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Can Persuasion Research Increase Commitment to Breastfeeding? A Test of Women's Resistance to Pro Infant-Formula Messages

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CAN PERSUASION RESEARCH INCREASE COMMITMENT TO BREASTFEEDING? A TEST OF WOMEN'S RESISTANCE TO PRO INFANT-FORMULA MESSAGES

A Capstone Experience/Thesis Project

Presented in Partial Fulfillment of the Requirements for

the Degree of Bachelor of Arts with

Honors College Graduate Distinction at Western Kentucky University

By:

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ABSTRACT

William McGuire's Attitude Inoculation Theory (AIT) predicts that the act of warning women that they may be exposed to attempts to change their attitudes can "inoculate" them against persuasion. The warning can be compared to a weakened virus when it enters the body. In response to the threat or "virus" people will strengthen their attitudes. After a short delay the participant is introduced to the message and their resistance to this message is evaluated. The purpose of this study was to analyze women's attitudes towards infant feeding by utilizing the inoculation theory. Overall, we found that the inoculation had no effect for participants who had pre-existing, positive breastfeeding attitudes. However, participants who had pre-existing, negative breastfeeding attitudes and received the inoculation strengthened their negative attitudes toward breastfeeding.

Keywords: Capstone Experience, Thesis, Inoculation Theory, Infant Feeding, Honors College, CE/T

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Major Field: Psychology

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CHAPTER ONE

INTRODUCTION

Kentucky ranks 48th out of 50 in breastfeeding rates in the U.S. Nearly half (42%) of Kentucky infants do not receive any breast milk (CDC, 2007). This compares to an average rate of 25% not receiving any breast milk in the remainder of the U.S. (Breastfeeding Report Card, 2010). Part of this problem has been identified by the National Breastfeeding Awareness Campaign, which tried to position breastfeeding as the normative way to feed infants between 2004 and 2006. Researchers with the campaign found that while women were somewhat informed of the benefits of breast milk over formula, women still felt that formula usage was "okay," and saw the superiority of breast milk over formula as something akin to "optimal nutrition" over "normal nutrition" (womenshealth.gov). Recently, in the Science Section of the New York Times, there was an article covering how some health authorities are asking hospitals to stop handing out free samples of formula milk. This is because many people found it easier to stop breastfeeding and to start formula feeding when they had samples around the house (Belluck, 2012, p. D6). Although subsequent research has tried to correct the problem of women viewing breastfeeding as "optimal" compared to formula feeding as "normal," it has been guided more by intuition than by theory or empirical findings (see, e.g. critiques by Heinig, 2009, and Ebert-Wallace & Taylor, 2011).

The statistics regarding how many infants have never received any breast milk are a cause for concern. Healthy People 2020 have set several goals for breastfeeding advocacy. One goal of this committee is to increase the proportion of infants who are breastfed at 6 months. In 2006, 43.5% of infants were breastfed at 6 months and the goal is to have 60.6% of infants breastfed at 6 months in 2020. This can be compared to Healthy People 2010 where the proportion of mothers who breastfed exclusively for the first 6 months was 13% in 2002 and 17% in 2010 (United States Breastfeeding Committee). Breast milk lowers the probability of ear infections, diarrhea, and asthma (womenshealth.gov). There are also several benefits for the mother. Breastfeeding helps shrink a woman's uterus to pre-pregnancy size. Also the bonding between the infant and the mother is increased by the closeness associated with breastfeeding (womenshealth.gov).

This study uses a theory from persuasion research, known as Attitude Inoculation Theory (AIT, McGuire, 1961), to help women who intend to breastfeed maintain their commitment to breastfeeding, even when they are exposed to arguments for the use of infant formula. Inoculation research assesses how people can become resistant to persuasive techniques (Wood, 2007, p. 357). William McGuire's (1961) AIT predicts that the act of warning women that they may be exposed to attempts to change their attitudes can "inoculate" them against persuasion. The warning can be compared to a weakened virus when it enters the body. In response to the threat or "virus" people will strengthen their attitudes. After some time passes the participant is introduced to the message and their resistance to this message is evaluated (Banas & Rains, 2010, p. 282).

There are two important aspects of the inoculation. The inoculation must be perceived as a threat to previous attitudes. A threat is critical to the foundation of this theory because it is a catalyst for resistance (Pfau, Ivanov, Houston, Haigh, Sims, Gilchrist, Russell, Wigley, Exkstein, & Richert, 2005, p. 416). In response to the threat, the receivers of the inoculation strengthen their pre-existing attitudes, which protects them from future attacks (Wood, 2007, p. 359). The second aspect, also known as refutational preemption, states that the inoculation must provide the participant with counterarguments that he or she can use against other attacks (Compton & Pfau, 2004, p. 345). It is important that the refutational preemption does not provide only positive reasons for maintaining one's pre-existing attitude because this will not be strong enough to provide immunity to later attacks (McGuire & Papageorgis, 1962, p. 25). Although the threat can be perceived as a trigger for resistance, it is actually the formation of counterarguments that initiates the process of resistance to attacks on a pre-existing attitude (Pfau, et. al, 2005, p. 416). Not only can refutational preemption provide people with ways to address attacks on their pre-existing beliefs, it can also be a threat to people who have a pre-existing attitude that is in opposition toward the previous material. The refutational preemption will cause the opposing party to reevaluate their attacks, which can be perceived as a threat. However, those with a neutral position towards the study are unlikely to perceive a threat because their neutral positions are not being addressed by the inoculation (Wood, 2007, p. 359).

AIT has been used in numerous studies with a variety of topics. One study utilized the Inoculation Theory with regard to credit card marketing, which targets college students. This study found that an inoculation could protect students from credit

card advertisements and help influence healthy attitudes concerning credit card debt (Compton & Pfau, 2004). Other researchers have used AIT to conduct research on health in such areas as agricultural biotechnology (Wood, 2007), but to our knowledge no one has conducted inoculation research on the topic of breastfeeding.

It is expected that participants who receive materials designed to increase their resistance to pro-infant formula persuasive attacks will show more positive breastfeeding attitudes compared with the control group one week later, after exposure to the pro-formula materials.

CHAPTER TWO

METHOD

Participants

There were 88 Western Kentucky University students who participated in the study. Participants were female and were an average of 19.7 (*sd* = 2) years old.

Materials

This is a two-condition experimental design. In the first week, participants were asked to read pro-breastfeeding materials taken from a government website (http://www.womenshealth.gov/). These materials discussed the benefits of breastfeeding for both the infant and the mother. The full text can be found in Appendix 1. Depending on experimental condition, participants were either dismissed after viewing this breastfeeding information, or shown the inoculation materials, designed to strengthen their attitudes toward breastfeeding. The inoculation discussed how mothers are being overwhelmed by infant formula advertisements. Additionally, it gave reasons why mothers should not believe everything that infant formula advertisements state. The full text can be found in Appendix 2.

Attitudes toward breastfeeding were measured before leaving. Using a number of items, the full text of which is available in Appendix 3. Semantic differential scales had participants rate their view of breastfeeding. A few of the answer choices were: Negative…Positive; Bad…Good; Against…In Favor; Harmful…Beneficial; and

Foolish…Wise. Each item was answered on a 1-9 scale, with higher values indicating more positivity toward breastfeeding. Behavioral Willingness was also measured on a 1-9 scale with higher scores representing a more positive attitude. Sample items included: "In general, how willing would you be to let us send you more information related to breastfeeding?" and "Hypothetically, how willing would you be to sign a petition in favor of breastfeeding?" Additionally, subjective perceptions of attitude strength were measured on a 1-9 scale with higher scores representing a more positive attitude. Sample items included: "How certain are you of your feelings toward breastfeeding?" and "How easily could your opinion toward breastfeeding be changed?"

The Iowa Infant Feeding Attitude Scale (Lewallen, 2006) was administered and responses were collected on a 1-5 scale (5 *strongly agree*… 1 *strongly disagree*). The average of these scores was taken, such that higher values meant a more pro-breastfeeding attitude.

The Breastfeeding Self-Efficacy Scale (BFSES; Dennis, 2003) was used to identify women who had doubts about their ability to breastfeed. Women with lower scores on this scale perceived breastfeeding as more risky. Sample items included: "I think I will be able to successfully complete breastfeeding like other challenging tasks." And "I think I will be able to stay motivated to breastfeed my baby." Women scoring lower on the BFSES were considered to have doubts about breastfeeding, and potentially to view breastfeeding as risky.

One week later, for the second session of the study, participants were asked to review pro-infant formula materials, which stated some of the perceived benefits of infant formula. The full text can be found in Appendix 4. Participants were then given a brief

prompt, which explained the importance of answering the upcoming question with their current feelings and beliefs (see Appendix 5). They were asked to indicate their breastfeeding attitudes once more, which were assessed by the same scales as week one (See Appendix 3). Participants received one credit for the first session they completed and an incentive, either a $10 gift card and a credit or two credits, for their participation in the second session.

Procedure

Participants signed up to participate and then completed the tasks in the lab on a computer. They were instructed on the purpose of the task before beginning the study. The experiment took approximately 15-20 minutes for session one, and the same amount of time for session two. Once finished, participants left the lab and were emailed when their credit was granted.

CHAPTER THREE

RESULTS

Of the 88 participants, 4 were excluded due to either already being a mother or not intending to become a mother. This left 84 participants in the sample. Of these 84, 67 were in the no inoculation condition, and only 17 were in the inoculation condition. These unequal sizes were due to error, and unfortunately somewhat qualify the reliability of these results.

Using the available sample, the 6 semantic differential scores from both the initial and final lab session separately were averaged to yield attitude indices where higher values indicated more positive breastfeeding attitudes, with a possible range of 1-9. The initial semantic differential score had a Cronbach's alpha score of .96, and the final semantic differential score had a Cronbach's alpha .97.

Participants' final breastfeeding attitudes were then regressed on their standardized initial breastfeeding attitudes, a dummy variable representing the inoculation factor (1 = inoculation; 0 = no inoculation), and their interaction. This analysis showed a significant positive effect of initial breastfeeding attitudes on final attitudes, ($t(1,83) = 10.77$; B = 0.94; $p = .000$; $\eta^2_{partial} = .59$)), as well as negative effect of the inoculation on final breastfeeding attitudes ($t(1,83) = -2.03$; B = -.53; $p = .046$; $\eta^2_{partial} = .05$)), but this was qualified by an interaction between initial breastfeeding attitudes and inoculation condition ($t(1,83) = -2.2$; B = 1.11; $p = .031$; $\eta^2_{partial} = .06$)). Predicted values

from this equation are graphed below, at – 1 SD and + 0.5 SD of initial attitudes. Although normally +/- 1 SD would be chosen (c.f. West, Aiken, & Krull, 1996), plotting the predicted value of participant's final attitudes at + 1 SD would have yielded impossible predicted values, larger than 9 (on a 1-9 scale, this is impossible). Further, inspection of the data showed that no participant scored more than 0.5 SD above the mean on initial breastfeeding attitudes, so 0.5 SD above the mean was chosen to most accurately demonstrate the nature of the interaction.

As can be seen in the figure, initial breastfeeding attitudes were positively related to final attitudes. However, they were more strongly related in the inoculation condition. The inoculation led women relatively low in breastfeeding positivity (- 1 SD), to have even more negative final attitudes than they otherwise would have. Among women relatively higher in initial breastfeeding positivity (+ 0.5 SD), the inoculation had no effects.

Identical regression analyses were run using initial BFSES to predict final BFSES; initial IIFAS to predict final IIFAS; and initial behavioral willingness to predict final behavioral willingness. Although each of these initial measures significantly predicted its own final measure, the inoculation condition did not interact with any of them to predict the final measure (all *ps* > .5), nor did the inoculation condition have any conditional main effects by itself (all *ps* > .25).

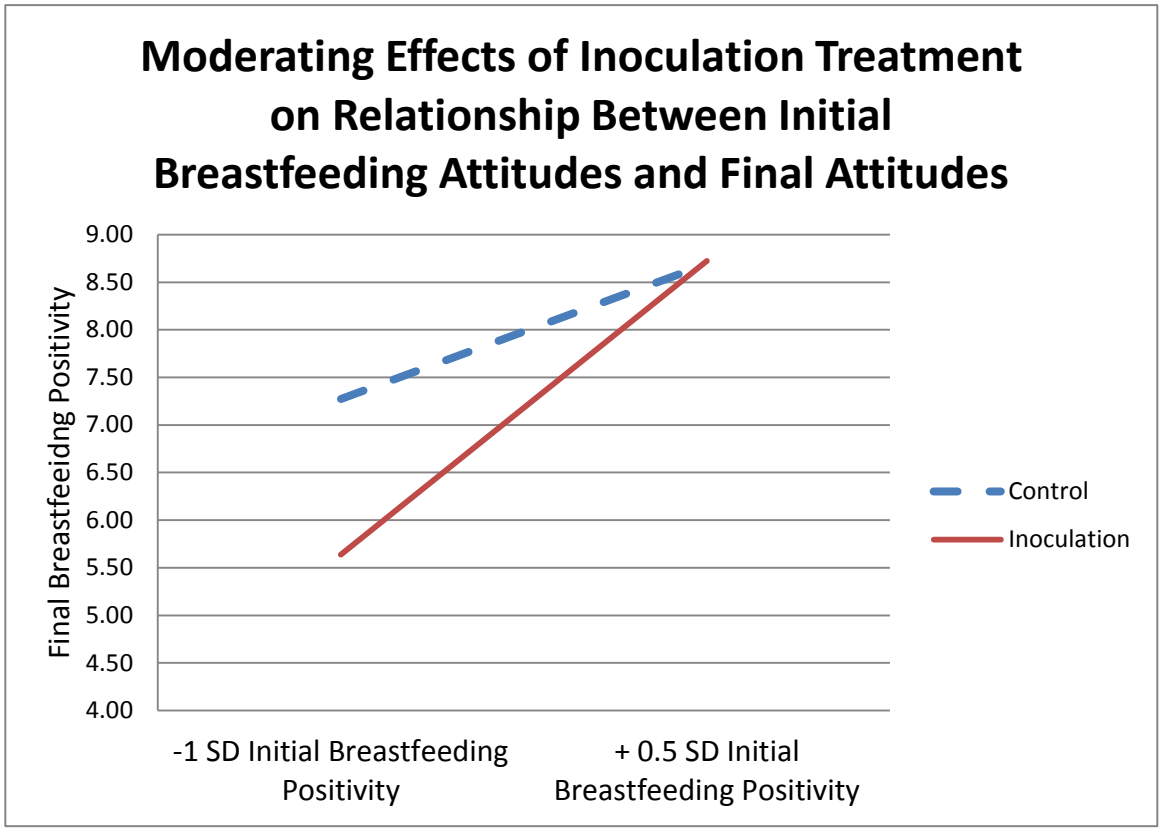

Figure 1: Moderating Effects of Inoculation Treatment on Relationship Between Initial Breastfeeding Attitudes and Final Attitudes.

CHAPTER FOUR

DISCUSSION

The experiment does not support our hypothesis that participants who have positive, pre-existing attitudes toward breastfeeding and receive the inoculation materials will show stronger positive breastfeeding attitudes compared with the control group, after exposure to the pro-formula materials, predicted by McGuire's Attitude Inoculation Theory (McGuire, 1961). However, in our study it was found that participants with negative breastfeeding attitudes actually became more negative in their attitudes toward breastfeeding after exposure to the inoculation. This is consistent with the idea that the refutational preemption can be perceived as a threat to participants who have opposing attitudes toward breastfeeding because the counterarguments challenge the participants' pre-existing attitudes (Wood, 2007, p. 359). If the counter-arguments used in the refutational preemption were not persuasive enough, the participants would not be influenced to shift their negative attitudes toward breastfeeding to positive attitudes to breastfeeding.

William McGuire's theory can be compared to a weakened "virus" entering the immune system. Just as our body prepares and strengthens itself to the upcoming virus, our attitudes also strengthen when given a warning that our pre-existing attitudes may be under attack (1961). McGuire's theory focuses on the importance of the inoculation, the warning. The inoculation must contain two things—a perceivable threat and refutational

preemption. The threat must be strong enough so that the participant feels like their attitudes are under attack (Pfau, Ivanov, Houston, Haigh, Sims, Gilchrist, Russell, Wigley, Exkstein, & Richert, 2005, p. 416). The refutational preemption is important because it features the counter-arguments that the participant can use when their attitudes are questioned (Compton & Pfau, 2004, p. 345).

There are a few limitations to the current experiment. One limitation is that participants were not randomly assigned to the control and the treatment conditions. There was an error with the computer program that was supposed to randomly assign participants into either the control or the experimental condition. As a result, more data were collected so that more participants could be placed in the treatment condition to help equal out the number of participants in each condition. Along with the participants not being fully randomly assigned, the participants toward the end of the study received a different incentive than participants at the beginning of the study. There were only 100 $10 Wal-Mart gift cards; however, when more data needed to be collected and there were no more gift cards, participants received two credits for the second session.

Overall, the experiment does not support our hypothesis that participants with pre-existing, positive attitudes toward breastfeeding will strengthen their attitudes after receiving an inoculation. Contrastingly, participants with negative attitudes toward breastfeeding became even more negative toward breastfeeding when given an inoculation. These results are consistent with the idea that if the refutational preemption is not strong enough to persuade participants with opposing views to question their pre-existing attitudes, then the inoculation will not work. Therefore, in the future it would be wise to reevaluate the counterarguments in terms of persuasive strength.

This research is important to continue and improve upon. Current breastfeeding campaigns do not make use of well-developed social psychological persuasion theories, such as the Attitude Inoculation Theory. If the results had supported our hypothesis, then the application of this theory could have led to more effective breastfeeding promotion materials, and to enhanced commitment to breastfeed among mothers. Future research concerning this topic is significant because the findings of future studies literally could be life saving for many infants. The research also has significance in demonstrating how basic research in social psychology can be applied to achieve pro-social outcomes. Future findings could provide a significant contribution to both public health officials and researchers in social psychology.

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APPENDIXES

Appendix 1

Breastfeeding has many benefits for infants, mothers and society.

One advantage breastfeeding offers for the infant is overall health protection. Breast milk helps fight against diseases because of its vital contents such as, hormones and antibodies. This helps to benefit the child's health throughout their life. It has been discovered by some research that breastfeeding can reduce the chances of Type 1 Diabetes and certain skin rashes for an infant. Along with being extremely nutritious for an infant, breast milk changes over time as the child develops and breast milk is easier to digest for an infant. This is beneficial since formula milk is made from cow's milk and an infant's stomach needs time to adjust to the different milk.

There are also numerous benefits of breastfeeding for the mother. When a mother breastfeeds there is no need to worry about the proper temperature of the milk and there is no concern about sterilizing the bottles. Breastfeeding is also more economically friendly because the mother does not have to spend money on formula. Studies have also found breastfed infants become sick less often, which would save money on medical bills. Mothers also benefit from the close contact given during breastfeeding. The close contact initiates the secretion of oxytocin, a hormone that helps calm mothers and milk

secretion. Another benefit for mothers is link between breastfeeding and lower risk of health problems including, Type 2 Diabetes and Breast Cancer.

Along with benefitting the infant and mother, breastfeeding can also be advantageous to society. One benefit is that mothers are less likely to miss work due to a child's illness because breast fed infants are less likely to become sick. Breastfeeding also helps to limit the amount of trash produced due to plastic bottles and formula cans.

Appendix 2

Thank you for your help so far with this project. Although many people have positive attitudes toward breastfeeding, many people use artificial formula to feed their infants, and many people will change their minds about breastfeeding and will use formula. This is a significant health and economic problem for many people. The reason that women use formula is in part due to formula advertisements that claim that formula offers the same nutrient benefits and allows significant others to help with the nursing process.

DON'T FALL FOR FORMULA FEEDING ADVERTISEMENTS

New mothers are being overwhelmed with formula feeding advertisements. Studies conducted by the Centers for Disease Control (CDC; 2007) show that 42% of Kentucky infants do not receive breast milk at all, and large numbers of infants in the United States as a whole share this situation. While many mothers fully understand the multiple benefits of breastfeeding, formula companies are continuously targeting new and expecting mothers with updated campaign strategies. Some of these statements may be so convincing that they make you doubt your current opinion towards breastfeeding.

Formula companies state that formula is designed to have the nutrients your infant needs such as, iron and other important vitamins and minerals. However, formula feeding does not have everything that breast milk has. Breast milk protects your infant. It has colostrum, which is sweet yellow milk that a mother makes during pregnancy and right after birth. This milk is full of vitamins, nutrients, and antibodies that are essential for an infant. Along with colostrum, breast milk also changes and adapts to what the infant needs. Colostrum turns into mature milk, which has the correct amount of fat, sugar, and proteins necessary for your infant's development.

Formula companies also argue that formula feeding is easy. However, formula feeding requires a lot of organization and preparation since the formula must be mixed and heated to the proper temperature. Unlike formula milk, breast milk is already properly mixed and properly heated.

Another claim that formula companies make is that formula feeding can include everyone else in the family. However, fathers and other family members can get involved with the infant by being part of a support system for the mother while she is breastfeeding. Family members and significant others can help the mother properly position the infant; tickle the infant's foot or rub his or her back to help keep the infant awake while breastfeeding; adjust pillows for the mother while she breastfeeds; hold the baby while feeding is occurring; and watch for proper latching-on of the infant to the mother's nipple.

Breastfeeding is the best way to feed a baby. Choose the best for your baby!

Appendix 3:

Demographic Questions:

What is your gender?

Male

Female

How old are you?

18

19

20

21

22

Other

Do you have children of your own? (are you a mother?)

Yes (1)

No (2)

Do you plan to have children in the future?

Yes (1)

No (2)

This appeared before the participants moved to the next section of questions:

Because your personal views on breastfeeding may affect the way you think about this topic, please answer the following questions so that we can take this into consideration. Although some of the questions are similar, each one is different in some way from the others. Please read each one.

Q140 Please indicate your view of breastfeeding on the following scale.

- ❍ Negative (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Positive (9)

Q141 Please indicate your view of breastfeeding on the following scale.

- ❍ Bad (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Good (9)

Q142 Please indicate your view of breastfeeding on the following scale.

- ❍ Unfavorable (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Favorable (9)

Q143 Please indicate your view of breastfeeding on the following scale.

- ❍ Against (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ In favor (9)

Q144 Please indicate your view of breastfeeding on the following scale.

- ❍ Harmful (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Beneficial (9)

Q145 Please indicate your view of breastfeeding on the following scale.

- ❍ Foolish (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Wise (9)

PhoneTime: In the future, we might be interested in finding people who would be willing to volunteer some time to make phone calls to students to tell them about the benefits of the breastfeeding.

Hypothetically, how much time would you be willing to devote to making these phone calls?

- ❍ 0 minutes (1)
- ❍ 10 minutes (2)
- ❍ 20 minutes (3)
- ❍ 30 minutes (4)
- ❍ 40 minutes (5)
- ❍ 50 minutes (6)
- ❍ 60 minutes (7)
- ❍ 70 minutes (8)
- ❍ 80 minutes (9)

Q147 Hypothetically, how many letters would you be willing to write to students about the benefits of breastfeeding?

- ❍ 0 letters (1)
- ❍ 1-5 letters (2)
- ❍ 6-10 letters (3)
- ❍ 11-15 letters (4)
- ❍ 16-20 letters (5)
- ❍ 21-25 letters (6)
- ❍ 26-30 letters (7)
- ❍ 31-35 letters (8)
- ❍ 36-40 letters (9)

Q148 Hypothetically, how willing would you be to sign a petition in favor of breastfeeding?

- ❍ Not at all (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Completely (9)

Q149 Hypothetically, how willing would you be to add your name to a list of students in favor of breastfeeding?

- ❍ Not at all (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Completely (9)

Q150 In general, how willing would you be to let us send you more information related to breastfeeding?

- ❍ Not at all (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Completely (9)

Q151 How certain are you of your feelings toward breastfeeding?

- ❍ Not at all (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Completely (9)

Q152 How sure are you that your opinion about breastfeeding is right?

- ❍ Not at all (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Completely (9)

How easily could your opinion toward breastfeeding be changed?

- ❍ Not easily at all (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Very easily (9)

How strongly do you feel about the issue of breastfeeding?

- ❍ Not strongly at all (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ (7)
- ❍ (8)
- ❍ Very Strongly (9)

All participants received this statement before the next section of questions.

Thank you for your help so far. Please answer these additional opinion questions.

Q69 Thinking about how you want to feed your baby, please indicate your response on the scale below:

- ❍ Absolutely Not Breastfeed (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ Absolutely Breastfeed (7)

Q70 To what extent would you be willing to feed your baby infant formula?

- ❍ Not at all willing to feed formula (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ Absolutely willing to feed formula (7)

Q75 To what extent do you think it is risky for the baby to feed it breast milk?

- ❍ Not at all risky (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ Very risky (7)

Q157 To what extent do you think it is risky for the baby to feed it infant formula?

- ❍ Not at all risky (1)
- ❍ (2)
- ❍ (3)
- ❍ (4)
- ❍ (5)
- ❍ (6)
- ❍ Very risky (7)

Iowa Infant Feeding Attitude Scale (IIFAS)

(De La Mora et al. 1999)

A 5-point likert scale (SD: strongly disagree; D: Disagree; N:

Neutral; A: Agree; and SA: Strongly Agree) is applied to all 17 questions to determine level of agreement to each question posed.

1 The benefits of breastfeeding last only as long as the baby is breast fed. *

2 Formula feeding is more convenient than breastfeeding. *

3 Breastfeeding increases mother infant bonding.

4 Breast milk is lacking in iron. *

5 Formula fed babies are more likely to be overfed than breastfed babies.

6 Formula feeding is the better choice if the mother plans to go back to work. *

7 Mothers who formula feed miss one of the great joys of motherhood.

8 Women should not breastfeed in public places such as restaurants. *

9 Breastfed babies are healthier than formula fed babies.

10 Breastfed babies are more likely to be overfed than formula fed babies. *

11 Fathers feel left out if a mother breast feeds. *

12 Breast milk is the ideal food for babies.

13 Breast milk is more easily digested than formula.

14 Formula is as healthy for an infant as breast milk. *

15 Breastfeeding is more convenient than formula.

16 Breast milk is cheaper than formula.

17 A mother who occasionally drinks alcohol should not breastfeed her baby. *

* Variables reverse scored to calculate total infant feeding attitude so that a strong breast feeding attitude has a score of 5 for each question giving a maximum score of 85 and a minimum of 17.

Please assume for the purpose of this scale that you have decided to start breastfeeding your baby. We are interested in your perceptions of how this will go.

1: Not at all confident…5: Completely confident

I think I will always be able to:

1 Determine that my baby is getting enough milk

2 Successfully cope with breastfeeding like I have with other challenging tasks

3 Breastfeed my baby without using formula as a supplement

4 Ensure that my baby is properly latched on for the whole feeding

5 Manage the breastfeeding situation to my satisfaction

6 Manage to breastfeed even if my baby is crying

7 Keep wanting to breastfeed

8 Comfortably breastfeed with my family members present

9 Be satisfied with my breastfeeding experience

10 Deal with the fact that breastfeeding can be time-consuming

11 Finish feeding my baby on one breast before switching to the other breast

12 Continue to breastfeed my baby for every feeding

13 Manage to keep up with my baby's breastfeeding demands

14 Tell when my baby is finished breastfeeding

Appendix 4:

This statement will be given to all participants during the second visit.

Thank you for coming today. We would like to ask you a few more questions.

Because attitudes about infant feeding are based on many things, we would like to ask you some more questions about infant feeding once you have a chance to look at some additional information.

It's your first child: breast isn't always best.

As a new mother, you have a lot to do. You and your partner have to make numerous decisions on how to raise your newborn child. But not all of these choices have to be difficult to make.

Many new parents debate whether to breastfeed or formula feed. However no dispute is necessary. Formula milk is made with essential nutrients your baby needs, such as vitamins and minerals. The first year of development is vital to an infant's overall health. Therefore the American Academy of Pediatrics states an iron-formulated formula is the only substantial substitute for breast milk. Our formula is iron-fortified for your baby's health needs.

Not only is formula milk a great substitute for your own milk, but it also allows the other members of your family to get involved with helping take care of the newborn. Fathers can sometimes feel left out because they cannot participate in breastfeeding, but they can help participate in formula feeding. Not only will fathers feel needed if you

formula feed, but mothers also will be able to take a break, especially during night feedings.

Remember that not all choices you make as a mother will be this easy. Formula feed today!

Appendix 5:

Because our own opinions play a role in determining how we think about things we read, we would like to ask you some questions about what you, personally, believe. Many of the questions that follow are questions that you saw before, during your first visit. Today, we are not interested in whether you can remember what you put on the previous visit. Instead, we would like to know what you think right now. Please respond to these questions based on what you are thinking and feeling RIGHT NOW, AT THIS MOMENT. This will allow us to better understand people's reactions to infant feeding information. Remember, we want your honest opinion of how you feel and think, right now.