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## Enhancing Breastfeeding Self-Efficacy through Prenatal Education

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RUNNING HEAD: ENHANCING BREASTFEEDING SELF-EFFICACY

Enhancing Breastfeeding Self-Efficacy through Prenatal Education

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NURS 8000

## **Introduction**

Breastfeeding provides benefits to infants and mothers. In 2003, the Bellagio Child Survival Study Group identified the promotion of exclusive breastfeeding as one of the greatest life-saving strategies for decreasing childhood mortality (Thulier & Mercer 2009). The American Academy of Pediatrics (AAP, 2005) recommends exclusive breastfeeding for the first 6 months of life and continued breast milk to at least 12 months, longer if it is desirable for mother and child. The World Health Organization (WHO, 2001) recommends that infants be exclusively breastfed for the first 6 months of life and that breastfeeding be continued into the second year of life or longer. These recommendations are based on studies showing long term benefits in children who receive breast milk in their first year of life. The benefits of breastfeeding include: the reduction of infant mortality and morbidity and decrease risk of infectious disease, like diarrhea, respiratory, ear, and urinary tract infections (American Academy of Pediatrics, 2005, WHO, 2002). Long term benefits include decrease incidence of obesity and chronic illness such as diabetes, allergies and asthma (Baldwin & Friedman, 2006). Less incidences of osteoporosis, ovarian cancer, and premenopausal breast cancer are reported for mothers who have breastfed (Noel-Weiss, Rupp, Cragg, Bassett & Woodend, 2006).

National data collected in the United States reveals that although many women initiate breastfeeding, few are able to meet the recommendations for exclusivity and duration. The highest rate of drop off occurs in the first few weeks after birth (Centers for Disease Control and Prevention, 2010). Breastfeeding initiation rates in the United States are at an all time high. 75 percent of women giving birth are initiating breastfeeding in the hospital. Although the number of women who initiate breastfeeding is increasing, the number of women who continue to breastfeed to the recommend length is still very low. Only 13.3 percent of US women are

exclusively breastfeeding at 6 months. This falls short of the *Healthy People 2020* goals of 50% of all women exclusively breastfeeding at 6 months (CDC, 2010). The breastfeeding rates among socially disadvantaged women are even lower than the national average (McQueen, Dennis, Stremler & Williams 2011). Black women breastfeed at a rate of 19 percent, as compared with White women at 31 percent (McCarter-Spaulding & Gore, 2009). To effectively address the low breastfeeding rates, nurses and lactation consultants need to indentify high-risk mothers reliably and recognize breastfeeding barriers that are susceptible to supportive interventions.

There are many high-risk factors that are *nonmodifiable* such: as age, race, socio-economic status, level of education, marital status and psychological variables (Thulier & Mercer, 2009). The reasons for early cessation are vast. Research suggests that many mothers discontinue breastfeeding due to perceived challenges rather than maternal choice (Dennis 2002). Maternal breastfeeding confidence or self-efficacy is a variable that is *modifiable* through interventions such as education and support. Many of the variables are not susceptible to intervention. The variable of self-efficacy or maternal confidence is one that can be modified and enhanced through prenatal breastfeeding education.

### **Purpose**

The benefits of breastfeeding are becoming widely recognized. The majority of women believe breast milk to be the optimal food for infants. This is evidenced by the high initiation rates. Despite the high initiation rate, there is a significant drop off rate after the women go home from the hospital (Bernaix, Beaman, Schmidt, Harris, & Miller, 2010). This decline suggests that new mothers have been given the information, but not the tools to be successful. The steep drop off in breastfeeding rates during the first few weeks of the infant's life represents a gap in

breastfeeding education. Women need more than information. They need the tools to be successful. This starts prenatally before the baby is born.

A strong sense of self-efficacy encourages individuals to engage themselves fully in the activity, to endure hardships and setbacks. Someone with high self-efficacy will be determined to succeed despite failed attempts. Many women report issues with breastfeeding in the initial months postpartum (Dennis 1999). This illustrates why early breastfeeding education prenatally is of great importance.

The purpose of this project is to create, implement and evaluate a curriculum for breastfeeding education that will increase a woman's self-efficacy.

### **Conceptual Framework**

Self-efficacy has received attention as a predictor of health related behaviors. Described as an individual's confidence in his or her perceived ability to perform a specific task or behavior (Bandura 1977), Dennis' Breastfeeding Self-Efficacy framework (1999), is derived from Bandura's Social Cognitive Learning Theory (Bandura, 1977). Dennis uses her framework to understand the role self-efficacy plays in relation to breastfeeding behaviors. Breastfeeding self efficacy refers to a mother's perceived ability or confidence to breastfeed her newborn and influences her decisions regarding breastfeeding such as whether to breastfeed or not, how much effort she will expend on the task and how she will deal with the challenges that she will encounter during her experience. The theory of self-efficacy proposes that a person's level of self-efficacy may be influenced by four factors. These factors are: personal accomplishments, vicarious experiences, verbal persuasion, and psychological and affective states. These factors

could be influenced by education and healthcare provider intervention (Bandura, 1977, Dennis, 1999).

The first source, *personal accomplishments*, is based on the belief that successes build robust belief in one's personal efficacy. Failures undermine it, especially if failures occur before a sense of efficacy is firmly established (Bandura (1994).

The second source, *vicarious experiences*, builds a strong sense of efficacy through the vicarious experiences provided by social models. Seeing people similar to oneself succeed by sustained effort raises observer's beliefs that they too possess the capabilities to master comparable activities required to succeed (Bandura, 1994).

The third source, *verbal persuasion*, is a way to strengthen people's beliefs that they have what it takes to succeed. People who are persuaded verbally that they possess the capabilities to master given activities are likely to mobilize greater effort and sustain it than if they harbor self-doubts and dwell on personal deficiencies when problems arise (Bandura, 1994).

The fourth source is *psychological and affective states*. The final way to enhance efficacy is to reduce people's stress reactions and alter their negative emotional proclivities and interpretations of their physical states. It is how the emotions are perceived, rather than the sheer intensity of emotional and physical reactions that is important. People with a high sense of efficacy are likely to view their state of affective arousal as an energizing facilitator of performance, whereas those who are plagued by self-doubt regard their arousal as a debilitation (Bandura, 1994).

## The Tool

Dennis and Faux devised the original breastfeeding self-efficacy scale to measure a mother's self-efficacy in regards to breastfeeding in 1999. Dennis revised the BSES into a shorter version in 2003. The Breastfeeding self-efficacy short form (BSES-SF) is a 14 item tool with high internal consistency (Cronbach's  $\alpha = .94$ ). Predictive validity for the BSES-SF was demonstrated by a statistically significant difference in the scores on the BSES-SF for mothers who were exclusively breastfeeding and those who were bottle feeding or who were doing both (Pollard, 2009). The results from studies using the BSES indicate there is a correlation in breastfeeding self-efficacy and duration of breastfeeding. Many of the researchers using the scale have recommended its use as a screening tool for mothers who may need extra support and guidance with breastfeeding. Dennis recommends the BSES be used to identify breastfeeding mothers at high risk, assess breastfeeding behaviors and cognitions to individualize confidence-building strategies, evaluate the effectiveness of various interventions and guide program development (Dennis, 2002).

The Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) is a 14-item questionnaire with a possible ranges in scores from 14-70. The BSES-SF consists of positive statements such as "I can always determine that my baby is getting enough milk" and "I can always be satisfied with my breastfeeding experience." Participants are asked to rate their agreement with the statement on a Likert scale. A response of '1' indicates that the participant is not at all confident and a response of '5' indicates that the participant is very confident with the statement.

There is strong reliability and evidence of construct and predictive validity for the BSES-SF. Reliability of the instrument was reported with a Cronbach alpha of .94. Construct validity was demonstrated by significant correlations between the BSES-SF and the Rosenberg Self-Esteem Scale, the Perceived Stress Scale, and the Edinburgh Postnatal Depression Scale with  $p < .001$ . Predictive validity for the BSES-SF was demonstrated by a statistically significant difference in the scores on the BSES-SF for mothers who were exclusively breastfeeding and those who were partially breastfeeding or bottle-feeding (Dennis 2002).

### **Literature Review**

Immediate performance accomplishments and physiological responses are powerful sources of self-efficacy information and influence a mother's perceived ability to breastfeed. Blyth, Creedy, Dennis, Moyle, Pratt, & DeVries (2002), found new mothers with high self-efficacy were significantly more likely to continue to breastfeed to 4 months postpartum and do so exclusively compared to mothers with lower scores. The authors concluded high self-efficacy was related to breastfeeding initiation and exclusivity, whereas low self-efficacy was related to bottle feeding at 1 week postpartum. These findings are consistent with the findings of Dennis and Faux (1999), Dennis (2002), who also found significant relationship between self-efficacy scores and future breastfeeding behavior.

In McCarter-Spaulding and Gore's study of 15 women of African descent, a significant relationship between breastfeeding self-efficacy scores in the first week postpartum and breastfeeding rates at one month was discovered. For each unit increase in breastfeeding self-efficacy there was a decreased risk of having weaned by one month postpartum. Breastfeeding

self-efficacy was the only predictor that was significantly related to breastfeeding duration at one month postpartum (McCarter-Spaulling & Gore, 2009) .

Around the world, studies examining breastfeeding self-efficacy have shown it to be an important variable associated with breastfeeding initiation, duration, and exclusivity. These findings have been replicated many times in different populations. The relationship between breastfeeding self-efficacy and duration have been studied in Canada, Portugal, Brazil, Puerto Rico, China, Poland, United Kingdom, US women of African descent and adolescent populations. In all of these populations, breastfeeding self-efficacy positively correlated to either greater initiation rates, longer duration or more exclusivity (McQueen, Dennis, Stremler, & Norman, 2011).

The Breastfeeding Self-Efficacy Short Form (BSES-SF) was used in a study of 70 women in North Carolina to measure baseline self-efficacy and breastfeeding duration. Pollad and Guill (2009), conclude that the score on the BSES-SF was statistically significant predictor of breastfeeding length. The use of the BSES-SF as a baseline assessment tool to identify women who were at high risk of weaning was also suggested. Using the BSES-SF as a screening tool, health care providers can target women at risk for early weaning and plan strategies that enhance a mother's knowledge and confidence with breastfeeding using Dennis' breastfeeding self-efficacy framework.

Our perception and ideas about breastfeeding begin prior to pregnancy. In this country women rarely have the benefit of seeing women openly breastfeeding public. It is not the cultural norm to nurse into the toddler and preschool years like in other cultures. Women still face

disapproval of breastfeeding in public or weaning after the toddler years. In non-Western cultures it is common for children to be breastfed for three to four years (Griese, 1996).

Today in our society, instead of women getting their information from mothers and peers, like they were at the turn of the century; women are relying on prenatal education and healthcare professionals. In pregnancy the commitment to breastfeed is made in the first trimester (Griese, 1996). Education and breastfeeding self-efficacy needs to be addressed before birth. Prenatal educators have a unique opportunity to not only disseminate breastfeeding information but an obligation to build a women's confidence in the face of western negative stereotypes.

A systematic review of professional support found that interventions that are initiated prenatally and /or in-hospital and continue postnatally are generally more effective than interventions initiated in the postpartum period (McQueen, Dennis, Stremmer & Norman, 2011).

Griese (1996), found a profound lack of confidence when interviewing women prenatally about their plans to breastfeed. When asked, "Are you planning to breastfeed your baby?" Some of the responses received were:

-“Well, I thought I'd try but I just don't know if I can do it.”

-“I had such a rough time breastfeeding my first baby and had no help. I don't know if I want to go through that again.”

-“I'm going back to work in two months so I guess I can't.”

-“My sister had two breast infections and I have no desire to breastfeed if that's how it would be for me.”

These women had the desire to breastfeed but lacked the confidence in their body's ability to feed their infant. Additionally they lacked the support needed to be successful. A study done in fifteen self-identified African American women (Lewallen & Street, 2010), one of the major themes to emerge was lack of information prenatally. Women reported lack of information and feeling isolated. One woman said:

I think that if the doctor could give out information, or have someone in their practice that can go ahead and talk to those women who are kind of on the fence about whether or not they are gonna breast or bottle feed. If, you know, they could do that, I think that would help, because you can go ahead and make that educated decision from that point instead of at the last minute being asked, "Are you gonna breastfeed or are you gonna bottle," and seeking out information and support on your own in those beginning stages (Lewallen & Street, 2010 p.671).

Another women talked about how she felt unprepared for the reality of breastfeeding. "I wish someone had told me how lonely it gets at night; I wish I had been prepared for that, the sole provider, you're the only one who can do it every single night." (Lewallen & Street, 2010 p.671).

A prenatal breastfeeding curriculum that focuses on building a women's confidence will prepare mothers to be successful in the face of adversity.

### **Breastfeeding Self-Efficacy Curriculum**

#### **Creating the Curriculum**

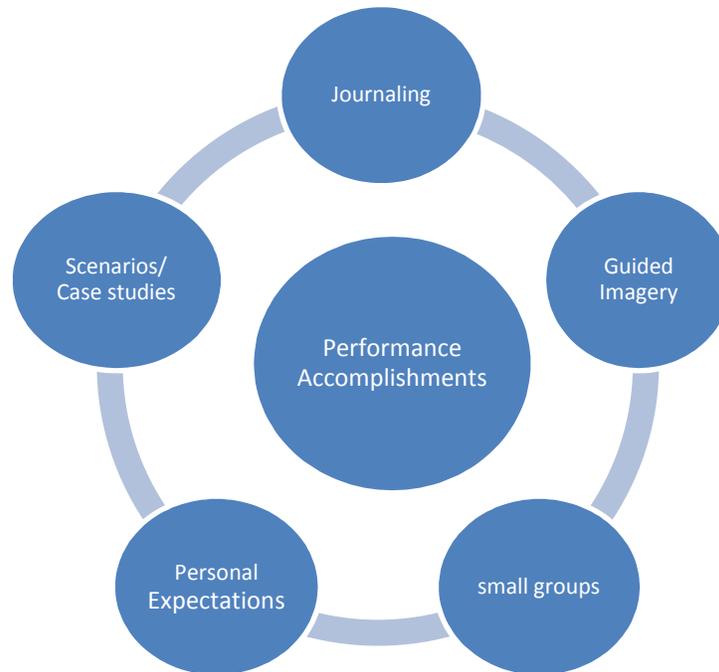
According to Dennis (1999), in choosing and maintaining desired health behaviors, individuals weigh four sources of information: (1) performance accomplishments, (2) vicarious

experiences, (3) verbal persuasion, and (4) inferences made from one's physiologic and/or affective state.

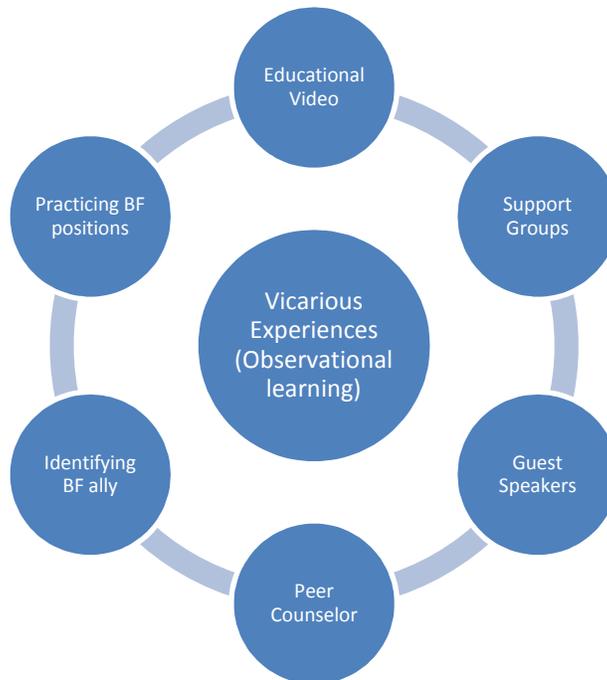


This curriculum is directed at improving a mother's self-efficacy. The four sources of information are central to the teaching objectives. Teaching strategies are designed to encourage individuals to draw on their personal experiences using the four sources as a way to increase self-efficacy. For example, when using *performance accomplishments* as a source of self-efficacy, journaling and guided imagery are useful tools. Journaling and guided imagery can be used to apply a mother's past success during a demanding or rigorous experience to the new experience of breastfeeding. Asking mothers to recall how they dealt successfully with a demanding or challenging situation, helps them to identify the sources of personal strength they possess.

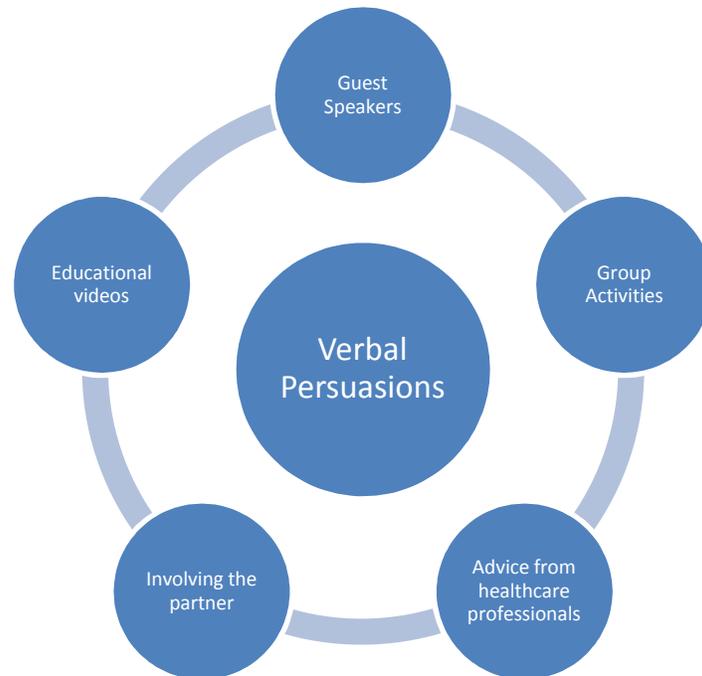
Through different mediums such as guided imagery, scenarios/case studies, journaling, and small groups, a woman will develop individual strategies to meet the demands of breastfeeding.



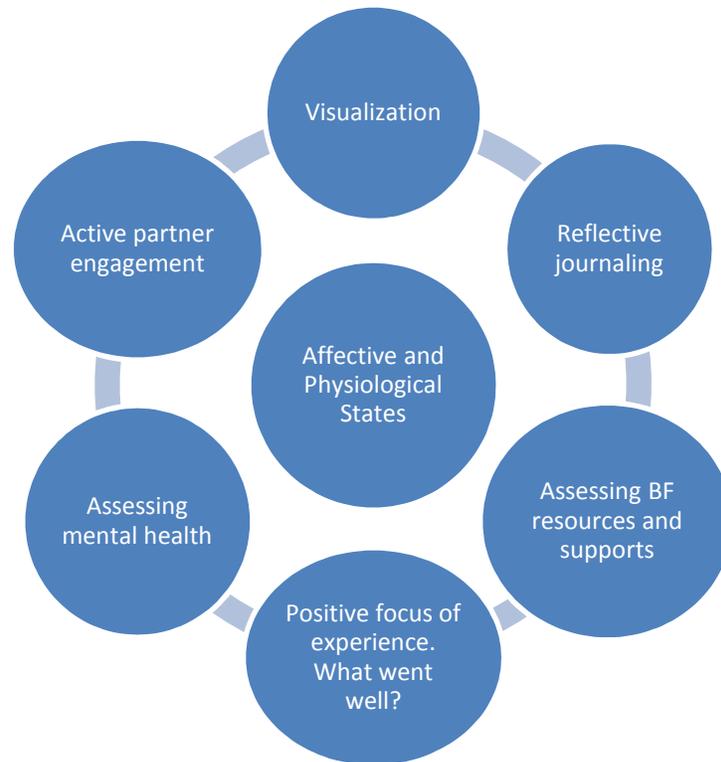
This is a visual image to help conceptualize the active teaching strategies used to enhance the self-efficacy source, *performance accomplishments*.



The second source, vicarious experiences, is enhanced through active teaching strategies such as: education videos, support groups, guest speakers, peer counselors, identifying breastfeeding ally, and practicing breastfeeding positions. Seeing people similar to themselves successfully breastfeed increases the mother's sense of self-efficacy.



Active teaching strategies to enhance the third source, verbal persuasion, are things such as: educational videos, guest speakers, group activities, advice from healthcare professionals and involving the partner in the activity. Teaching partners to give praise and encouragement increases the mother's confidence. The woman is influenced positively by what she hears from others.



Lastly, the fourth source, psychological and affective states can be enhanced through active teaching strategies such as: visualization, reflective journaling, assessing breastfeeding resources and supports, focusing on the positive aspects of the breastfeeding experience, assessing personal mental health, and active partner engagement. These active teaching strategies help shape the perception of the mother's breastfeeding experience. By addressing the woman's self-doubt prenatally, she is able to alter any negative perceptions. These strategies also help her to set up a healthy, solid support system before the baby arrives.

Teaching strategies incorporate the principles of adult learning theory. The instructor is the facilitator or coach as the learners discover strategies to be successful in breastfeeding. The participants will take part in creative problem solving with case studies and hands on group

activities as well as exploring their own personal strengths and weaknesses surrounding breastfeeding self-efficacy.

The principals of adult learning theory (Knowles, 1980) are applied to this group of learners.

Adult learning theory assumes adults:

- Need to be involved in the planning and evaluation of their instruction, experience provides (including mistakes) provides the basis for learning activities.
- Adults are most interested in learning subjects that have immediate relevance to their jobs or personal life.
- Adult learning is problem-centered rather than content oriented.

The class is targeted towards parents who have registered for prenatal breastfeeding education. Participants typically have little or no experience breastfeeding, or have had a negative experience with breastfeeding. Classes vary in length from 2 1/2- 3 hours. Standard required breastfeeding content as per The CDC Guide to Breastfeeding will be taught (Shealy, Benton-Davis, & Grummer-Strawn, 2005). Teaching strategies will focus on building self-efficacy.

Partners are highly encouraged to attend to establish a base of support for the new mother. Although they can constitute a barrier to breastfeeding, fathers can also be a positive influence. A randomized controlled trial of a two-hour prenatal intervention with fathers on how to be supportive of breastfeeding found a far higher rate of breastfeeding initiation among participants' partners (74 percent) than among partners of controls (14 percent). In another trial, 25 percent of women whose partners participated in a program on how to prevent and address common

problems with lactation (such as pain or fear of insufficient milk) were still breastfeeding at six months, compared with 15 percent of women whose partners were informed only about the benefits of breastfeeding. Among women who experienced challenges with breastfeeding, the program effect was even stronger, with 24 percent of participants' partners breastfeeding at six months versus less than 5 percent of partners in the comparison group (U.S. Department of Health and Human Services, 2011).

### **Implementing the Curriculum**

The objectives are based on Dennis' Breastfeeding Self-Efficacy short Form (BFSE-SF), which measures a woman's confidence in her ability to breastfeed (Dennis, 2003). The BFSE-SF should be given to the group of learners before instruction.

Initially the learners will be asked to fill out the BFSE-SF. Participants will also be asked if they have particular questions in regards to breastfeeding education. Based on the initial data from the BFSE-SF and class self reported needs, teaching strategies will be targeted towards the learners' gaps in self-efficacy. If a woman scores low on an item, for example item number one, "I can always determine if my baby is getting enough." Specific strategies to address infant satiation will be implemented. This will ensure the mother can identify ways in which her baby is receiving enough milk.

One particularly effective teaching strategy for this example is breaking into small groups after the content is taught. The learners are asked to problem solve what to do if the infant is still showing hunger cues after frequent feedings. The scenarios help the learners to access their support systems by asking what a partner can do in the situation as well as other supports they can access such as lactation consultants, organizations such as La Leche League and

breastfeeding support groups. The learners are asked to take the knowledge they've gained and apply it to the scenario as well as self-evaluate the personal strengths and supports they will have to draw upon when faced with a breastfeeding challenge.

Thinking about and planning strategies prenatally for breastfeeding success will make the transition to breastfeeding postpartum less traumatic. As a result, women will have a greater sense of the challenges they may face and a better idea of how to successfully overcome those challenges.

### **Evaluation of Curriculum**

The BFSE-SF will be administered again after the class is completed. One would predict an increase in the scores after teaching a curriculum that focused on increasing self-efficacy. Based on the final BFSE-SF results, changes can be made to the curriculum to continue to achieve high self-efficacy as a result of the teaching. If there is consistently low scores on a particular question on the BFSE-SF or a negative trend in a general area, changes to teaching strategies can be made to address this area to ensure greater self-efficacy.

The BFSE-SF is also a useful tool in screening women who may need extra guidance and assistance once their babies are born. If the individual leaves the class with a low self-efficacy score, the BFSE-SF can be an effective tool in communication with breastfeeding support staff and lactation consultants in the clinic and hospital when the at-risk mother delivers and needs support and guidance in breastfeeding. Healthcare professionals can readily see the areas in which self-efficacy is low prenatally and help to empower the new mother to breastfeed successfully during the postpartum period.

Recommendations to use the BFSE-SF as a baseline assessment tool in the hospital after women deliver are widely recognized in the breastfeeding community (Pallard & Guill, 2009). No studies have looked at using the BFSE-SF as a screening tool in the prenatal period. This could catch women earlier and allow interventions in the prenatal period as well as provide continuity of care. The BFSE-SF could be included in the woman's prenatal record so that in the clinic prenatally and in the hospital postnatally, staff can assess how much breastfeeding intervention is needed.

### **Conclusion**

Preparing women prenatally to be successful in breastfeeding their babies can have a major impact on the health of our society. The importance of breastfeeding's impact on the public's health is being recognized nationally. The United States Surgeon General has sent out a call to action to support women who breastfeed. Two studies have been done correlating healthcare costs associated with lack of breastfeeding. The first, conducted in 2001, identified the economic impact of breastfeeding for three illnesses—otitis media, gastroenteritis, and necrotizing enterocolitis. This study found that increasing the proportion of children who were breastfed in 2000 to the targets established in *Healthy People 2010*, would have saved an estimated \$3.6 billion annually. These savings were based on direct costs (e.g., costs for formula as well as physician, hospital, clinic, laboratory, and procedural fees) and indirect costs (e.g., wages parents lose while caring for an ill child), as well as the estimated cost of premature death (US Department of Health and Human Services, 2011).

A more recent study that used costs adjusted to 2007 dollars and evaluated costs associated with additional illnesses and diseases (sudden infant death syndrome, hospitalization for lower respiratory tract infection in infancy, atopic dermatitis, childhood leukemia, childhood obesity, childhood

asthma, and type 1 diabetes mellitus) found that if 90 percent of U.S. families followed guidelines to breastfeed exclusively for six months, the United States would save \$13 billion annually from reduced direct medical and indirect costs and the cost of premature death. If 80 percent of U.S. families complied, \$10.5 billion per year would be saved (US Department of Health and Human Services, 2011).

Little research has been done in the area of self-efficacy during the prenatal period. The majority of women believe breast milk to be nutritionally superior to formula. Despite this belief, only a small percentage of women are able meet the recommended feeding guidelines. Women who possess higher breastfeeding self-efficacy scores breastfeed longer. These mothers also report greater satisfaction with the overall experience. A curriculum that improves a women's self-efficacy can increase the rates of breastfeeding duration. This will help to close the gap between the recommendations and actual feeding practices of mothers in the United States.

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