

1. Since the first mother and baby I tried to help in my midwifery training I have been asking the question,

"When a baby is not latching how can I help without damaging the mothers self confidence in her ability to breastfeed?"

Breastfeeding Self-efficacy

Self-Efficacy

- A mothers belief or confidence in her ability to breastfeed - is a modifiable variable associated with successful breastfeeding outcomes.



(Kingston et al 2007)

2. Many known predictors of breastfeeding success or failure are NON-modifiable social or demographic variables, such as maternal age, education level, socioeconomic status or support from significant others; things that we cannot change during the short relationship we have with a breastfeeding dyad.

However, there is a way to improve success rates in the early post partum period. For more than 30yrs studies across a wide range of fields such as athletics, business and education (Stajkovic A 1998) have shown that a person's sense of Self- Efficacy about performing a particular task or behaviour is a strong predictor of the outcome — the higher the self-efficacy the higher the likelihood of success.

Recent studies have identified that "Enhanced maternal self-efficacy is a modifiable variable associated with successful breastfeeding outcomes" (Kingston 2007)

Self-Efficacy & Breastfeeding Outcomes

Dunn et al 2006

"The relationship between the vulnerability factors [breastfeeding confidence, PND, supplementation, perceived adequacy of support] & breastfeeding outcome at 6 wks post partum, after controlling for again deducation".

"Maternal confidence was the strongest predictor of breastfeeding outcome" (odds ratio: 1.85, 95% CI: 1.50-2.27, P<.001)

Consistent with previous research:

Dennis 1999; Blyth et al., 2002; Buxton et al., 1991; O'Campo et al.,1992; Painzak & Turner, 2000.

Self-efficacy a MODIFIABLE variable

3. I wont spend a lot of time on the research, you can peruse the attached reference list, but will note a couple of important studies here.

In 2006, Dunn et al – Looked at the "The relationship between the vulnerability factors [breastfeeding confidence, PND, supplementation, perceived adequacy of support] & breastfeeding outcome at 6 wks post partum." After controlling for age and education, they found that "Maternal confidence was the strongest predictor of breastfeeding outcome" (odds ratio: 1.85, 95% CI: 1.50-2.27, P<.001) and that "low level of confidence with breastfeeding is a powerful predictor or early weaning"

Which was consistent with previous research by: Dennis 1999; Blyth et al., 2002; Buxton et al., 1991; O'Campo et al.,1992; Painzak & Turner, 2000; Creedy 2003.

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Self-Efficacy & Breastfeeding Outcomes

Dennis 2006

In 1999 Dennis & Faux developed & tested a Breastfeeding Self-efficacy scale (BSES) to measure Breastfeeding confidence.

Studies replicating this original research have been conducted in Canada, Australia, China, Puerto Rico.

In these studies BSES scores consistently predicted breastfeeding duration at 4, 6, 8, and 16 weeks post partum:

In addition, a significant relationship between BSES scores & exclusive breastfeeding was demonstrated

Self-efficacy a MODIFIABLE variable

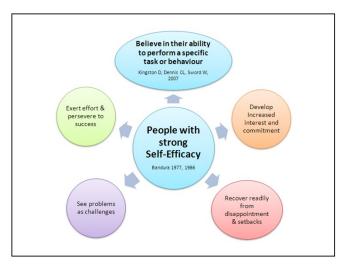
4. Dennis 2006 chronicles the following studies:

Dennis & Faux (1999) developed and tested a Breastfeeding Self-efficacy scale (BSES) to measure Breastfeeding confidence.

Studies replicating this original research have been conducted in Canada (Dennis 2003), Australia (Blyth et al., 2002, 2004; Creedy et al 2003), China (Dia & Dennis 2003), Puerto Rico (Molina Torres et al., 2003).

In these studies BSES scores consistently predicted breastfeeding duration at 4, 6, 8, and 16 weeks post partum:

In addition, a significant relationship between BSES scores & exclusive breastfeeding was demonstrated



- 5. The evidence shows that, people with strong self-efficacy:
 - Believe in their ability to perform a specific task or behaviour. Kingston D. (2007)
 - Develop increased interest and commitment in the behavior.
 - Recover readily from disappointment & setbacks.
 - See problems as challenges.
 - Exert effort & persevere to success.

It is therefore easy to imagine that strong self-efficacy will be a great help to mothers experiencing early latching problems.

Plastic Fantastic Brain & Self-Efficacy

 Throughout life the human brain grows new connections in response to the *environment*, the *task at hand* and our *thoughts* and *imaginings*.



 "Repetition of experiences and thoughts – like the repetition of piano scales – builds stronger and more lasting neural pathways, making future successes more likely".



Doidge 2010, Glover, R. & Wiessinger, D. (2012)

6. The latest neuroscience helps us to understand how self-efficacy theory works

Neuro scientists have recently begun to understand that Neurons that fire together wire together and make more permanent pathways in the brain.

Norman Doidge, author of the book "The brain that changes it's self" likened it to the impressions a skier makes in the snow, if you ski down the slope once you only make a small mark on the snow, which is easily obliterated. But if you ski down that slope in exactly the same place over and over impression.

Plastic Fantastic Brain & Self-Efficacy

Neural reinforcement for Breastfeeding mothers

- Through repetition of successful experiences and thoughts. Performing and/or observing successful breastfeeding behaviours builds stronger, more lasting neural pathways, making future successes more likely.
- We can help, using the 4 practical, building blocks of efficacy theory Bandura 1977



7. Therefore neural reinforcement for breastfeeding mothers will come through repetition of successful experiences and thoughts.

We can help provide the repetition of successful experiences by using the 4 practical building blocks of Self-efficacy theory.

B/F Self-efficacy: How can we help?

There are 4 simple, practical, proven ways to build a mothers breastfeeding self-efficacy



8. In fact they can be a reliable practical framework on which to base our interactions with mothers.

Building Breastfeeding Self-efficacy

"According to Bandura's social cognitive theory
(1986) self-efficacy is an individuals perceived
ability to perform a specific task or behaviour
that is modifiable through"
(Kingston 2007)

- 1. Performance accomplishment or Task mastery
- 2. Vicarious experience
- 3. Verbal persuasion
- 4. Physiological and emotional states

Bandura: "self-efficacy is derived from four principal sources of information"

9. "According to Bandura's theory, self-efficacy is an individuals perceived ability to perform a specific task or behaviour that is modifiable through" four principal sources of information"

THESE ARE THE BUILDING BLOCKS OF SELF Efficacy

The things that build Self-efficacy in human beings whatever the task

Building Breastfeeding Self-efficacy

- 1. Performance accomplishment or Task mastery
 - Successful experiences: most powerful influence on S-E
 - Successful experiences increase self-efficacy, repeated failures diminish it
 - Min., Birth interventions, extend STS, Biological Nurturing Approaches)



Bandura: "self-efficacy is derived from four principal sources of information"

10. The most influential source is **Performance Accomplishment or Task Mastery** –

It is most powerful when a mother and baby have successful experiences with minimal intervention from outside sources.

Highlighting where we should focus our efforts initially, supporting birth practises that minimize interventions, encourage extended skin to skin contact and biological nurturing or baby-led approaches.

However it also applies when a baby is not latching on his own and it is necessary to break the process down into simple steps that help the mother via a series of smaller successes, one step at a time.

Building Breastfeeding Self-efficacy

Vicarious experience – especially powerful when mothers are uncertain about their abilities or have limited experience

Self-efficacy is increased by **observing others successfully performing** the target behaviour. *Real examples are rare BUT*

We can help by Modelling the behaviour:

With videos, images, graphics, &
Participatory Modelling
Helper Demonstrates
Mother Replicates
Helper coaches to success

A highly effective form of vicarious experience when combined with relevant verbal persuasion.

Helper Demonstrates (with a doll, explaining what they are doing & why it's important)

Mother Replicates
(mother repeats the action or actions

with her own baby)
Coach to Success



11. Vicarious experience -

Chances to observe other women successfully positioning and attaching *newborn* babies are rare in this culture. Therefore if a mother is experiencing latching difficulties she has little helpful vicarious information to guide her.

Modelling of successful behaviours (see the 7 fundamental innate latching behaviours) helps mothers avoid excess trial and error; especially the repetition of errors which will diminish her self-efficacy.

The use of visual media, video/DVD, pictures, graphics **and demonstrations with a doll** can provide mothers with effective vicarious learning experiences.

When a mother needs to help her baby attach, we may help most by using a coaching technique called **Participatory Modeling.**

Self-efficacy studies have shown that breaking a complex behaviour into small steps is helpful. When using participatory modeling a helper demonstrates the relevant step or steps of the behaviour with a doll, combined with clear descriptions of what they are doing and why it is important.

The mother then replicates the modelled behaviour with her own baby, while the helper observes and assists her

(helper observe & assist her efforts, encouraging successful actions and preventing pitfalls)

A highly effective form of vicarious experience combined with relevant verbal persuasion.

Participatory Modelling is used to promote strong feelings of selfefficacy

Participatory Modelling to enhance S-E

efforts. Giving her encouraging feedback on successful actions and preventing actions that will lead to failure.

So that, by the end of the session, both mother and helper are confident that the she has understood AND most important, *experienced* what she needs to do to succeed.

"Even before breastfeeding itself is successful, participatory modelling that leads to or enables a series of smaller successes can strengthen a mother's self-efficacy so that she remains eager to reach her breastfeeding goals. Imagine the pleasure the mother of a non-latching baby can derive simply from discovering how to make herself and her baby fit together comfortably." (Glover R. Weissinger 2012)

Demonstration, replication, and repeated small successes are a powerful, effective route to success.

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Building Breastfeeding Self-efficacy

- 3. Verbal persuasion most powerful when: (Bandura '77,'86)
 - The model verbalizes the process & strategies for success
 - Encouragement in the form of ability feedback is used in the early stages of learning a skill
 - Mother perceives the helper as a credible, knowledgeable source of information (kept to a minimum, simply stated, rich in analogies, playfulness and demonstrations) (Glover, Weissinger 2012)
 - Be aware "it is easier to verbally undermine than build self-efficacy"
- 4. Physiological and emotional states
 - Will affect how mothers perceive their ability to breastfeed
 - Alleviating PAIN, stress, anxiety promotes self-efficacy

Skill and Confidence are an unconquered army - George Herbert

12. **Verbal persuasion** can be very powerful but it is only helpful when it contributes to the effective performance of the task

It includes: describing what is being modelled, and why it will increase the likelihood of success, encouragement in the form of ability feedback as mother is practising a new skill, additional verbal information that clearly contributes to a successful outcome and in turn increases her perception of you as a credible source of information.

Verbal persuasion can be a valuable tool for us but with a caution, that "it is easier to verbally undermine than build self-efficacy".

The helper who tries to be positive by saying "you're doing a great job, or baby looks attached well" **will not** build self-efficacy in a mother who is breastfeeding in pain.

Inappropriate verbal persuasion that is out of synch with the mothers experience is perhaps our least effective way to help! Appropriate verbal persuasion combined with Participatory Modelling can be one of our best.

So keep your verbal persuasion to a minimum, simply stated, relevant, rich in playful analogies, and demonstrations

Physiological and Emotional states will affect how mother perceives her ability to perform the task

Simply alleviating her pain or stress, making her comfortable physically and emotionally can improve her belief in her breastfeeding abilities.

Building Breastfeeding Self-efficacy

Finally these simple effective strategies require us to have a good knowledge of the innate pre-sucking process & how to model and describe each step to a mother

Skill and Confidence are an unconquered army -George Herbert



13. However as George Herbert said in the 16th century "Skill and Confidence are an unconquered army"

If we want to send mothers home from hospital or our clinic with strong self-efficacy we need to know what are the successful pre-sucking behaviours and how to demonstrate and describe them effectively.

Biological Pre-sucking behaviours

Characterized by:

1. STABILIZING to release a cascade of biological responses in both mother and baby, that lead to ..





- **2. SEEKING** rooting, head righting, gaping and tongue extrusion reflexes that lead to ..
- **3. SCOOPING** up an large enough mouthful of breast for comfortable and effective breastfeeding



14. For the past 40+ years I have called the process of a baby attaching at the breast Positioning and Attachment, but recently I have begun to call it the innate pre-sucking behaviours of mother and infant.

Because I would like to move away from language that infers this is something that mothers or midwives have to make happen, but rather see it as a biological process that mothers and their helpers need to know how to support.

Recently I have begun to characterize these pre sucking behaviours in three phases,

That begin with stabilizing baby on its mothers body

Email: reblact@iinet.net.au

resulting in the release of a cascade of biological responses in both mother and baby, that lead to ...,

Baby seeking the breast and nipple, using the rooting, head righting, gaping and tongue extrusion reflexes, that lead to,

Baby being *in the position to* use their bottom jaw to 'scoop' up an large enough mouthful of breast for comfortable and effective breastfeeding.

The terminology might have changed but the biological process and physical behaviours have not.

See the 7 innate pre-sucking behaviours table that support the release of the innate reflex responses built into every newborn and mother and are fundamental to a continuum of helping approaches that we can use across the spectrum of breastfeeding situations.

AND

Rebecca's education materials that are designed for Mother-sped / Mother-Led situations when a baby is not attaching on his own and needs some help from his mother to support the pre-sucking behaviours.

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References:

- © This smiley face indicates some of the "Light bulb" research that enlightened my understanding of the innate pre-sucking behavior and how to help mothers and babies experience comfortable, effective breastfeeding with the least amount of intervention from me. Rebecca Glover
- ©Bandura, A. (1977). Self-Efficacy: Toward a unifying theory of behavioural change Psychological Review, 84

 (2), 191-215.
- Bandura, A. (1986). Social foundation of thought and action: A social cognitive theory. Englewood Cliffs, NJ:
 Prentice-Hall
- ©Bergman N.J. (2003). Humans & Kangaroos A Biological Perspective. Conference Syllabus. ILCA Sydney. www.kangaroomothercare.com
- Blyth, R. J., Creedy, D. K., Dennis, C.-L., Moyle, W., Pratt, J., & DeVries, S. (2002). Effect of maternal confidence on breastfeeding duration: An application of breastfeeding self-efficacy theory. *Birth*, *29*, *278-284*.
- Blyth, R. J., Creedy, D. K., Dennis, C.-L., Moyle, W., Pratt, J., DeVries, S., et al. (2004). Breastfeeding Duration in an Australian Population: The Influence of Modifiable Antenatal Factors *Journal of Human Lactation*, 20(1), 30-38.

- Buxton, K. E., Faden, A. C., Brown, R. R., Brown, C. H., Paige, C. M., & Chwalow, A. J. (1991). Women intending to breastfeed: Predictors of early infant feeding experiences. *American Journal of Preventative Medicine, 7, 101-106*.
- Cantrill, R. (2006). Influence of naked body contact between mother and newborn on effective breastfeeding. Unpublished PhD Manuscript Griffith University, Brisbane, Australia.
- ©Colson, S. (2008). Biological Nurturing® Laid-Back Breastfeeding [DVD] *The Nurturing Project. available on line at* biologicalnurturing.com.
- ©Colson, S. D., Meek, J. H., & Hawdon, J. M. (2008). Optimal positions for the release of primitive neonatal reflexes stimulating breastfeeding. *Early Human Development*, 84(7): 441-449.
- Colson, S. (2010). *An introduction to Biological Nurturing*. Amarillo, TX: Hale Publishing, L.P.
- Creedy, D.K., Dennis C-L., Blyth, R., Moyle, W., Pratt, J., DeVries, S.M. (2003) Psychometric characteristics of the Breastfeeding Self-efficacy Scale: Data from an Australian sample. *Research in Nursing & Health, 26, 143-152*.
- Dennis, C.-L., & Faux, S. (1999). Development and psychometric testing of the Breastfeeding Self-Efficacy Scale. *Research in Nursing and Health*, 22(5), 399-409.
- Dennis, C-L., (1999) Theoretical underpinnings of breastfeeding confidence: A self-efficacy framework. *Journal of Human Lactation*, *15*, *195-201*.
- Dennis, C-L., (2003) The Breastfeeding Self-efficacy Scale: Psychometric assessment of the short form. *Journal of Obstetrics, Gynaecology and Neonatal Nursing*, *32*, *734-744*.
- ©Dennis, C-L., (2006) Identifying Predictors of Breastfeeding Self-Efficacy in the Immediate Postpartum Period. *Research in Nursing & Health*, *29*, *256-268*.
- Dai, X., & Dennis, C-L., (2003) Translation and validation of the Breastfeeding Self-Efficacy Scale into Chinese. Journal of Midwifery & Women's Health, 48, 350-356.
- ©Doidge, N. (2010). The brain that changes itself. New York, NY: Penguin Group.
- Dunn, S., Davies, B., McCleary, L., Edwards, N., & Gaboury, I. (2006). The Relationship between Vulnerability Factors and Breastfeeding Outcome. *JOGNN*, 35(1), 87-96.
- ©Freeman, G. (2000). Poor Feeders Workshop, Melbourne, Australia.
- Genna, C.W. (2011). Supporting Sucking Skills in Breastfeeding Infants. 2nd Edition Jones and Bartlett Publishers. In Press.
- Glover. (2005). The Key to Successful Breastfeeding. Perth: Pamphlet
- Glover, R. (2005). Follow Me Mum. Perth: DVD
- Glover, R. (2004). Lessons from innate feeding abilities transform breastfeeding outcomes. *ILCA Conference Syllabus*, Scottsdale, AZ, p. 87.
- Glover, R. (2007). Working with Innate Infant Programming and Design: Putting it into Practice Hints and Hitches Paper presented at Seeking Suckling Success: CLCWA Conference, Fremantle, Western Australia.
- Glover, R., & Wiessinger, D. (2012). They Can Do It, You Can Help: Building Breastfeeding Skill and Confidence in Mother and Helper In C. Watson Genna (Ed.), Supporting Sucking Skills in Breastfeeding Infants (pp. 105-148). Woodhaven, New York: Jones & Bartlett
- Jacobs LA, Dickinson JE, Hart PD, Doherty DA, Faulkner SJ, (2007). Normal Nipple Position in Term Infants Measured on Breastfeeding Ultrasound. J Hum Lact 23(1) 52-9
- ©Kingston, D., Dennis, C-L., Sword, W. (2007). Exploring Breastfeeding Self-efficacy. J Perinat Neonat Nurs Vol. 21, No. 3, pp, 207-215
- Molina Torres, M., Davila Torres, R.R., Parrilla Rodreguez, A.M., & Dennis, C-L. (2003) Translation and validation of the Breastfeeding Self-Efficacy Scale into Spanish: Data from a Puerto Rican population. *Journal of Human Lactation*, 19, 35-42.
- ©Morris, E.S. & Klein, M.D. (1987). *Pre-feeding skills*. San Antonio, TX: Therapy Skills Builders.

- Naylor AJ, Ed. Morrow A, co-ed. (2001). "Infant Oral Motor Development in Relationship to the Duration of Exclusive Breastfeeding" Developmental Readiness Paper . 13-5 http://linkagesproject.org/publications/devreadinesspaper.html
- ©Noel-Weiss, J., Bassett, V., & Cragg, B. (2006). Developing a prenatal breastfeeding workshop to support maternal breastfeeding self-Efficacy. *JOGNN*, *35*(3), *349-357*.
- ©Noel-Weiss, J., Bassett, V., & Cragg, B. (2006). Randomized controlled trial to determine effects of prenatal breastfeeding workshop on maternal breastfeeding self-efficacy and breastfeeding duration. *JOGNN*, 35(5), 349-357.
- O'Campo, P., Faden, R.R., Gielen, A., Wang, M. (1992). Prenatal factors associated with breastfeeding duration: Recommendation for prenatal interventions. *Birth*, *19*, *195-201*
- Pajares, F. (2002). Overview of Social Cognitive and Self-Efficacy Theory. from http://www.des.emory.edu/mfp/eff.html
- Papinczak, T. A., & Turner, C. T. (2000). On analysis of personal and social factors influencing initiation and duration of breastfeeding in a large Queensland maternity hospital. *Breastfeeding Review*, 8(1), 25-33.
- ©Righard L. Alade M.O. (1990). Effect of delivery room routines on success of first breastfeed. Lancet;336:1105-07
- ©Smillie, C.M., Baby-Led Breastfeeding... The Mother-Baby Dance. DVD *Geddes Productions. A Makelin Media Production*
- ©Uvnas-Moberg, K. Johansson B. Lupoli B Svennsersten-Sjaunja K. (2001). Oxytocin facilitates behavioural, metabolic and physiological adaptations during lactation. Appl Anim Behav Sci May 2nd 72 (3) 225-234
- Uvnas-Moberg, K. (1996). Neuroendocrinology of the Mother-Child Interaction. *Trends in Endocrinology and Metabolism* (7)4:126–31.
- ©Widström A-M et al. (1987). Gastric suction in healthy newborn infants. Effects on circulation & developing feeding behaviour. Acta Paediatr Scand;76:566-72
- Wolf L.S. Glass R.P. (1992). Feeding and Swallowing Disorders in Infancy: Assessment and Management. Therapy Skills Builders
- ©Woolridge, M. W. (1986). Aetiology of Sore Nipples. *Midwifery, 2, 172-176.*
- ©Woolridge, M. W. (1986). The 'Anatomy' of Infant Sucking. *Midwifery, 2, 164-171*.