setting: Health facility to receive antenatal counseling and at	IV: Antenatal Education and Postnatal Education by BF Counselors DV1: Initiation of BF in hospital w/in 1 hr of birth DV2: EBF at day 3 PP DV3: EBF 3 mn PP DV4: EBF 6 mn PP	Antenatal and postnatal interviews. Pre-structured and pre-tested questionnaire. 24-hr	t-test, Chi-square test	Mothers in IG achieved higher rates of initiation of BF and EBF up to 6 mn PP. At 6 mn PP, 8.4% of mothers in IG were not prone to bottle-feed than mothers in CG (22.9%). 95% CI.	LOE: II Strengths: RCT. Thorough description of how participants were randomized and of the IG intervention design. Nutritionist included in the study received training from

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<p>An experimental study in an urban population in India.</p> <p>Funding: Grant given by SIDA</p> <p>Bias: Three of the authors work w/ BPNI, one of the organizations that organized the study</p> <p>Country: India</p>		<p>g in antenatal and postnatal after deliver and for the first 6 mn PP to determine its effects on EBF.</p>	<p>participants home in postnatal period.</p> <p>Sample Demographics: 300 eligible participants randomized by SPSS software. Socio-demographic characteristics gathered. Most participants in IG and CG had middle and intermediate school, are a homemaker, are Muslim, and live in an urban setting.</p> <p>Inclusion Criteria: 18 yrs or older, gestational age</p>	<p>Antenatal Education by BF Counselors: 2 antenatal visits in hospital. Educated about: benefits of EBF up to 6 mn PP. Showed feeding techniques.</p> <p>Postnatal Education by BF Counselors: 8 PP home visits at 3rd, 7th, 15th day and 2nd, 3rd, 4th, 5th and 6th mn after birth. Each visit was for 20-30 minutes. Counseling included practice EBF, addressed specific BF problems and answered questions.</p>	<p>infant feeding recall as indicated by WHO.</p>		<p>DV1: IG= 73.4% CG=33.6% (p< .001).</p> <p>DV2: IG= 98.6%; CG= 85.6% (CI= 2.71-51.73)</p> <p>DV3: IG= 95.7%; CG= 74.6% (CI= 3.09-18.92)</p> <p>DV4: IG= 88.1%; CG= 50.0% (CI= 0.13-0.62)</p>	<p>the BPNI and had 7-day training from the program called “Infant and Young Child Feeding Counseling: A Training Course”. Study also looked at the amount of mother bottle-feeding and how many EBF up to 6 mn PP.</p> <p>Weaknesses: 31 participants did not receive allocated intervention. Also, more participants were analyzed in IG (135) vs CG (128). This could have skewed results. Additionally, most participants in the IG and CG are homemakers and do not work outside the home.</p> <p>Conclusions: Providing antenatal</p>

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			<p>18 to 22 wks, singleton pregnancy, wants to BF newborn, plan to deliver in hospital, and stay in Aligarh up to 6 mn PP.</p> <p>Exclusion Criteria: Mother w/ medical complications during pregnancy or after delivery and newborn w/ medical complications.</p> <p>Attrition: 15 participants in IG lost to f/u at 6 mn. 22 participants in CG lost to f/u at 6 mn.</p>					<p>counseling is an effective intervention for early initiation in the hospitals for BF and postnatal counseling is effective to sustain EBF up to 6 mn PP.</p> <p>Feasibility/Applicability to population: Resources need to be allocated for establishing counseling services in hospitals and private health facilities. This can be difficult though due to cost, this is not covered by insurance, and this is not a payable service through insurance.</p>

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Huang et al., (2019). Individualized intervention to improve rates of exclusive breastfeeding: A 41 randomized controlled trial. Funding: Authors did not receive financial support for authorship, research, or publication.	Inferred to be Theory of Self-Efficacy	Design: RCT Purpose: Investigate effectiveness of antenatal BF education and postnatal lactation support to improve rates of EBF compared to only doing routine care.	N: 352 n: 176 (IG) n: 176 (CG- routine antenatal and PP care) Setting: West China Second University Hospital and by telephone Sample Demographics: Most had college graduate level education, made an income of 5001-10,000, Did not smoke, was primiparous, and had not previously BF. Inclusion Criteria: Age over 18, greater than 34 wks	IV1: BF video IV2: Hosp visit IV3: LC visit PP IV4: Printed info IV5: 1:1 consult IV6: Monthly phone calls DV1: EBF at d/c from hospital DV2: EBF at 42 days PP DV3: EBF 4 mn PP	BF attrition prediction scale. BF knowledge scale. BF assessment scale. BF knowledge scale. Telephone call once a mn.	Chi-square test, rank sum test	Maternal satisfaction of BF higher in IG than CG (F= 0.98, P= .32) DV1: IG= 43.2%; CG= 30.0%; Relative risk= 1.78; CI= 1.12-2.82; p= .01 DV2: IG= 74.5%; CG= 72.0%; Relative risk= 1.14; CI= 0.68-1.89; p= .62 DV3: IG= 70.9%; CG= 46.2%; relative risk= 2.84 CI= 1.76-4.60; p= .00	LOE: II Strengths: RCT. Description of CG. Description of IG interventions. Measurement tools used. Weaknesses: Researchers provided BF education to IG and study did not state what training they had in BF. Conclusions: A combination of antenatal and postnatal interventions significantly improve EBF at delivery and up to 4 mn PP. Needs to be regularly ongoing to be effective. Feasibility/Applicability to population: Study determined that

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<p>Bias: None recognized</p> <p>Country: China</p>			<p>gestation, and no contraindications for BF</p> <p>Exclusion Criteria: Multiple pregnancies and high-risk pregnancy.</p> <p>Attrition: In IG, 28 dropped out or lost to f/u; In CG, 31 dropped out or lost to f/u.</p>					<p>face to face interaction is more effective at finding problems of BF mothers, but some BF problems can be solved via telephone. Because ongoing visits in person might not be cost-effective, phone calls can help to reduce costs. Medical staff can be trained in lactation and be able to offer support via phone.</p>
<p>Kim et al., (2018). Interventions promoting exclusive breastfeeding up to six months after birth: A systematic</p>	<p>Inferred to be Integrated Theory of Health Behavior Change and Theory</p>	<p>Design: SR and MA</p> <p>Purpose: Review evidence from RCTs to determine how effective</p>	<p>N: 27 n: 36,051</p> <p>DS: Cochrane, EMBASE, PsyINFO, MEDLINE, KoreaMED, CINAHL</p> <p>Inclusion Criteria:</p>	<p>IV1: EBF support intervention IV2: BFHI IV3: Combined intervention IV4: Professional provider led intervention IV5: Intervention during antenatal and PP period</p> <p>DV1: EBF 6 mn PP</p>	<p>The Cochrane Collaboration's Risk of Bias tool. Random Effect Model.</p>	<p>Comprehensive Meta-analysis I2 index</p>	<p>IV1: OR= 2.77; 95% CI: 1.81-3.76</p> <p>IV2: OR= 5.21; 95% CI: 2.15-12.61</p> <p>IV3: OR= 3.56; 95% CI: 1.74-7.26</p> <p>IV4: OR= 2.87; 95% CI: 1.86-4.37</p>	<p>LOE: I</p> <p>Strengths: SR and MA. Many RCTs used. Thorough discussion of interventions. Results of RCTs thorough.</p> <p>Weaknesses: Possible selection bias of studies.</p>

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<p>review and meta-analysis of randomized controlled trials.</p> <p>Funding: National Research Foundation of Korea</p> <p>Bias: None recognized</p> <p>Country: South Korea</p>	<p>of Self-Efficacy</p>	<p>EBF promotion</p> <p>43 randomized results in EBF at 6 mn PP and measure the effects of interventions on EBF duration</p>	<p>Published in Korean or English, RCTs of quasi-randomized and cluster randomized trials, interventions to improve BF, reported EBF at 6 mn</p> <p>Exclusion Criteria: Review studies, conference proceedings, unpublished, gray literature, studies reporting rates of EBF earlier than 6 mn, abstracts, non-RCTs</p>	<p>Combined intervention: prenatal visits, PP visits, and cont of pre and PP visits</p>			<p>IV5: OR= 3.32; 95% CI: 1.83-6.03</p>	<p>Conclusions: Mothers 2.77 x more apt to cont EBF 6 mn PP w/ professional involvement, multicomponent intervention, interventions w/ both community and hospital settings, provider training, and interventions from antenatal to PP period.</p> <p>Feasibility/Applicability to population: Might not be cost-effective to have interventions ranging from antenatal to PP period. Will cost money for provider training and some might not be willing to do it voluntarily.</p>

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<p>Labiberté et al., (2016). A randomized controlled trial of innovative postpartum care model for mother-baby dyads.</p> <p>Funding: BORN, The Ottawa Hospital Research Institute, and Children’s Hospital of Eastern Ontario Research Institute</p>	<p>Inferred to be Theory of Self-Efficacy and Social Cognitive Theory</p>	<p>Design: RCT</p> <p>Purpose: Evaluate maternal satisfaction and EBF rates of mothers attending a new PP community-based clinic helping mothers after 1st mn PP after d/c from hospital</p>	<p>N: 472 n: 157(CG) n: 315 (IG)</p> <p>Setting: PP Clinic</p> <p>Sample Demographics: 30 y.o. or older, primiparous, completed university education, married</p> <p>Inclusion Criteria: Greater than 18 y.o., delivered a singleton infant at gestation age greater than 36wks and 6 days, BF baby in hospital and intended at d/c, no medical problems, and</p>	<p>IV1: Appointment with multidisciplinary clinic 48 hrs after hospital d/c IV2: 6 days/wk clinic open staffed w/ RN, LC, family physician IV3: mothers and babies go to clinic as much as needed IV4: 1-month PP, transitioned to routine care</p> <p>DV1: EBF wk 2 DV2: EBF wk 4 DV3: EBF wk 12 DV4: EBF wk 24</p>	<p>Mother Satisfaction Survey, Socio-Demographic Survey, Postpartum Depression Scale, Breastfeeding Self-Efficacy Scale</p>	<p>Student’s t test, Pearson Chi-square, univariate tests</p>	<p>DV1: EBF in previous 2 wks 65.1% OR= 1.32(0.87-1.99)</p> <p>DV2: EBF in previous wk 65% OR= 1.25 (0.82-1.91)</p> <p>DV3: EBF in previous 2 wks 66.1% OR= 1.28 (0.84-1.95)</p> <p>DV4: EBF in past 2 wks 51.7% OR= 1.24 (0.83-1.86)</p>	<p>LOE: II</p> <p>Strengths: RCT. Designs and procedure described thoroughly. Measurement tools used.</p> <p>Weaknesses: Underpowered study bc rate of CG was 10% higher than expected resulting in effect size of 6%. PP clinic did not prove statistically significant amount of EBF at 12 wks. More participants in IG than CG responded to questionnaires, potentially skewing results.</p> <p>Conclusions: PP care incr EBF and incr maternal satisfaction. W/ higher BSES scores, mothers more likely to</p>

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<p>Bias: None recognized</p> <p>Country: Canada</p>			<p>could be contacted by email or phone</p> <p>Exclusion Criteria: Did not speak French or English, had breast surgery, did not have transport available, birthed a preterm baby or had multiple gestations, did not desire to BF, adoptive mothers, or had a psychological risk.</p> <p>Attrition: F/u data at 12 wks: CG (n=134) and IG (n=295)</p>					<p>EBF at 12 and 24 wks PP.</p> <p>Feasibility/Applicability to population: LC might not be available at PP clinics. Population in the study had higher education so results might differ with at risk socioeconomic population.</p>
McFadden et al., (2017).	Inferred to be Theory	Design: SR	N: 73 n: 74,656	IV1: Trained personnel IV2: Ongoing scheduled visits	GRADE approach	Review Management	DV1: 51 RCTs (n=21418) average RR	LOE: I

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Support for healthy breastfeeding mothers with healthy term babies. Funding: National Institute for Healthcare Research Bias: None recognized Country: United Kingdom	of Self-Efficacy and Social Cognitive Theory	Purpose: Review RCTs to determine effect of supportive interventions on BF duration and what is best supportive 46 randomized	DS: Cochrane Pregnancy and Childbirth's Trials Register, Medline, CINAHL, Embase, Cochrane Central Register of Controlled Trials, BioMed Central; hand searches from major conferences and 30 journals Inclusion Criteria: Quasi-RCTs or RCTs w/ or w/o blinding. Cluster RCTs. Pregnant women w/o prior medical conditions and did not receive cesarean	IV3: Face-to-face support IV4: Support interventions IV5: Postnatal support alone IV6: Antenatal and Postnatal Support IV7: 4 to 8 PP contacts DV1: Stopping any BF up to 6 mn PP DV2: Stopping EBF up to 6 mn PP DV3: Stopping any BF up to 4-6 wks PP DV4: Stopping EBF up to 4-6 wks PP Support includes peer supporters, professionals, or both. Support interventions include praise, information, reassurance, chance to talk about and answer mothers'		er 5 software	0.91; 95% CI 0.88-0.95 DV2: 45 RCTs (n=18591) average RR 0.88; 95% CI 0.85-0.92 DV3: 33 RCTs (n=11264) average RR 0.87; 95% CI 0.80-0.95 DV4: 32 RCTs (n=10960) RR 0.79; 95% CI 0.71-0.89 IV3: <i>With DV1:</i> 24 RCTs (n= 13890) RR 0.92; 95% CI 0.86-0.95 <i>With DV2:</i> 29 RCTs (n= 13905) RR 0.86; 95% CI 0.81-0.90 <i>With DV3:</i> 13 RCTs (n= 5186) RR 0.84; 95% CI 0.75-0.94 <i>With DV4:</i> 16 RCTs	Strengths: SR. Thorough data and analyses. Large sample size. Quality of evidence from studies were moderate. Weaknesses: Did not thoroughly explain how data was measured or analyzed. Conclusions: BF support incr EBF and BF duration. Effective support includes interventions with trained personnel during antenatal and PP care, and ongoing scheduled visits so women can predict when support is available. EBF and any BF more successful with face-to-face support, postnatal support alone and

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			<p>sections. Studies w/ support interventions. Interventions in postnatal period alone or included antenatal aspect.</p> <p>Exclusion Criteria: Interventions only taking place in antenatal period alone. Did not contain support intervention. Women with additional care needs.</p>	<p>questions, and staff training.</p>			<p>(n= 5382) RR 0.68; 95% CI 0.57-0.81</p> <p>IV5: <i>With DV1</i>: 35 RCTs (n= 15570) RR 0.91; 95% CI 0.89-0.95 <i>With DV2</i>: 29 RCTs (n= 11683) RR 0.89; 95% CI 0.84-0.94 <i>With DV3</i>: 22 RCTs (n= 7793) RR 0.83; 95% CI 0.75-0.93 <i>With DV4</i>: 23 RCTs (n= 7764) RR 0.75; 95% CI 0.61-0.93</p> <p>IV7: <i>With DV1</i>: 14 RCTs (n= 3236) RR 0.86; 95% CI 0.77-0.97 <i>With DV2</i>: 16 RCTs (n= 5148) RR 0.73; 95% CI 0.63-0.84 <i>With DV3</i>: 6 RCTs (n= 1088) RR 0.79; 95% CI 0.63-1.00 <i>With DV4</i>: 7 RCTs (n= 1519) RR</p>	<p>between 4 to 8 PP contacts. Supporters can be offered by peer supporter, professionals or both.</p> <p>Feasibility/Applicability to population: Healthcare staff will need to be trained in BF techniques and ways to educate women. Ongoing scheduled visits are not deductible by insurance companies for BF care so practices might not be willing to do this. Might not be cost-effective for practices to do face-to-face if it is free for mothers to attend.</p>

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Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
							0.63; 95% CI 0.48-0.82	
McFadden et al., (2019). Counselling interventions to enable women to initiate and continue breastfeeding: A systematic review and meta-analysis. Funding: WHO Bias: None recognized Country: Scotland	Inferred to be Theory of Self-Efficacy	Design: SR and MA Purpose: Look at RCTs to determine how counselling interventions given directly to women impact BF outcomes .	N: 63 n: 33,073 DS: CINAHL, Medline, Cochrane Trials Register, WHO International Clinical Trials Registry, Embase, and clinicaltrials.gov. Inclusion Criteria: RCT (quasi-RCT and cluster RCT). Pregnant women intending or considering to BF and women initiating or are BF. Interventions included BF counseling. Studies also had	IV1: Counseling IV2: Antenatal only Interventions IV3: Postnatal only Interventions IV4: Antenatal and Postnatal Interventions IV5: 4 or more interactions with intervention IV6: Face-to-Face IV7: Telephone IV8: Interventions with both primiparous and multiparous together DV1: Stop any BF before 4-6 wks PP DV2: Stop any BF before 6 mn PP DV3: Stop EBF before 4-6 wks PP DV4: Stop EBF before 6 mn PP	GRADE approach, Cochrane Handbook for Systematic Reviews of Interventions, Sensitivity analysis.	Reviewer 5 Software	IV1: <i>With DV1</i> : 29 trials; RR= 0.85; 95% CI= 0.77-0.94; Tau ² = 0.03; I ² = 53%; Chi ² = 64.03; p<0.0003 <i>With DV2</i> : 30 trials; RR= 0.92; 95% CI=0.87-0.97; Tau ² = 0.01; I ² = 64%; Chi ² =85.17; p<0.00001 <i>With DV3</i> : 31 trails; RR= 0.79; 95% CI= 0.72-0.87; Tau ² = 0.06; I ² = 87%; Chi ² = 269.19; p<0.00001 <i>With DV4</i> : 33 trials; RR= 0.84; 95% CI= 0.78-0.91; Tau ² = 0.05; I ² = 99%; Chi ² = 2341.08; p<0.00001	LOE: I Strengths: SR and MA. Only reviewed RCTs. 15 cluster-randomized trials and 48 individually randomized trials. Thorough description of methods and results. Weaknesses: Unclear risk of bias with RCTs because of lack of blinding. High heterogeneity. Conclusions: BF counseling is effective at maintaining EBF when delivered at least 4 x in the PP period w/ or w/o antenatal interventions compared to counseling only delivered in antenatal

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			<p>to report at least 1 of the following: # not initiating BF w/in 1 hr of birth; # stopping BF before 6 mn; # stop EBF before 6 mn; # stop any BF before 12 mn; # stop any BF before 24 mn; # infants given prelacteal and additional infant formula, fluids or foods w/in 1st 3 days PP; # infants fed bottles during 6 mn PP.</p> <p>Exclusion Criteria: Non-RCTs, interventions targeted at</p>				<p>IV2: <i>With DV1:</i> 6 trials; RR= 0.86; 95% CI= 0.72-1.03 <i>With DV2:</i> 6 trials; RR= 0.93; 95% CI= 0.88-0.98 <i>With DV3:</i> 6 trials; RR= 0.95; 95% CI= 0.89-1.02 <i>With DV4:</i> 5 trials; RR= 0.98; 95% CI= 0.96-1.01</p> <p>IV3: <i>With DV1:</i> 12 trials; RR= 0.83; 95% CI= 0.69-1.00 <i>With DV2:</i> 18 trials; RR= 0.96; 95% CI= 0.88-1.04 <i>With DV3:</i> 12 trials; RR= 0.71; 95% CI= 0.59-0.85 <i>With DV4:</i> 16 trials; RR=0.88; 95% CI= 0.81-0.96</p>	<p>period or fewer than 4 x. Face-to-face counseling more effective over telephone counseling. Counseling interventions more effective with both primiparous and multiparous women included.</p> <p>Feasibility/Applicability to population: To have face-to-face interventions, staff will need to volunteer their time and go through training to be competent in BF. Might not be cost-effective for practices to pay staff or hire specialists to do antenatal and PP counseling. Practice changes would need to occur to promote the office as BF friendly.</p>

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			healthcare providers, communities or families, interventions that did not include inclusion interventions of multi-component interventions or BF counseling.				<p>IV4: <i>With DV1:</i> 11 trials; RR= 0.91; 95% CI= 0.78-1.05 <i>With DV2:</i> 6 trials; RR= 0.79; 95% CI= 0.67-0.93 <i>With DV3:</i> 16 trials; RR= 0.81; 95% CI= 0.69-0.94 <i>With DV4:</i> 15 trials; RR= 0.71; 95% CI= 0.55-0.93</p> <p>IV5: <i>With DV1:</i> 15 trials; RR= 0.77; 95% CI= 0.66-0.90 <i>With DV2:</i> 16 trials; RR= 0.85; 95% CI= 0.75-0.96 <i>With DV3:</i> 19 trials; RR= 0.69; 95% CI= 0.58-0.82 <i>With DV4:</i> 22 trials; RR= 0.76; 95% CI= 0.66-0.88</p>	

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							<p>IV6: <i>With DV1:</i> 10 trials; RR= 0.86; 95% CI= 0.75-1.00 <i>With DV2:</i> 13 trials; RR= 0.89; 95% CI= 0.81-0.98 <i>With DV3:</i> 13 trials; RR= 0.67; 95% CI= 0.56-0.81 <i>With DV4:</i> 21 trials; RR= 0.74; 95% CI= 0.63-0.87</p> <p>IV7: <i>With DV1:</i> 4 trials; RR= 0.75; 95% CI= 0.61-0.93 <i>With DV2:</i> 2 trials; RR= 0.74; 95% CI= 0.5-1.00 <i>With DV3:</i> 4 trials; RR= 0.72; 95% CI= 0.55-0.95 <i>With DV4:</i> 3 trials; RR= 0.96; 95% CI= 0.83-1.12</p>	

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							<p>IV8: <i>With DV1:</i> 19 trials; RR= 0.87; 95% CI= 0.78-0.96 <i>With DV2:</i> 18 trials; RR= 0.94; 95% CI= 0.89-0.99 <i>With DV3:</i> 20 trials; RR= 0.75; 95% CI= 0.65 to 0.86 <i>With DV4:</i> 23 trials; RR= 0.81; 95% CI= 0.73-0.90</p>	
Meedya et al., (2017). Effect of educational and support interventions on long-term breastfeeding rate in primiparous women: A systematic review and	Inferred to be Theory of Self-Efficacy	<p>Design: SR and MA</p> <p>Purpose: Review RCTs to identify effect professional support and educational interventi</p>	<p>N: 10</p> <p>DS: CINAHL, Medline, Cochrane</p> <p>Inclusion Criteria: Published in English, RCTs, women 18 y.o. or older, intention to BF, primiparous women, studies that examined</p>	<p>IV1: Educational intervention IV2: Support intervention IV3: Combo of education and support</p> <p>DV1: EBF DV2: Any BF</p> <p>Educational intervention: BF educ during pregnancy and/or PP. Some in individual 1:1 or formal group classes.</p>	Standardized critical appraisal tool from Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument	Revman V5.3	<p>DV1: <i>Antenatal Education:</i> n= 2229 (3 RCTS) Anticipated absolute effects 102 per 1,000 (95% CI= 79 to 132) OR= 1.02 (95% CI= 0.77-1.36), p=0.88 Antenatal educ and support: n=459 (1 RCT) Anticipated absolute effects 153 per 1000 (95% CI= 96-234) OR= 1.25</p>	<p>LOE: I</p> <p>Strengths: SR and MA. Good heterogeneity of interventions, methodological quality of trials, and outcome measures.</p> <p>Weaknesses: Could not identify specific effective interventions.</p> <p>Conclusions: Combined antenatal</p>

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<p>meta-analysis.</p> <p>Funding: Authors did not receive financial support for authorship, research, or publication.</p> <p>Bias: None recognized</p> <p>Country: Australia</p>		<p>ons have on BF rates 6 mn PP compared to standard care with primiparous women.</p>	<p>effect of support and educational interventions provided by healthcare providers during antenatal, PP period or both.</p> <p>Exclusion Criteria: Did not meet criteria of mean quality score minus 1 SD, not an RCT, duplicate studies, multiparous women.</p>	<p>Some provided video tapes or booklets.</p> <p>Support interventions: telephone or 1:1 during pregnancy and/or PP.</p>			<p>(95% CI= 0.73-2.10), p=0.43</p> <p><u>Postnatal educ:</u> n= 200 (1 RCT) Anticipated absolute effects 486 per 1000 (95% CI=352-623) OR= 1.24 (95% CI= 0.71-2.16), p=0.46</p> <p><u>Postnatal support:</u> n= 581 (1 RCT) Anticipated absolute effects 49 per 1000 (95% CI=21-107) OR= 1.61 (95% CI= 0.69-3.79), p=0.27</p> <p>DV2: <u>Antenatal educ:</u> n= 2229 (3 RCT) Anticipated absolute effects 620 per 1000 (95% CI=577-660) OR= 0.97 (95% CI= 0.81-1.15), p= 0.71</p> <p><u>Antenatal educ and support:</u> n= 469 (1 RCT) Anticipated</p>	<p>support and educ w/ PP support and educ is useful in incr BF rates at 6 mn PP in primiparous women.</p> <p>Feasibility/Applicability to population: To do antenatal and PP interventions, practices will need to restructure themselves. They might not see this as cost-effective because healthcare providers and staff might need to be paid to come in days to help with support and education unless they are willing to volunteer their time.</p>

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							absolute effects 374 per 1000 (95% CI= 291-464) OR= 0.87 (95% CI= 0.60-1.26), p=0.46 <i>Postnatal educ:</i> n= 150 (1 RCT) Anticipated absolute effects 561 per 1000 (95% CI= 397-710) OR= 0.72 (95% CI= 0.37-1.38), p=0.32 <i>Postnatal support:</i> n= 509 (1 RCT) Anticipated absolute effects 568 per 1000 (95% CI= 481-653) OR= 0.91 (95% CI= 0.64-1.30), p=0.61 <i>Antenatal educ and support combo w/ postnatal educ and support:</i> n= 101 (1 RCT) Anticipated absolute effects 136 per 1000 (95% CI= 40-374) OR= 2.09	

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							(95% CI= 0.55-7.93), p=0.28	
Puharić et al., (2020). The effect of a combined intervention on exclusive breastfeeding in primiparas: A randomized controlled trial. Funding: Authors did not receive financial support for authorship, research, or	Inferred to be Theory of Self-Efficacy and Social Cognitive Theory	Design: RCT Purpose: Determine how BF booklet use and telephone calls would help w/ EBF, BF self-efficacy, and BF attitudes.	N: 400 n: 136 (IG) n: 128 (ACG) n: 136 (SCG) Setting: Obstetric practices Sample Demographics: Majority of participants were, non-smokers, received up to secondary education, employed, lives with partner, makes a high monthly income, owns a flat, intended to EBF, and were 25 to 35 y.o.	IV1: BF booklet IV2: Pregnancy booklet IV3: Telephone calls DV1: EBF at 3 mn DV2: EBF at 6 mn DV3: BF self-efficacy at 3 mn DV4: Attitudes toward BF at 3 mn Telephone calls: 1 during pregnancy, and 3 after delivery at 2, 6, and 10 wks	Infant Feeding Survey, Iowa Infant Feeding Attitude Scale, Breastfeeding Self-Efficacy Scale, Social Support Appraisal Scale-SS-A	Ordinal Regression, Chi-Square Tests, Kruskal-Wallis Test	DV1: EBF 81%; OR 4.6; CI 95% (2.7-8.1) DV2: EBF 64%; OR 15.7; CI 95% (9.1-27.1) DV3: 3 mn 57-70% DV4: Baseline: 60-68% 3 mn: 65-74%	LOE: II Strengths: RCT. 10% of phone calls were assessed by a trained psychologist, separate from the research team to check for fidelity. Interventions were done by a registered nurse with BF training, 15 yrs of clinical experience, and 2 yrs working in primary obstetric care. Attrition was minimal. Weaknesses: Only 1 person did the phone calls and if this person was highly motivated, which is not likely to be achieved in a real setting, this could have not made results accurate for a real-life situation.

Key: #- number; **ACG-** active control group; **bc-** because; **BF-** breastfeeding; **BFHI-** baby friendly hospital initiative; **BPNI-** Breastfeeding Promotion Network of India; **BSES-** Breastfeeding Self-Efficacy Scale; **CG-** Control Group; **CI-** confidence interval; **combo-** combined; **cont-** continue; **d/c-** discharge; **decr-** decrease; **DS-** database searched; **DV-** dependent variable; **EBF-** exclusive breastfeeding; **educ-** education; **EG-** Experimental Group; **f/u-** follow-up; **hr-** hour; **IBCLC-** international board-certified lactation consultant; **ICU-** Intensive Care Unit; **IG-** Intervention Group; **incr-** increase; **IV-** independent variable; **LC-** lactation consultant; **LOE-** level of evidence; **MA-** meta-analysis; **min-** minute; **mn-** months; **N-** number of studies (if SR) or participants in study; **n-** number of participants (if SR) or number of participants in subset; **OR-** odds ratio; **PP-** postpartum; **RCT-** Randomized Control Trial; **RD-** risk difference; **RN-** registered nurse; **RR-** risk ratio; **SCG-** standard care group; **SD-** standard deviation; **SR-** systematic review; **SIDA-** Swedish Agency for International Development Agency; **wk-** week **w/-** with; **w/in-** within; **x-** times; **WHO-** World Health Organization; **y.o.-** years old; **yr-** year

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
publication . Bias: None recognized Country: Croatia			<p>Inclusion Criteria: Primigravidae, singleton pregnancy, attended prenatal visit from 20 to 32 wks, speak Croatian, and reside w/in Republic of Croatia for a yr</p> <p>Exclusion Criteria: Unable to speak Croatian by telephone, not staying in the country for a yr, and psychiatric or medical problems that would be worsened by participating.</p>					<p>Conclusions: Combined antenatal and PP interventions involving and BF booklet and telephone support among primiparas helps incr EBF at 3 and 6 mn, incr self-efficacy of BF, decr amount of BF problems, and improves feelings of BF.</p> <p>Feasibility/Applicability to population: Telephone communication is cost-effective for support of PP women. But staff would need to be trained with BF educ in order to provide good care and depending on the practice, there might be a lot of PP patients to f/u w/ which might not be feasible</p>

Key: #- number; **ACG-** active control group; **bc-** because; **BF-** breastfeeding; **BFHI-** baby friendly hospital initiative; **BPNI-** Breastfeeding Promotion Network of India; **BSES-** Breastfeeding Self-Efficacy Scale; **CG-** Control Group; **CI-** confidence interval; **combo-** combined; **cont-** continue; **d/c-** discharge; **decr-** decrease; **DS-** database searched; **DV-** dependent variable; **EBF-** exclusive breastfeeding; **educ-** education; **EG-** Experimental Group; **f/u-** follow-up; **hr-** hour; **IBCLC-** international board-certified lactation consultant; **ICU-** Intensive Care Unit; **IG-** Intervention Group; **incr-** increase; **IV-** independent variable; **LC-** lactation consultant; **LOE-** level of evidence; **MA-** meta-analysis; **min-** minute; **mn-** months; **N-** number of studies (if SR) or participants in study; **n-** number of participants (if SR) or number of participants in subset; **OR-** odds ratio; **PP-** postpartum; **RCT-** Randomized Control Trial; **RD-** risk difference; **RN-** registered nurse; **RR-** risk ratio; **SCG-** standard care group; **SD-** standard deviation; **SR-** systematic review; **SIDA-** Swedish Agency for International Development Agency; **wk-** week **w/-** with; **w/in-** within; **x-** times; **WHO-** World Health Organization; **y.o.-** years old; **yr-** year

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
			Attrition: 45 lost to f/u (In IG, 7 lost to f/u; in ACG, 25 lost to f/u; in SCG, 13 lost to f/u)					depending on how much staff there is. Also, staff would need to be motivated to make a positive impact.
Wouk et al., (2016). Clinical interventions to promote breastfeeding by Latinas: A meta-analysis. Funding: National Institutes of Health Bias: None recognized	Inferred to be Theory of Self-Efficacy	Design: MA Purpose: Review prospective, controlled studies and determine how effective different interventions are on any BF and EBF with Latinas.	N: 14 n: 4000 DS: CINAHL, Embase, Medline Inclusion Criteria: Describe a clinical BF intervention w/ control and intervention group in United States, published in a peer-reviewed journal, study sample >50% Latina, and report EBF outcomes.	IV1: Prenatal and PP intervention IV2: PP intervention IV3: > 6 contacts of intervention IV4: 3-6 contacts of intervention IV5: Medical provider intervention IV6: IBCLC provider intervention IV7: Lay provider intervention DV1: BF at 1-3 mn PP DV2: BF at 4-6 mn PP DV3: Any BF 1-3 mn PP DV4: Any BF 4-6 mn PP	Number needed to treat, corresponding standard errors, RD estimates.	Meta-regression model, Crude model, Intercooled Stata	IV1: <i>For DV1:</i> 8/10 studies. p= .01 RD= 0.05 (95% CI -0.01-0.11) <i>For DV2:</i> 6/8 studies. p= 0.74 RD= 0.00 (95% CI -0.02-0.02) <i>For DV3:</i> 10/14 studies p= .96 RD= 0.13 (95% CI 0.08-0.18) <i>For DV4:</i> 7/8 studies p= .41 RD= 0.10 (95% CI 0.04-0.15) IV2: <i>For DV1:</i> 2/10 studies p= .03 RD= 0.01 (95% CI -0.12-0.13) <i>For DV2:</i> 2/8 studies p= .04 RD= 0.01 (95% CI -0.04-0.07) <i>For DV3:</i> 2/14 studies p= .56 RD=	LOE: I Strengths: A MA. Thorough description of data synthesis and analysis. 11/14 studies reviewed were RCTs. Large number of subjects. Studies had comparison groups. Weaknesses: Limited studies on BF and Latinas. 6/14 studies rated good quality, 3 as fair, and 5 as poor. Conclusions: 5 studies showed a substantial incr in BF at 1-3 mn and 4-6 mn PP when there was prenatal and

Key: #- number; **ACG-** active control group; **bc-** because; **BF-** breastfeeding; **BFHI-** baby friendly hospital initiative; **BPNI-** Breastfeeding Promotion Network of India; **BSES-** Breastfeeding Self-Efficacy Scale; **CG-** Control Group; **CI-** confidence interval; **combo-** combined; **cont-** continue; **d/c-** discharge; **decr-** decrease; **DS-** database searched; **DV-** dependent variable; **EBF-** exclusive breastfeeding; **educ-** education; **EG-** Experimental Group; **f/u-** follow-up; **hr-** hour; **IBCLC-** international board-certified lactation consultant; **ICU-** Intensive Care Unit; **IG-** Intervention Group; **incr-** increase; **IV-** independent variable; **LC-** lactation consultant; **LOE-** level of evidence; **MA-** meta-analysis; **min-** minute; **mn-** months; **N-** number of studies (if SR) or participants in study; **n-** number of participants (if SR) or number of participants in subset; **OR-** odds ratio; **PP-** postpartum; **RCT-** Randomized Control Trial; **RD-** risk difference; **RN-** registered nurse; **RR-** risk ratio; **SCG-** standard care group; **SD-** standard deviation; **SR-** systematic review; **SIDA-** Swedish Agency for International Development Agency; **wk-** week **w/-** with; **w/in-** within; **x-** times; **WHO-** World Health Organization; **y.o.-** years old; **yr-** year

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Country: United States			Exclusion Criteria: Research abstracts, not peer-reviewed, did not contain an IG or CG, not conducted in the United States, and sample contained < 50% Latinas.	7 interventions included phone calls, 7 used required or optional home visits, 13 used in-hospital or clinic visits by interpersonal support, 9 interventions involved both prenatal and PP points of contact.			-0.02 (95% CI -0.07-0.04) <i>For DV4:</i> 1/8 studies RD= -0.09 (95% CI -0.25-0.06) IV3: <i>For DVI:</i> 5/10 studies p= .001 RD= 0.05 (95% CI -0.04-0.14) <i>For DV2:</i> 4/8 studies p= .27 RD= 0.01 (95% CI -0.02-0.03) <i>For DV3:</i> 6/14 studies p= .08 RD= 0.11 (95% CI 0.04-0.18) <i>For DV4:</i> 5/8 studies p= .01 RD= 0.07 (95% CI -0.03-0.17) IV4: <i>For DVI:</i> 4/10 studies p= .33 RD= 0.03 (95% CI -0.07-0.12) <i>For DV2:</i> 3/8 studies p= .49 RD= 0.00 (95% CI -0.03-0.03) <i>For DV3:</i> 5/14 studies p= .93 RD=	PP interventions and training by an IBCLC. 3 interventions with significant incr in EBF at 1-3 mn included both prenatal and PP interventions and >6 times of contact. All interventions significantly incr any BF or EBF included 1 or >1 home visit by a provider. Lay providers had stronger effect on EBF at 1-3 mn PP. Feasibility/Applicability to population: Specifically, for the Latina population, some are not fluent in English, so to hire an interpreter might not be cost-effective. Ideally, the lay provider or IBCLC is multilingual to help this population. IBCLCs might not be

Key: #- number; **ACG**- active control group; **bc**- because; **BF**- breastfeeding; **BFHI**- baby friendly hospital initiative; **BPNI**- Breastfeeding Promotion Network of India; **BSES**- Breastfeeding Self-Efficacy Scale; **CG**- Control Group; **CI**- confidence interval; **combo**- combined; **cont**- continue; **d/c**- discharge; **decr**- decrease; **DS**- database searched; **DV**-dependent variable; **EBF**- exclusive breastfeeding; **educ**- education; **EG**- Experimental Group; **f/u**- follow-up; **hr**- hour; **IBCLC**- international board-certified lactation consultant; **ICU**- Intensive Care Unit; **IG**- Intervention Group; **incr**- increase; **IV**- independent variable; **LC**- lactation consultant; **LOE**- level of evidence; **MA**- meta-analysis; **min**- minute; **mn**- months; **N**-number of studies (if SR) or participants in study; **n**- number of participants (if SR) or number of participants in subset; **OR**- odds ratio; **PP**- postpartum; **RCT**- Randomized Control Trial; **RD**- risk difference; **RN**- registered nurse; **RR**- risk ratio; **SCG**- standard care group; **SD**- standard deviation; **SR**- systematic review; **SIDA**- Swedish Agency for International Development Agency; **wk**- week **w/-** with; **w/in**- within; **x**- times; **WHO**- World Health Organization; **y.o.**- years old; **yr**- year

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
							<p>0.12 (95% CI 0.04-0.20) <i>For DV4</i>: 3/8 studies p= .56 RD= 0.11 (95% CI -0.03-0.24)</p> <p>IV5: <i>For DV1</i>: 4/10 studies p= .02 RD= 0.03 (95% CI -0.06-0.13) <i>For DV2</i>: 5/8 studies p= .30 RD= 0.01 (95% CI -0.02-0.03) <i>For DV3</i>: 6/14 studies p= .13 RD= 0.06 (95% CI -0.03-0.15) <i>For DV4</i>: 4/8 studies p= .05 RD= 0.04 (95% CI -0.06-0.14)</p> <p>IV6: <i>For DV1</i>: 3/10 studies p= .19 RD= 0.03 (95% CI -0.09-0.15) <i>For DV2</i>: 2/8 studies p= .32 RD= -0.01 (95% CI -0.05-0.03) <i>For DV3</i>: 4/14 studies p= .84</p>	<p>cost-effective to have in practices. For lay provider, they would need training with BF to share proper information about BF. Practices might not be willing to do this, or lay provider might not have motivation.</p>

Key: #- number; **ACG**- active control group; **bc**- because; **BF**- breastfeeding; **BFHI**- baby friendly hospital initiative; **BPNI**- Breastfeeding Promotion Network of India; **BSES**- Breastfeeding Self-Efficacy Scale; **CG**- Control Group; **CI**- confidence interval; **combo**- combined; **cont**- continue; **d/c**- discharge; **decr**- decrease; **DS**- database searched; **DV**-dependent variable; **EBF**- exclusive breastfeeding; **educ**- education; **EG**- Experimental Group; **f/u**- follow-up; **hr**- hour; **IBCLC**- international board-certified lactation consultant; **ICU**- Intensive Care Unit; **IG**- Intervention Group; **incr**- increase; **IV**- independent variable; **LC**- lactation consultant; **LOE**- level of evidence; **MA**- meta-analysis; **min**- minute; **mn**- months; **N**-number of studies (if SR) or participants in study; **n**- number of participants (if SR) or number of participants in subset; **OR**- odds ratio; **PP**- postpartum; **RCT**- Randomized Control Trial; **RD**- risk difference; **RN**- registered nurse; **RR**- risk ratio; **SCG**- standard care group; **SD**- standard deviation; **SR**- systematic review; **SIDA**- Swedish Agency for International Development Agency; **wk**- week **w/-** with; **w/in**- within; **x**- times; **WHO**- World Health Organization; **y.o.**- years old; **yr**- year

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
							RD= 0.14 (95% CI 0.04-0.25) <i>For DV4</i> : 3/8 studies p= .65 RD= 0.16 (95% CI 0.03-0.29) IV7 : <i>For DV1</i> : 3/10 studies p= .004 RD= 0.07 (95% CI -0.05-0.18) <i>For DV2</i> : 1/8 studies RD= 0.02 (95% CI -0.03-0.07) <i>For DV3</i> : 4/14 studies p= .10 RD= 0.13 (95% CI -0.09-0.35) <i>For DV4</i> : 1/8 studies RD= 0.05 (95% CI -0.01-0.02)	

Key: #- number; **ACG**- active control group; **bc**- because; **BF**- breastfeeding; **BFHI**- baby friendly hospital initiative; **BPNI**- Breastfeeding Promotion Network of India; **BSES**- Breastfeeding Self-Efficacy Scale; **CG**- Control Group; **CI**- confidence interval; **combo**- combined; **cont**- continue; **d/c**- discharge; **decr**- decrease; **DS**- database searched; **DV**-dependent variable; **EBF**- exclusive breastfeeding; **educ**- education; **EG**- Experimental Group; **f/u**- follow-up; **hr**- hour; **IBCLC**- international board-certified lactation consultant; **ICU**- Intensive Care Unit; **IG**- Intervention Group; **incr**- increase; **IV**- independent variable; **LC**- lactation consultant; **LOE**- level of evidence; **MA**- meta-analysis; **min**- minute; **mn**- months; **N**-number of studies (if SR) or participants in study; **n**- number of participants (if SR) or number of participants in subset; **OR**- odds ratio; **PP**- postpartum; **RCT**- Randomized Control Trial; **RD**- risk difference; **RN**- registered nurse; **RR**- risk ratio; **SCG**- standard care group; **SD**- standard deviation; **SR**- systematic review; **SIDA**- Swedish Agency for International Development Agency; **wk**- week **w/-** with; **w/in**- within; **x**- times; **WHO**- World Health Organization; **y.o.**- years old; **yr**- year

Table A2*Synthesis Table*

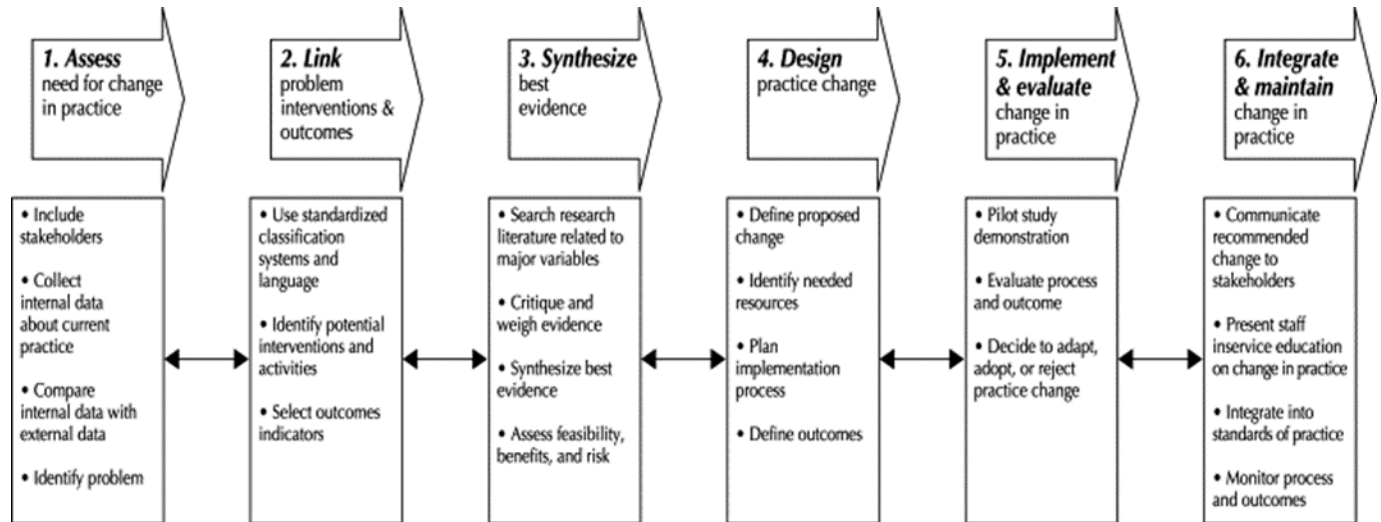
	Azimi et al.	Gupta et al.	Huang et al.	Kim et al.	Laliberté et al.	McFadden et al.	McFadden et al.	Meedya et al.	Puharić et al.	Wouk et al.
Study Characteristics										
Year	2020	2019	2019	2018	2016	2017	2019	2017	2020	2016
Design/LOE	RCT/II	RCT/II	RCT/II	SR & MA/I	RCT/II	SR/I	SR & MA/I	SR & MA/I	RCT/II	MA/I
Primiparous BF Women	X		X		X	X		X	X	
Singleton Newborn	X	X	X	X	X	X	X	X	X	X
BF Intentions		X			X		X	X		
Home Visit		X		X						X
Healthcare Facility Visit	X	X	X	X	X	X	X	X		X
Education/Support Through Telephone Calls	X		X	X				X	X	
IV										
Peer Counseling/Support	X			X		X	X	X		X
Telephone Calls	X		X	X				X	X	
Antenatal Education/Support		X	X	X				X	X	
Postnatal Education/Support	X	X	X	X	X	X	X	X	X	X
BF Counselors		X					X			
BF Video	X		X					X		
Printed BF Information			X					X	X	
IBCLC			X		X		X	X		X
Professional Counseling				X	X	X	X	X		X
More than 4 PP Interactions						X	X			X
DV										
BF Behavior	↑								↑	
Maternal Satisfaction			↑		↑				↑	
EBF 4 wks PP					↑	↑	↑			↑
EBF 12 wks PP					↑					
EBF 24 wks PP					↑					
EBF 3 mn PP		↑							↑	↑
EBF 4 mn PP			↑							
EBF 6 mn PP		↑		↑		↑	↑	↑	↑	↑

Key: **BF**- breastfeeding; **DV**- dependent variable; **EBF**- exclusive breastfeeding; **IBCLC**- international board-certified lactation consultant; **IV**- independent variable; **LOE**- level of evidence; **MA**- meta-analysis; **mn**- month; **PP**- postpartum; **RCT**- Randomized Control Trial; **SR**- systematic review; **wk**- week

Appendix B

Implementation Framework

Rosswurm and Larabee’s Model



Note. Six-step model to facilitate a shift from traditional practice to implement evidence-based changes into practice. From Rosswurm, M. A., & Larrabee, J. H. (1999). A model for change to evidence-based practice. *Journal of Nursing Scholarship*, 31(4), 317-322. 10.1111. j.1547-5069.1999.tb00510.x. Copyright by Blackwell Publishing.

Appendix C

IRB Expedited Approval



APPROVAL: EXPEDITED REVIEW

[Jennifer Santerre](#)
 EDSON: DNP
 602/243-7277
 Jennifer.Lynn.Santerre@asu.edu

Dear [Jennifer Santerre](#):

On 9/13/2020 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Supporting Mothers to Breastfeed with Peer Support Via Facebook©
Investigator:	Jennifer Santerre
IRB ID:	STUDY00012444
Category of review:	
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • Cover Letter_9_14_2020_Version 2.pdf, Category: Consent Form; • Modification Request_9_14_2020.pdf, Category: Other; • Project Site Letter of Support.pdf, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • Recruitment Flyer.pdf, Category: Recruitment Materials; • Staff Training_9_14_2020_Version 2.pdf, Category: Other; • Supporting Documents_9_10_2020.pdf, Category: Participant materials (specific directions for them); • Survey Invitation Facebook_ Post Verbiage and Survey Questions.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Tracked Changes Santerre and Schwartz Social

	Behavioral Protocol_9_14_2020.docx, Category: IRB Protocol;
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The IRB approved the protocol from 9/13/2020 to 9/12/2021 inclusive. Three weeks before 9/12/2021 you are to submit a completed Continuing Review application and required attachments to request continuing approval or closure.

If continuing review approval is not granted before the expiration date of 9/12/2021 approval of this protocol expires on that date. When consent is appropriate, you must use final, watermarked versions available under the "Documents" tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc:

Debra Ilchak
Jennifer Schwartz

Appendix D

Private Facebook® Group

Figure D1

Three Questions to Join Facebook® Group

The screenshot shows the 'Membership Questions' section of a Facebook group. At the top right is a 'Create' button. Below this are three questions, each with a text input field and 'Edit' and 'Delete' buttons. The questions are: 'Question 1: What is the name of the healthcare provider(s) you have seen during your pregnancy?', 'Question 2: What is your due date? If you already delivered, when did you have your baby?', and 'Question 3: How old are you?'. At the bottom is the 'Group Rules' section, which includes a toggle switch that is currently turned on.

Membership Questions Create

Question 1
What is the name of the healthcare provider(s) you have seen during your pregnancy?

Write your answer...

Edit Delete

Question 2
What is your due date? If you already delivered, when did you have your baby?

Write your answer...

Edit Delete

Question 3
How old are you?

Write your answer...

Edit Delete

Group Rules
Include your group rules and ask pending members to select that they agree to them.


Figure D2

Recruitment Flyer

Are you breastfeeding or planning to breastfeed?

Do you want peer support and a place to receive educational information about breastfeeding?

Join our private Facebook® breastfeeding peer support group



WHO is Eligible:

- ❖ 18 years or older
- ❖ Pregnant women 36 weeks gestation or over
- ❖ Postpartum mothers less than 12 weeks
- ❖ Can access Facebook®
- ❖ Speak and write in English

HOW to Find Us:

- ❖ Search on Facebook [redacted] to request to join [redacted]

NOTE

- ❖ This private Facebook® breastfeeding support group will be a part of a project within the Edson College of Nursing and Health Innovation at Arizona State University.
- ❖ Participation is voluntary.
- ❖ Any questions, please email Jennifer Schwartz, BSN, RN, Graduate Student at jmschwa6@asu.edu

Figure D3*Cover Letter**Supporting Mothers to Breastfeed with Peer Support Via Facebook[®]*

Dear participant,

I am a graduate student under the direction of Professor Jennifer Santerre in the Edson College of Nursing and Health Innovation at Arizona State University. I am inviting you to participate in a project involving joining a new private Facebook[®] group through [REDACTED] to provide a platform for peer support and evidence-based resources and education on breastfeeding.

I am inviting your participation to evaluate breastfeeding confidence (self-efficacy) after initiation of a breastfeeding peer support group via a private Facebook[®] group. If you choose to participate, you will also have access to breastfeeding educational materials and resources. To join the group, search on Facebook[®] [REDACTED] or paste the url [REDACTED]

Once approved, you will have full access to the page where you can ask questions, make comments, and have access to breastfeeding resources. This is a private Facebook[®] group, meaning all information in this group is only available to the members. As a social media site, Facebook[®] cannot be considered secure or private. By joining the group, you agree to abide by the Facebook[®] Page Disclaimer and Group Rules.

A one-time anonymous survey link will be posted after the group has been open for 11 weeks to ask about your experience with the private Facebook[®] group. The survey will take approximately 10 minutes to complete. You have the right not to answer any question and stop participation at any time. Your responses to the survey will be anonymous, meaning your personal information will not be attached to any of the data. The results of this project may be used in reports, presentations, or publications.

Your participation is voluntary. You can stop participation or withdraw at any time. To be eligible to join the private Facebook[®] group, you must be 18 years or older, be pregnant 36 weeks gestation or over, or less than 12 weeks postpartum. You must speak and write English and can access Facebook[®]. There are no foreseeable risks or discomforts to your participation.

If you have any questions concerning the project, please contact the team at: Jennifer Schwartz, BSN, RN at jmschwa6@asu.edu or Dr. Jennifer Santerre, DNP, WHNP-BC at Jennifer.lynn.santerre@asu.edu. If you have any questions about your rights as a participant in this project, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

By requesting to join the private Facebook[®] group, you are consenting to participate in the project.

Sincerely,
Jennifer Schwartz, BSN, RN, Graduate Student

Figure D4*Facebook® Page Disclaimer and Group Rules*

Welcome to the [REDACTED]!

This group offers women a safe place to connect, give and receive support, obtain current information, and encourage one another about breastfeeding experiences.

This group is meant for peer-to-peer support and information provided here is not a replacement for medical advice by a healthcare provider. No medical advice will be given. If you are concerned about your health, or that of your baby, please contact your healthcare provider. Our office number is [REDACTED].

Privacy and Security

- This group is set up as a “private” group which means that non-members cannot see who is in the group or what information is shared. Non-members cannot join the group without permission from the administrators, cannot see what members post, and cannot see that you are a member of the group from your Facebook® group list.
- As a social media site, Facebook® cannot be considered secure or private. You must take proper steps to protect your personal information on the Internet on any social media site.
- No one may use or disclose information of any person (except their own) of any kind on social media without the written permission of that person.

This is a Moderated Community

This group is moderated for conversational tone and content.

- Please be courteous, caring, and respectful to everyone in the group and realize opinions will vary. What works for one person or family may not work for another.
- Please refrain from advertising any services or products for sale.
- Please refrain from derogatory comments, cutting people down, and making political statements.
- Please refrain from disrespectful posts including but not limited to threatening, discriminatory, abusing, harassing, and violent statements/posts.
- If you feel another member is acting in a manner that violates the group rules, please contact the administrator privately to share your concerns.
- Member posts may be removed, discussions may be closed/removed, members may have their access to the group briefly or permanently removed – all at the administrators’ discretion & without notice if these terms are not abided by.
- Repeated violations of these guidelines will result in member removal from the group.

If you have any questions or comments, please send us a private message.

Group Rules Create

- 1 Be Kind and Courteous** ...

We're all in this together to create a welcoming environment. Let's treat everyone with respect. Healthy debates are natural, but kindness is required.
- 2 Respect Everyone's Privacy** ...

Being part of this group requires mutual trust. Authentic, expressive discussions make groups great, but may also be sensitive and private. What's shared in the group should stay in the group.
- 3 No Hate Speech or Bullying** ...

Make sure everyone feels safe. Bullying of any kind isn't allowed, and degrading comments about things like race, religion, culture, sexual orientation, gender or identity will not be tolerated.
- 4 No Promotions or Spam** ...

Give more than you take to this group. Self-promotion, spam and irrelevant links aren't allowed.

Figure D5

Themed Albums

Photos Videos Albums

for the First Time!

Breastfeeding resources for baby showers
 Share this album with your friends and family. They'll love to see your baby's first feeding. You'll love to see their reactions. It's a special moment for everyone involved. Share this album with your friends and family. They'll love to see your baby's first feeding. You'll love to see their reactions. It's a special moment for everyone involved.

How to pump your milk
 A step-by-step guide to pumping your milk. Includes information on how to choose a pump, how to use it, and how to store your milk. Includes information on how to choose a pump, how to use it, and how to store your milk.

How to latch your baby
 A step-by-step guide to latching your baby. Includes information on how to position your baby, how to hold your baby, and how to latch your baby. Includes information on how to position your baby, how to hold your baby, and how to latch your baby.

How to troubleshoot common breastfeeding problems
 A step-by-step guide to troubleshooting common breastfeeding problems. Includes information on how to identify the problem, how to troubleshoot the problem, and how to prevent the problem from recurring. Includes information on how to identify the problem, how to troubleshoot the problem, and how to prevent the problem from recurring.

Breastfeeding Basics
5 photos

Signs of a good latch

Signs of a good latch
 A list of signs that indicate a good latch. Includes information on how to observe your baby's behavior, how to feel your baby's mouth, and how to hear your baby's sounds. Includes information on how to observe your baby's behavior, how to feel your baby's mouth, and how to hear your baby's sounds.

Signs of a good latch
 A list of signs that indicate a good latch. Includes information on how to observe your baby's behavior, how to feel your baby's mouth, and how to hear your baby's sounds. Includes information on how to observe your baby's behavior, how to feel your baby's mouth, and how to hear your baby's sounds.

Latching
6 photos

How to troubleshoot common breastfeeding problems

How to troubleshoot common breastfeeding problems
 A list of common breastfeeding problems and how to troubleshoot them. Includes information on sore nipples, engorgement, mastitis, and low milk supply. Includes information on sore nipples, engorgement, mastitis, and low milk supply.

How to troubleshoot common breastfeeding problems
 A list of common breastfeeding problems and how to troubleshoot them. Includes information on sore nipples, engorgement, mastitis, and low milk supply. Includes information on sore nipples, engorgement, mastitis, and low milk supply.

Milk Supply
3 photos

Is My Baby Getting Enough?

Is My Baby Getting Enough?
 A list of signs that indicate your baby is getting enough milk. Includes information on how to observe your baby's behavior, how to feel your baby's weight, and how to hear your baby's sounds. Includes information on how to observe your baby's behavior, how to feel your baby's weight, and how to hear your baby's sounds.

Is My Baby Getting Enough?
 A list of signs that indicate your baby is getting enough milk. Includes information on how to observe your baby's behavior, how to feel your baby's weight, and how to hear your baby's sounds. Includes information on how to observe your baby's behavior, how to feel your baby's weight, and how to hear your baby's sounds.

Common Breastfeeding Problems
10 photos

How to troubleshoot common breastfeeding problems

How to troubleshoot common breastfeeding problems
 A list of common breastfeeding problems and how to troubleshoot them. Includes information on sore nipples, engorgement, mastitis, and low milk supply. Includes information on sore nipples, engorgement, mastitis, and low milk supply.

How to troubleshoot common breastfeeding problems
 A list of common breastfeeding problems and how to troubleshoot them. Includes information on sore nipples, engorgement, mastitis, and low milk supply. Includes information on sore nipples, engorgement, mastitis, and low milk supply.

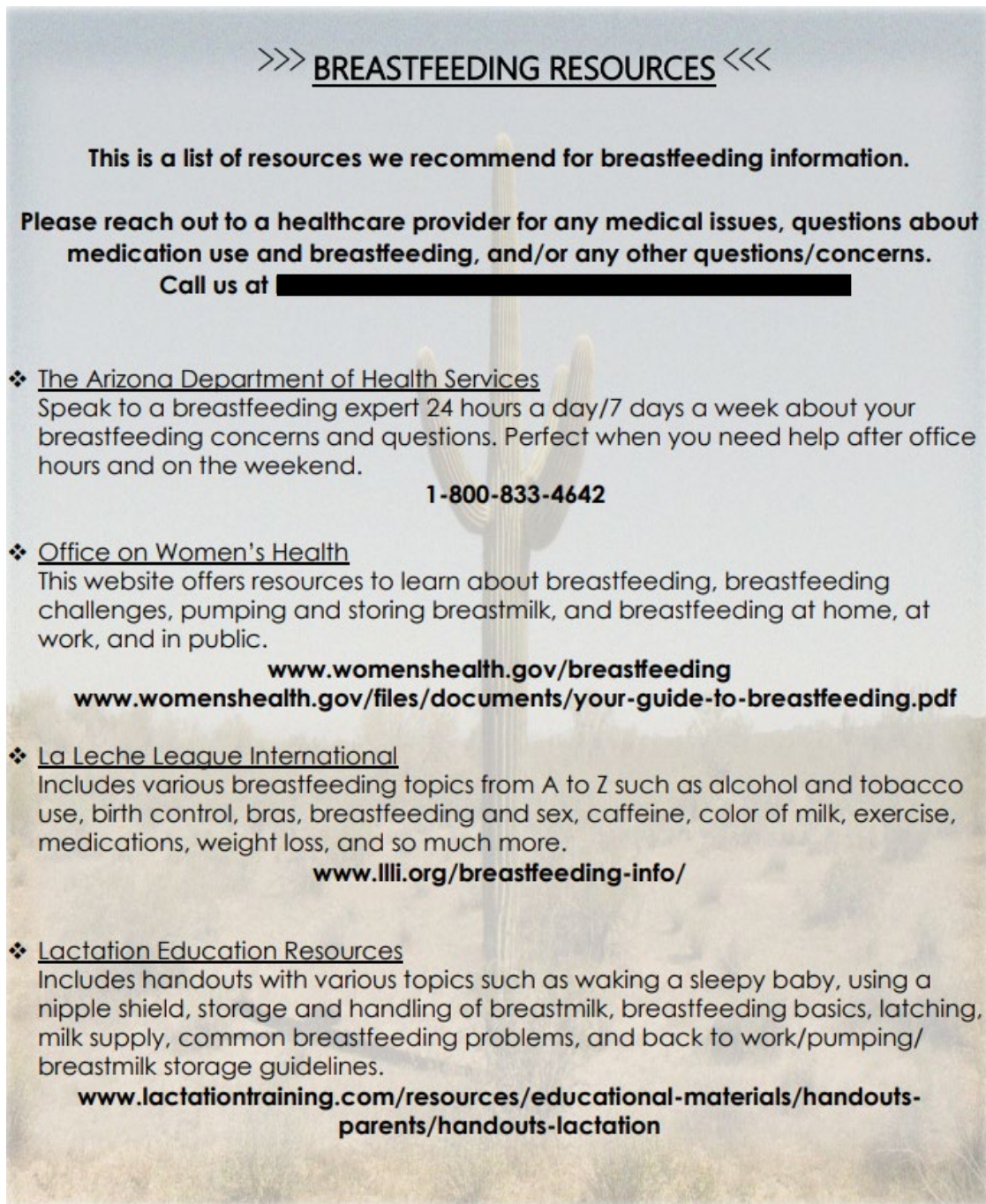
Back to Work/Pumping/Breast Milk Storage Guidelines
5 photos

This is a list of resources we recommend for breastfeeding information.

This is a list of resources we recommend for breastfeeding information.
 A list of resources for breastfeeding information. Includes information on how to find a lactation consultant, how to find a breastfeeding support group, and how to find a breastfeeding class. Includes information on how to find a lactation consultant, how to find a breastfeeding support group, and how to find a breastfeeding class.

This is a list of resources we recommend for breastfeeding information.
 A list of resources for breastfeeding information. Includes information on how to find a lactation consultant, how to find a breastfeeding support group, and how to find a breastfeeding class. Includes information on how to find a lactation consultant, how to find a breastfeeding support group, and how to find a breastfeeding class.

Breastfeeding Resources
1 photo

Figure D6*Resource List*A poster titled "BREASTFEEDING RESOURCES" with a background image of a saguaro cactus in a desert landscape. The text is centered and includes a list of recommended resources for breastfeeding information.

>>> **BREASTFEEDING RESOURCES** <<<

This is a list of resources we recommend for breastfeeding information.

Please reach out to a healthcare provider for any medical issues, questions about medication use and breastfeeding, and/or any other questions/concerns.

Call us at [REDACTED]

- ❖ **The Arizona Department of Health Services**
Speak to a breastfeeding expert 24 hours a day/7 days a week about your breastfeeding concerns and questions. Perfect when you need help after office hours and on the weekend.
1-800-833-4642
- ❖ **Office on Women's Health**
This website offers resources to learn about breastfeeding, breastfeeding challenges, pumping and storing breastmilk, and breastfeeding at home, at work, and in public.
www.womenshealth.gov/breastfeeding
www.womenshealth.gov/files/documents/your-guide-to-breastfeeding.pdf
- ❖ **La Leche League International**
Includes various breastfeeding topics from A to Z such as alcohol and tobacco use, birth control, bras, breastfeeding and sex, caffeine, color of milk, exercise, medications, weight loss, and so much more.
www.llli.org/breastfeeding-info/
- ❖ **Lactation Education Resources**
Includes handouts with various topics such as waking a sleepy baby, using a nipple shield, storage and handling of breastmilk, breastfeeding basics, latching, milk supply, common breastfeeding problems, and back to work/pumping/breastmilk storage guidelines.
www.lactationtraining.com/resources/educational-materials/handouts-parents/handouts-lactation

Figure D7*Discussion Prompts***Week 5 Discussion Prompts:**

- 1) What are your biggest concerns about breastfeeding that you want to ask your peers? If you are currently breastfeeding, what were your concerns and how did you overcome them?
- 2) What are your goals for breastfeeding? What have you done or did to prepare to breastfeed? Talk to family or friends? Read a book? Saw a lactation consultant?

Week 6 Discussion Prompts:

- 1) Have you previously breastfed or are you currently breastfeeding? If so, for how long? Any advice to mothers who have never breastfed before?
- 2) If you are currently breastfeeding, how is it going? What advice would you give to moms planning to breastfeed?

Week 7 Discussion Prompts:

- 1) What are some resources you found that help support you to breastfeed that you would share with your peers?
- 2) What are some things you are curious about breastfeeding that you want to know from your peers?

Week 8 Discussion Prompts:

- 1) Everyone has a different breastfeeding story. What is yours, either with a previous baby or your current one?
- 2) Planning on going back to work and pumping? What are some questions you have for your peers? Already back at work? What did you do to prepare?

Week 9 Discussion Prompts:

- 1) Did you have any pain or discomfort while breastfeeding? Those moms who did, what advice do you have for others to help with this problem?
- 2) What supplies do you recommend other moms buy to help with breastfeeding? (Examples include nursing bras, nursing pads, nursing nightgown, etc.)

Week 10 Discussion Prompts:

- 1) Do you have concerns about breastfeeding in public? Do you think breastfeeding in public has become more socially acceptable?
- 2) What is your favorite thing about breastfeeding?

Week 11 Discussion Prompts:

- 1) Nighttime feeding can be exhausting. How are nighttime feeds going? Any tips for other moms?
- 2) Has anyone else experienced engorgement? What tips do you have to prevent it? What tips do you have for moms experiencing engorgement?

Week 12 Discussion Prompts:

- 1) For those who are pumping, any suggestions on items to buy to store breast milk while at work or traveling?
- 2) For those moms returning to work, how did you address pumping with your supervisor or boss? Any suggestions for moms to have that discussion? Where did you pump and store your breastmilk?

Appendix E

Breastfeeding Self-Efficacy Scale- Short Form

1 = not at all confident
 2 = not very confident
 3 = sometimes confident
 4 = confident
 5 = very confident

		Not at all Confident		Very Confident		
1	I can always determine that my baby is getting enough milk	1	2	3	4	5
2	I can always successfully cope with breastfeeding like I have with other challenging tasks	1	2	3	4	5
3	I can always breastfeed my baby without using formula as a supplement	1	2	3	4	5
4	I can always ensure that my baby is properly latched on for the whole feeding	1	2	3	4	5
5	I can always manage the breastfeeding situation to my satisfaction	1	2	3	4	5
6	I can always manage to breastfeed even if my baby is crying	1	2	3	4	5
7	I can always keep wanting to breastfeed	1	2	3	4	5
8	I can always comfortably breastfeed with my family members present	1	2	3	4	5
9	I can always be satisfied with my breastfeeding experience	1	2	3	4	5
10	I can always deal with the fact that breastfeeding can be time consuming	1	2	3	4	5
11	I can always finish feeding my baby on one breast before switching to the other breast	1	2	3	4	5
12	I can always continue to breastfeed my baby for every feeding	1	2	3	4	5
13	I can always manage to keep up with my baby's breastfeeding demands	1	2	3	4	5
14	I can always tell when my baby is finished breastfeeding	1	2	3	4	5

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Note. 14-item questionnaire consisting of a 5-point Likert scale. From Dennis, C-L. (2003). The breastfeeding self-efficacy scale: Psychometric assessment of the short form. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 32(6), 734-744. 10.1177/0884217503258459.

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Appendix F
Survey Results

Figure F1*Demographic Data (n=3)*

Variable	<i>n</i>	<i>%</i>
Weeks in Group		
Less than 1 week	0	0.00
1 week	0	0.00
2 weeks	0	0.00
3 weeks	0	0.00
4 weeks	0	0.00
5 weeks	0	0.00
6 weeks	0	0.00
7 weeks	1	33.33
8 weeks	0	0.00
9 weeks	0	0.00
10 weeks	0	0.00
11 weeks	0	0.00
12 weeks	2	66.67
Times Visited Group		
Several times a week	0	0.00
About once a day	0	0.00
1-3 days a week	2	66.67
4-6 days a week	0	0.00
Once a week	1	33.33
Every couple weeks	0	0.00
Other	0	0.00
Use of Group		
Ask questions, Give advice, Respond to peer(s), Read what others wrote, Read information on handouts located in themed albums	2	66.67
Ask questions, Give advice, Read what others wrote	1	33.33
Group Helpful		
Strongly Disagree	0	0.00
Disagree	0	0.00
Neutral	0	0.00
Agree	3	100.00

Strongly Agree	0	0.00
Received Peer Support		
Strongly Disagree	0	0.00
Disagree	0	0.00
Neutral	1	33.33
Agree	2	66.67
Strongly Agree	0	0.00
Peer Support Helped Confidence		
Strongly Disagree	0	0.00
Disagree	0	0.00
Neutral	1	33.33
Agree	2	66.67
Strongly Agree	0	0.00
Accessed Handouts		
Yes	3	100.00
No	0	0.00
Handouts Helpful		
Strongly agree	2	66.67
Agree	1	33.33
Neutral	0	0.00
Disagree	0	0.00
Strongly Disagree	0	0.00
Did not access the handouts	0	0.00
Delivery Method		
A vaginal delivery	3	100.00
A cesarean section	0	0.00
Multiple Delivery		
Yes	0	0.00
No	3	100.00
Health Difficulties		
Yes	1	33.33
No	2	66.67
NICU stay		
Yes	0	0.00
No	3	100.00
37 week or prior delivery		
Yes	0	0.00
No	3	100.00
First baby		
Yes	2	66.67
No	1	33.33

Previous Breastfeeding		
Yes	0	0.00
No	3	100.00
Feeding Baby		
Only breastfeeding/breast milk	3	100.00
Breast milk and formula feeding	0	0.00
Formula feeding only	0	0.00
Breastfeeding Time		
Only formula fed	0	0.00
1 week	0	0.00
2 weeks	0	0.00
3 weeks	0	0.00
1 month	0	0.00
2 months	3	100.00
3 months	0	0.00
4 months	0	0.00
5 or more months	0	0.00
Baby Age		
Less than 1 week old	0	0.00
1 week	0	0.00
2 weeks	0	0.00
3 weeks	0	0.00
1 month	0	0.00
2 months	3	100.00
3 months	0	0.00
4 months	0	0.00
5 or more months	0	0.00
Participant Age		
18-20	0	0.00
21-24	1	33.33
25-29	2	66.67
30-34	0	0.00
40+	0	0.00
Ethnicity		
White	2	66.67
Black or African American	0	0.00
Asian	0	0.00
American Indian or Alaskan Native	0	0.00
Native Hawaiian or Other Pacific Islander	0	0.00
2 or more	1	33.33
Other Race	0	0.00
Latina		
No	1	33.33
Yes	2	66.67
Education		
Bachelor's degree	3	100.00

Less than high school	0	0.00
High school/GED	0	0.00
Some College	0	0.00
Associates Degree	0	0.00
Graduate degree (Masters or Doctorate)	0	0.00
Employment		
On maternity leave from full-time work	3	100.00
On maternity leave from part-time work	0	0.00
Full-time	0	0.00
Part-time	0	0.00
Unemployed	0	0.00
Marital Status		
Single (never married)	0	0.00
Married or in a domestic partnership	3	100.00
Widowed	0	0.00
Divorced	0	0.00
Separated	0	0.00

Note. Percentages might not equal 100% because of rounding miscalculations

Figure F2*BSES-SF (n=3)*

Variable	<i>n</i>	<i>%</i>
I can always determine that my baby is getting enough milk		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	2	66.67
Very confident	1	33.33
I can always successfully cope with breastfeeding like I have with other challenging tasks		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	3	100.00
Very confident	0	0.00
I can always breastfeed my baby without using formula as a supplement		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	1	33.33
Very confident	2	66.67
I can always ensure that my baby is properly latched on for the whole feeding		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	2	66.67
Very confident	1	33.33
I can always manage the breastfeeding situation to my satisfaction		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	3	100.00
Very confident	0	0.00
I can always manage to breastfeed even if my baby is crying		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	2	66.67
Very confident	1	33.33

I can always keep wanting to breastfeed		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	3	100.00
Very Confident	0	0.00
I can always comfortably breastfeed with my family members present		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	3	100.00
Very confident	0	0.00
I can always be satisfied with my breastfeeding experience		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	2	66.67
Very confident	1	33.33
I can always deal with the fact that breastfeeding can be time consuming		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	3	100.00
Very Confident	0	0.00
I can always finish feeding my baby on one breast before switching to the other breast		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	3	100.00
Very confident	0	0.00
I can always continue to breastfeed my baby for every feeding		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	3	100.00
Very confident	0	0.00
I can always manage to keep up with my baby's breastfeeding demands		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	2	66.67
Very confident	1	33.33
Missing	0	0.00

I can always tell when my baby is finished breastfeeding		
Not at all confident	0	0.00
Not very confident	0	0.00
Sometimes confident	0	0.00
Confident	1	33.33
Very confident	2	66.67

Note. Percentages might not equal 100% because of rounding miscalculations.