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Exposure of Breastfeeding Education to OB/GYNS Currently Practicing in the State of Mississippi and Its Effect on Confidence in Providing Breastfeeding Support to Expectant Mothers

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EXPOSURE OF BREASTFEEDING EDUCATION TO OB/GYNS CURRENTLY PRACTICING IN THE STATE OF MISSISSIPPI AND ITS EFFECT ON CONFIDENCE IN PROVIDING BREASTFEEDING SUPPORT TO EXPECTANT MOTHERS

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ABSTRACT

There are several well documented benefits of breastfeeding for the mother and child, however, Mississippi breastfeeding rates are lacking when compared to the rest of the United States. It is believed that breastfeeding encouragement and support from prenatal healthcare providers can play a major role in mothers choosing to initiate breastfeeding. OB/GYNs should be at the forefront of this initiative because they have repeat prenatal contact with many mothers. In order to provide breastfeeding encouragement and support to expectant mothers, OB/GYNs must have adequate breastfeeding education and the confidence to support these mothers. This study analyzed the amount of breastfeeding education received throughout medical school and during residency by OB/GYNs currently practicing in Mississippi and its effect on their confidence to provide breastfeeding support to expectant mothers. Results showed that Mississippi OB/GYNs are not getting adequate breastfeeding education throughout medical school and residency. Results also show that while Mississippi OB/GYNs are fairly confident in referring mothers for breastfeeding counseling, they are not as confident in teaching new mothers to breastfeed or in helping new mothers with breastfeeding problems. Breastfeeding education should be provided in medical school and should continue throughout residency for OB/GYNs so that they are confident in providing needed education to expecting mothers so that these mothers can make an informed and well educated infant feeding decision.

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Introduction

The benefits of breastfeeding to both mother and child have been well documented in recent years. However, the United States is lacking in the area of meeting recommendations for breastfeeding. More mothers are initiating breastfeeding; however mothers who initiate breastfeeding are not exclusively breastfeeding for the recommended 6 months post-birth. Mothers discontinue breastfeeding for many reasons, but it is believed that the encouragement by physicians can play a role in reducing the number of mothers who discontinue breastfeeding prematurely (Brodribb, W., Jackson, C., Fallon, A., & Hegney, D., 2007).

Studies have shown that physicians who support breastfeeding have a big impact on the mother's decision to breastfeed (Freed, G.L., Clark, S.J., Sorenson, J., Lohr, J.A., Cefalo, R., & Curtis, P., 1995; Black, 2001; Brodribb et al., 2007; Taveras et al., 2004; Dillaway, H.E., & Douma, M.E., 2004; Labarere et al., 2005; Godfrey, J.R. & Meyers, D., 2009; Keister, D., Roberts, K.T., & Werner, S.L., 2008; Geraghty, S.R., Riddle, S.W., & Shaikh, U., 2008). Some simple words of encouragement from a health care provider are sometimes all a mother who is undecided on breastfeeding needs to make her decision (Taveras et al., 2004). Many physicians feel that they provide the support that the mothers need, but most mothers disagree (Taveras et al., 2004). One reason physicians might not be meeting mothers' expectations is their lack of knowledge about breastfeeding. Physicians receive very little education on breastfeeding during medical school and their residency (Feldman-Winter et al., 2010). So, when they have a patient

who needs breastfeeding counseling or support, physicians may feel that their skills in this area are inadequate and they are not confident enough to provide counseling to their patients. State health facts show that only 50.3% of children in Mississippi have ever been breastfed, compared to the national rate of 74.0%. Additionally, only 10.5% of children in Mississippi are breastfed at 12 months, compared to the national average of 22.7% (Kaiser Family Foundation, 2008; U.S. Department of Health and Human Services, 2012). To determine the most effective breastfeeding intervention practices for expectant Mississippi women, understanding the amount of breastfeeding education received by OB/GYNs and its effect on the confidence level of OB/GYNs to counsel these mothers is required. This study will examine the question: What are the effects of breastfeeding education received by OB/GYNs currently practicing in the state of Mississippi related to confidence in providing breastfeeding support to expectant mothers? The hypothesis is that the exposure of breastfeeding education to OB/GYNs effects confidence of OB/GYNs to counsel expecting mothers on breastfeeding. To the investigator's knowledge, no such study has been conducted among Mississippi OB/GYNs alone. This information is vital to determine if attention and intervention efforts are needed among practicing OB/GYNs in Mississippi as a means to increase the initiation and continuation of breastfeeding among Mississippian mothers.

Literature Review

The Benefits of Breastfeeding

The benefits of breastfeeding have been well documented in recent years (Labarere et al., 2005). There has been evidence showing benefits of breastfeeding for infants and mothers alike (Hale, 2007; Setty, 2006).

Human milk is original in its make-up and no other type of feeding can compare to its high quality. Exclusive breastfeeding is the standard in which all other types of feedings are measured (American Academy of Pediatrics, 2005). Studies show that breastfeeding decreases the incidence and/or severity of many infectious diseases in infants including diarrhea, respiratory tract infections, bacterial infections, otitis media, and urinary tract infections (Keister et al., 2008; American Academy of Pediatrics, 2005; American Dietetic Association, 2009; Freed et al., 1995; Godfrey et al., 2009; Leung, A.K.C. & Sauve, R.S, 2005; HHS, 2003). Also, infant mortality rates are significantly lower in breastfed infants than in non-breastfed infants in the United States (American Academy of Pediatrics, 2005). Other studies show a decrease in the rates of sudden infant death syndrome, Type 1 diabetes, Type 2 diabetes, lymphoma, leukemia, Hodgkin disease, overweight and obesity (American Academy of Pediatrics, 2005; Lawrence, 2010), hypercholesterolemia, and asthma in individuals who were breastfed (American Academy of Pediatrics, 2005). It is thought that obesity prevention begins with breastfeeding (Lawrence, 2010; Parikh et al., 2009) because early infant feedings sets the path for feeding habits later in life. Through breastfeeding, the infant controls appetite and learns to respond to cues of satiety

(Lawrence, 2010). Breastfeeding is also thought to aid in cognitive development of children (Quinn, P.J., O'Callaghan, M., Williams, G.M., Najman, J.M., Andersen, M.J., & Bor, W., 2001; Caspi et al., 2007).

Breastfeeding not only provides benefits for the child, but for the mother as well. Some of these benefits include decreased postpartum bleeding, decreased menstrual blood loss, more rapid loss of weight gained during pregnancy, decreased risk of breast cancer and ovarian cancer, and a decreased risk of osteoporosis after menopause (American Academy of Pediatrics, 2005; Hale, 2007; Howard, F.M., Howard, C.R., & Weitzman, M., 1993; Godfrey et al., 2009; Keister et al., 2008; Setty, 2006; American Dietetic Association, 2009; Leung et al., 2009). Breastfeeding also enhances mother-infant relationships, is inexpensive, and is convenient for the mother (Howard et al., 1993, Godfrey et al., 2009, American Dietetic Association, 2009).

Despite the well-documented benefits of breastfeeding, the rate of breastfeeding initiation and continuation remains below the Healthy People 2020 goal of 81.9% of mothers breastfeeding exclusively right after birth and 25.5% continuing to breastfeed for at least 6 months (U.S. Department of Health and Human Services, 2012). The American Academy of Pediatrics recommends exclusive breastfeeding during the first 6 months of life, continuing to at least 1 year of age with the addition of other feeding methods (American Academy of Pediatrics, 2005; Labarere et al., 2005, American Dietetic Association, 2009; Philipp, 2000; Taveras, E.M., Capra, A.M., Braveman, P.A., Jensvold, N.G., Escobar, G.J., & Lieu, T.A., 2003). Despite knowing the importance of breastfeeding and its many benefits over formula-feeding, many mothers do not initiate breastfeeding or continue it for as long as recommended (Dillaway et al., 2004).

Healthcare Providers' Knowledge of Breastfeeding

Healthcare professionals are encouraged to educate and support breastfeeding mothers so that initiation rates are higher and duration of breastfeeding is longer (Dillaway et al., 2004). Since most women make decisions regarding feeding methods before the third trimester of pregnancy (Howard et al., 1993; Keister et al., 2008, Brodribb et al., 2007), prenatal care providers are in an ideal situation to influence the choice to breastfeed. Counseling and support is not only important during pregnancy, but after the mother returns home from her hospital stay (Shealy, K.R., Li, R., Benton-Davis, S., & Grummer-Strawn, L.M., 2005). Studies have shown that active breastfeeding promotion by physicians increases the initiation and duration of breastfeeding (Freed et al., 1995; Black, 2001; Brodribb et al., 2007; Taveras et al., 2004; Dillaway et al., 2004, Labarere et al., 2005; Godfrey et al., 2009; Keister et al., 2008; Geraghty et al., 2008).

Although healthcare providers are encouraged to support and educate mothers on breastfeeding, many do not have the confidence or training to do so (Taveras et al., 2004; Freed et al., 1995; Feldman-Winter et al., 2010; Dillaway et al., 2004; Labarere et al., 2005). Some physicians are not aware of the numerous benefits of breastfeeding and therefore do not consider it as the superior choice over infant formula. In a survey conducted by Feldman-Winter et al., most pediatric residents and fellows reported that breastfeeding and formula feeding were equally acceptable (Feldman-Winter et al., 2010). This attitude and lack of knowledge can be attributed to the inadequacy of training and education on breastfeeding during physicians' residency. In one study, only 55% of residents recalled even one episode of rounds or precepting that included breastfeeding (Freed et al., 1995). These findings support the need for more

breastfeeding education during residency of physicians (Feldman-Winter et al., 2010; Schanler, R.J., O'Conner, K.G., & Lawrence, R.A., 1999; Godfrey et al., 2009, Freed et al., 1995). Another study showed that pediatricians who have breastfed or whose wives have breastfed tend to have more confidence to support breastfeeding in a more active way than pediatricians who have not experience breastfeeding firsthand. It appears that confidence in providing education on breastfeeding comes more from personal experience, rather than clinical experience (Schanler et al., 1999).

It has been well documented that healthcare providers have a major impact on a mother's decision to initiate breastfeeding and to continue breastfeeding (Schanler et al., 1999). While the majority of physicians feel they provide adequate support of breastfeeding, mothers tend to disagree. A study by Dillaway et al. (2004) shows that physicians tend to take a more passive approach when it comes to breastfeeding support, whereas mothers prefer a more active approach. Just a few words of encouragement from a healthcare provider can give the mother the support she needs to continue breastfeeding her infant (Dillaway et al., 2004).

There is evidence that some physicians discourage breastfeeding without realizing it. Many clinics and hospitals provide free formula samples to expectant or postpartum mothers. By doing this, physicians are inadvertently encouraging the woman to use infant formula instead of breastfeeding (Philipp, 2000; Geraghty et al., 2008; Howard et al., 1993; American Academy of Pediatrics, 2005). In order to support breastfeeding, physicians should not accept free samples from formula companies. If they do accept them, they should only be given out to mothers who are not able to breastfeed (American Academy of Pediatrics, 2005).

As a frequent source of contact with the health care system, physicians are in a position to offer support and advice to potential and current breastfeeding mothers (Howard et al., 1993).

Residents and fellows should be educated and aware of the many benefits of breastfeeding for the child and mother. Confidence and skill should be developed throughout a physicians' residency, so when the time comes to educate a mother on breastfeeding, the physician is prepared (Feldman-Winter, L.B., Schanler, R.J., O'Conner K.G., & Lawrence, R.A., 2008; Shealy et al., 2005).

Although general physicians can play a major role in educating mothers on infant feeding, expecting them to be the sole provider of breastfeeding education is unrealistic. This is due to the fact that many women do not have contact with their general physician until after the infant is delivered (Howard, C.R., Schaffer, S.J., & Lawrence, R.A., 1997). Also, pediatricians' ability to provide breastfeeding education and encouragement is limited because most women make infant feeding decisions long before delivery. OB/GYNs specifically have early and extended prenatal contact with expectant mothers and are, therefore, better suited to encourage breastfeeding (Howard et al., 1997).

Breastfeeding in Mississippi

Mississippi has the lowest Maternity Practices in Infant Nutrition and Care (mPINC) score of all of the states that make up the United States. Mississippi also has the lowest score in the United States on the Center for Disease Control's breastfeeding report card (Department of Health and Human Services Centers for Disease Control and Prevention, 2010). State health facts show that breastfeeding initiation and continuation rates in Mississippi are much lower than the national breastfeeding initiation and continuation rates (Department of Health and Human Services Centers for Disease Control and Prevention, 2010; Kaiser Family Foundation, 2008). On study found that among Mississippi mothers, women who intended to breastfeed were more often white, had at least some college education, higher income, a smaller family size, and

previous breastfeeding experience than those who did not intend to breastfeed. These women also had more breastfeeding knowledge, higher self-efficacy, and fewer barriers to breastfeeding than women who did not intend to breastfeed (Mitra, A.K., Khoury, A.J., Hinton, A.W., & Carothers, C, 2004). Statistics show that African Americans make up 37.2% of the population in Mississippi, whereas African Americans make up only 12.9% of the total United States population (U.S. Census Bureau, 2009; U.S. Census Bureau, 2009). There is much evidence that African American women initiate and continue breastfeeding less often than any other racial or ethnic group (Mitra et al., 2004; Watkins, A.L., & Dodgson, J.E., 2010). So, African American women along with other women who are at a high risk for not breastfeeding should be identified and given additional support. Interventions should focus on improving knowledge of breastfeeding, increasing confidence in one's ability to breastfeed, and overcoming barriers to breastfeeding such as lack of social support (Mitra et al., 2004).

Methods

Participants

The participants included 360 licensed OB/GYNs currently practicing in the state of Mississippi. Mailing addresses of licensed OB/GYNs were found via internet search. Participants were informed that by completing and returning the mailed survey, they were giving consent to participate in the study. This study was reviewed by The University of Mississippi's Institutional Review Board (IRB) and permission was granted to conduct the study (IRB # 11-199).

Data Collection

The project was designed to survey, in questionnaire format, licensed OB/GYNs currently practicing in the state of Mississippi. The questionnaire (Anchondo & Akins, 2011) was developed by a team of researchers and permission to use the instrument was given to the investigator by the author. The questionnaire was designed to assess licensed OB/GYNs' knowledge, attitudes, and beliefs regarding breastfeeding. Details on the reliability of the questionnaire can be found in the original study in which the questionnaire was used, Anchondo & Akins (2011).

The following procedures for conducting this investigation are a modified version of the methods recommended by Dillman (2007) for conducting survey research. First, a postcard was sent to each OB/GYN requesting that they complete a questionnaire that will help with an

important study regarding their current clinical practices, knowledge, and opinions on breastfeeding support in expectant mothers. One week following the first mail-out, the questionnaire along with a cover letter and a self-addressed, stamped envelope was mailed to practicing OB/GYNs. Two weeks after the questionnaire was mailed, a follow-up postcard which included a statement of appreciation along with a reminder to complete and return the questionnaire was mailed to each OB/GYN. By including a reminder in the final mail-out, those who did not fill out the questionnaire the first time were encouraged to do so at the time that they received the follow-up postcard. Surveys were coded so that the study stayed anonymous and questionnaires could not be traced and matched to participants. As responses were received, they were recorded in a spread sheet format and saved on a flash drive. One month following the final distribution of the follow-up postcard, data collection was concluded.

Data analysis was completed using SPSS Statistics 17.0 software.

Results

A total of 360 questionnaires were mailed out. Sixty one questionnaires were returned and fifty six of these were able to be used for data analysis. The five questionnaires that were returned but not used had a note on them explaining that the recipient was either retired or no longer working at the facility and the questionnaire was not filled out. A total of forty questionnaires were unable to reach their destination and were returned to sender by the post office. The response rate for this study was 17.5%.

The average age of participants was 47.96 years old (n=54). Of those who answered the question concerning gender, 58.5% were male and 41.5% were female (n=53). Of the fifty five participants who answered the question regarding race, 9.1% were Black or African American, 87.3% were White/Caucasian, and 3.6% were listed as other. Fifty two were born in the United States (94.5%), one was born in Canada (1.8%), one was born in Poland (1.8%), and one was born on Puerto Rico (1.8%). Of those who answered questions on country in which they were raised, 96% were raised in the United States, 2.0% were raised in Canada and 2.0% were raised in Puerto Rico (n=50). Two of the thirty three participants who answered the question regarding ethnicity were considered Hispanic. Participants had, on average, 2.47 children (n = 53) and 86.0% breastfed their children (n=50).

This study contained two main variables, which were education and confidence. The education variable was calculated based on the response to the two questions: “Did you have a lactation course in medical school?” and “Have you been exposed to lactation/breastfeeding

assessment and treatment during residency?" If the participant answered yes to either question, then they were considered as having some form of exposure to breastfeeding education. The confidence variable was calculated based on the response to the three questions: "How confident are you that you can teach a new mother how to breastfeed?", How confident are you that you could help a new mother who is having difficulty with breastfeeding?", and "How confident are you that you could refer a woman for breastfeeding counseling?". Reponses were coded based on the Likert scale using 4 as very confident, 3 as somewhat confident, 2 as a little confident, and 1 as not at all confident. Scores were added together to form the confidence variable. Therefore, the higher the confidence variable value, the more confident a participant was.

Parametric tests were performed to analyze the correlation between education and confidence. An independent t-test was conducted and the Pearson Correlation Coefficient was found. There was a slight positive correlation between the amount of education and confidence level ($r=.170$), however no significance was found presumably due to the small sample size ($p=.214$). A box plot comparing education and confidence level was conducted and can be found in Figure 1.

Independent t-tests were also conducted comparing each question individually to analyze if a lactation course or exposure to lactation/breastfeeding assessment played a role in overall confidence, confidence in teaching a new mother to breastfeed, confidence to help a mother with breastfeeding difficulty, and confidence in referring a woman for breastfeeding counseling. No significant results were found. These results can be found in Table 1. Gender breakdown was also analyzed for each question, but no significant results were found.

Figure 1: Boxplot of Distribution of Education vs. Confidence level

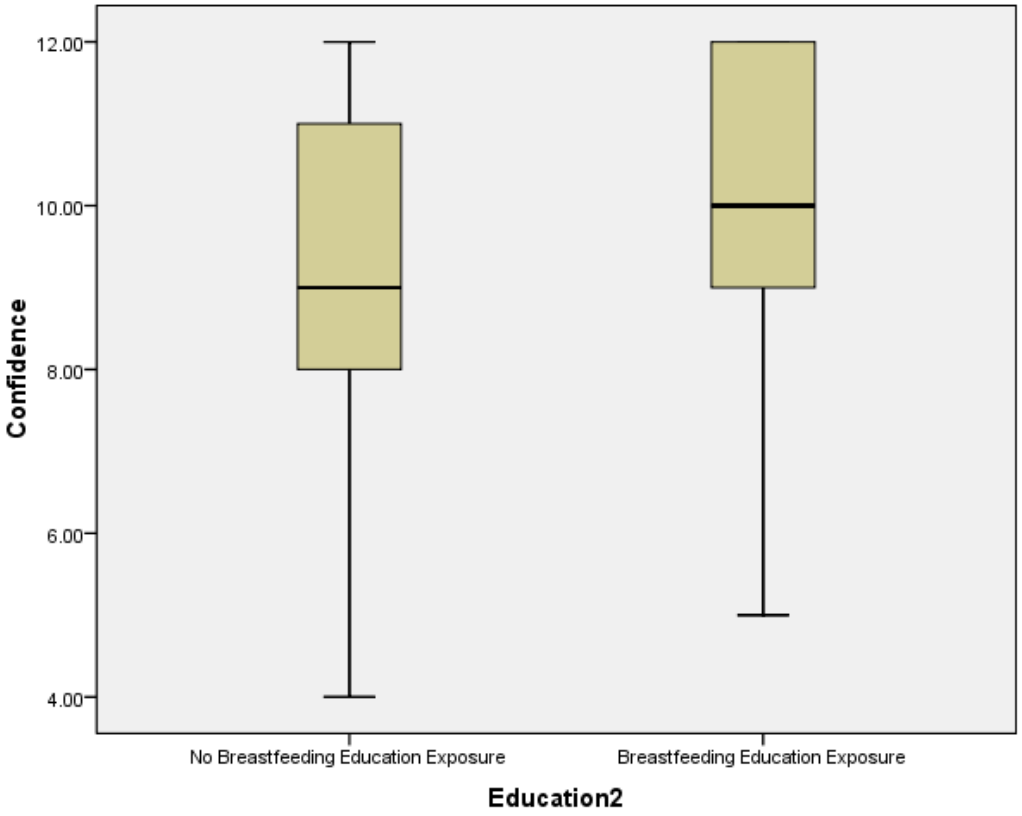

Table 1. Lactation Exposure and its Effect on Confidence

	Lactation Course Exposure			Lactation Assessment Exposure		
	Yes (n=8)	No (n=47)	t	Yes (n= 22)	No (n=33)	t
Overall Confidence Variable	9.13(±2.42)	9.34(±2.24)	.236	9.77(±2.20)	9.00(±2.25)	-1.264
Teaching Confidence	2.75(±1.17)	2.79(±1.12)	.084	3.00(±1.11)	2.64(±1.11)	-1.187
Helping Confidence	2.63(±1.06)	2.72(±1.04)	.243	2.86(±1.04)	2.61(±1.03)	-.905
Referring Confidence	3.75(±.43)	3.85(±.48)	.448	3.91(±.29)	3.76(±.56)	-1.163

Fifty five of those surveyed completed questions pertaining to breastfeeding education in medical school and confidence in counseling women on breastfeeding. Only 40.0% had some

sort of breastfeeding education, 60.0% were not exposed to lactation assessment during residency, and 85.5% did not have a lactation course in medical school. Of those who completed the questions pertaining to education, 74.5% had 0 to 2 lectures/trainings on breastfeeding, 20.0% had 3 to 5 lectures, and 5.5% had more than 5 lectures. Only 9.3% or 5 participants were familiar with the UNICEF baby friendly initiative (n=54). These results can be found in Table 2.

Table 2. OB/GYN Exposure to Breastfeeding Education.

	Yes	No
Any Type of Breastfeeding Education	40.0%	60.0%
Lactation Course in Medical School	14.5%	85.5%
Exposed to Lactation Assessment During Residency	40.0%	60.0%
Familiar with UNICEF Baby Friendly Initiative	9.3%	90.7%

Of the fifty five participants who responded to the questions regarding confidence,18.2% were not at all confident that they can teach a new mother how to breastfeed, 20.0% were a little confident, 27.3% were somewhat confident, and 34.5% were very confident that they can teach a new mother how to breastfeed. When asked about confidence in helping a mother with breastfeeding difficulty, 18.2% were not at all confident that they can help a new mother with breastfeeding difficulty, 16.4% were a little confident, 48.8% were somewhat confident, and 23.6% were very confident that they can help a new mother with breastfeeding difficulty. When asked about confidence in referring patients, 3.6% were a little confident that they can refer a woman for breastfeeding counseling, 10.9% were somewhat confident, and 85.5% were very confident. These results can be found in Table 3.

Table 3. OB/GYN Confidence in Providing Breastfeeding Support to New Mothers.

	Not At All	A Little	Somewhat	Very
Confidence Teaching New Mother to Breastfeed	18.2%	20.0%	27.3%	34.5%
Confidence Helping Mother With Breastfeeding Difficulty	18.2%	16.4%	41.8%	23.6%
Confidence Referring Woman for Breastfeeding Counseling		3.6%	10.9%	85.5%

Discussion

Results from this study support the idea that OB/GYNs currently practicing in Mississippi are not fully confident in providing breastfeeding support to expectant mothers. Only 34.5% were very confident in teaching a new mother to breastfeed, while only 23.6% were very confident in helping a new mother with breastfeeding difficulty. Aside from that, only 85.5% were very confident in referring women for breastfeeding counseling. Results also support the idea that OB/GYNs currently practicing in the state of Mississippi have inadequate exposure to breastfeeding education. Of those surveyed, 40% of the participants had no breastfeeding education throughout medical school or their residency.

These results are disturbing due to the fact that Mississippi has extremely poor breastfeeding rates when compared to the rest of the United States (Kaiser Family Foundation, 2008; U.S. Department of Health and Human Services, 2012) and Mississippi OB/GYNs could help encourage Mississippi mothers to initiate and continue breastfeeding. OB/GYNs practicing in Mississippi can make an impact on a mother's decision to breastfeed simply because the feeding decision is typically made before the baby is born (Howard et al., 1997). Any bit of breastfeeding encouragement from a healthcare provider can impact a mother's decision to breastfeed (Dillaway et al., 2004). Therefore, prenatal healthcare providers such as OB/GYNs should have adequate breastfeeding knowledge to accurately answer questions and provide resources to the mother should she have questions the OB/GYN is unable to answer. This breastfeeding education should start in medical school and should be reinforced throughout

residency so that OB/GYNs are fully confident in discussing breastfeeding or at least in referring a breastfeeding mother to an appropriate health care professional who can answer her questions.

Conclusion

This study examined the effect of breastfeeding education on the confidence level of OB/GYNs in providing breastfeeding support to expectant mothers. The parametric tests that were conducted to examine the correlation between the education and confidence variables did not produce significant results. This may be due to the small sample size (n=56). However, the study did shed light on the fact that the majority of OB/GYNs in Mississippi are not receiving breastfeeding education. In fact, very few OB/GYNs in the study sample were aware of the UNICEF Baby Friendly Initiative, which is a program designed to support successful breastfeeding. The confidence rates of OBGYNs in providing breastfeeding support to mothers were higher than expected; however some participants were not at all confident in teaching a new mother to breastfeed or helping her with a breastfeeding difficulty. Further studies should analyze other factors that could have contributed to a high confidence rate such as personal breastfeeding experience.

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APPENDIX

Initial Letter

March 30, 2011

A few days from now you will receive a mail-out containing a request to complete a brief questionnaire for an important research project being conducted by the University of Mississippi.

This study examines the level of awareness obstetricians-gynecologists have regarding the recommendation breastfeeding to expectant women.

I am writing in advance because we have found many people like to know ahead of time that they will be contacted. The study is important and will help your fellow obstetricians-gynecologists and those patients being served.

Thank you for your time and consideration. It is only with the generous help of people like you that our research can be successful.

Sincerely,

Brandi Pigg
Graduate Student
Department of Nutrition and Hospitality Management
University of Mississippi

Cover Letter

April 21, 2011

Dear Physician,

I am writing to ask your help in a study of obstetricians-gynecologists being conducted at The University of Mississippi. This study is part of an effort to learn more about obstetricians-gynecologists' opinions and best practices towards recommending breastfeeding to expectant mothers. It is my understanding that you are currently a practicing obstetrician-gynecologist.

Results from this survey will be used to help better understand the opinions obstetricians-gynecologists have toward recommending breastfeeding to expectant mothers. By understanding these opinions, programs to improve breastfeeding counseling in expectant mothers can be developed. The opinions of obstetrician-gynecologists are extremely important in the development of these programs.

Your answers are completely confidential and will be released only as summaries in which no individual's answers can be identified. When you complete your questionnaire, your name will be deleted from the mailing list and never connected to your answers again in any way. Your participation is voluntary. You can help us by taking a few minutes to share your experiences and opinions.

This study was reviewed by The University of Mississippi's Institutional Review Board (IRB). The IRB has determined that this study fulfills the human research subject protections obligations required by state and federal law and University policies. If you have any questions, concerns or reports regarding your rights as a participant of research, please contact the IRB at (662)915-7482 or refer to protocol number 11-199.

If you have any questions or comments about this study, I would be happy to talk with you. My telephone number is 1-573-429-8902, or you can e-mail me at blpigg@olemiss.edu

Thank you very much for helping with this important study.

Sincerely,

Brandi Pigg
Graduate Student
Department of Nutrition and Hospitality Management
University of Mississippi

Questionnaire

Age_____

Country of origin?_____
In what country were you raised? _____

Gender: Male Female
Race:
___American/Indian or Alaskan Native ___ Native Hawaiian or Other Pacific Islander
___Asian ___White/Caucasian
___Black or African American ___Other _____

Ethnicity: ___Hispanic or Latino ___Not Hispanic or Latino

Please tell us about your children. *If you do not have children please skip to* ***question 11***.

1. How many children do you have? _____

2. Were any of your children **ever** breastfed, even if only once?
   If you didn't breastfeed please skip to ***question 11***.
   Yes No

3. Using 1 to mean 'Disliked very much' and 5 to mean 'Liked very much', how would you say you felt about breastfeeding the **first week** you (or your spouse) were breastfeeding?
   Disliked very much **Liked very much**
   1 2 3 4 5

4. Using 1 to mean 'Not at all likely' and 5 to mean 'Very likely,' how likely is that you (or your spouse) would breastfeed again if you had another child?
   Not likely **Very likely**
   1 2 3 4 5

5. How old was your child or your children when she or he completely stopped breastfeeding or being fed breastmilk?
   Child no. 1 Days_____ Weeks_____ Months _____ Still breastfeeding____
   Child no. 2 Days_____ Weeks_____ Months _____ Still breastfeeding ___
   Child no. 3 Days_____ Weeks_____ Months _____ Still breastfeeding ___
   Child no. 4 Days_____ Weeks_____ Months _____ Still breastfeeding ___

6. Did you (or your spouse) breastfeed as long as you wanted to?
   Yes No

7. Was your child or children ever given infant formula?
   Yes No

8. If Yes, did you receive free samples of infant formula?
   Yes No

9. How old were your children when she or he was first fed infant formula?
   Child no. 1 Days_____ Weeks_____ Months _____
   Child no. 2 Days_____ Weeks_____ Months _____
   Child no. 3 Days_____ Weeks_____ Months _____
   Child no. 4 Days_____ Weeks_____ Months _____

10. What was the **main reason** your child or children stopped breastfeeding? Please check as many as apply. If never breastfed, please skip to next question.

    ____I had to go back to work
    ____I didn't have a place to pump
    ____My baby lost interest in nursing or began to wean him or herself
    ____I felt that I breastfed long enough for my baby to get the benefits of breastfeeding
    ____Maternity leave was too short
    ____I didn't think I had enough milk
    ____ I could not tell how much my baby ate
    ____A health professional said I should feed my baby formula
    ____Breastfeeding was too painful
    ____I didn't want to breastfeed in public
    ____My baby was having trouble latching or sucking
    ____The baby was old enough to wean
    ____Other_____

11. Do you intend to breastfeed or provide breastmilk to any future children you might have?
    Yes No Not sure

12. In your opinion what is the **main reason** mothers stop breastfeeding early (e.g. before the baby is 6 months of age)?

    _____

13. How long do you think babies should be breastfed?
    6 months or fewer More than 1 year
    6 months to 1 year Mom decides

14. In my clinic I assess breastfeeding problems by observing breastfeeding or by doing a breast evaluation.
    All the time Never
    Sometimes N/A

15. If there are not medical contraindications, do you counsel every woman to breastfeed her baby?

Yes No

16. Do you believe that breastfeeding is the best way to feed an infant?

Yes No

17. Please mark whether you strongly agree, agree, disagree, or strongly disagree with the following statements:

	Strongly Agree	Agree	Disagree	Strongly Disagree
It is fine with me when women breastfeed their children in public				
Breastfeeding in public is not acceptable				
In our society, breastfeeding is not socially acceptable.				
Babies should breastfeed until 1 year of age				
Babies should breastfeed until they have teeth				
I would be embarrassed if a mother breastfed her toddler in front of me				
Mothers who smoke should only feed their babies formula				
Physicians should strongly encourage and support mothers to breastfeed				
Formula and human milk are very similar				
Breastfed babies are healthier than formula fed babies				
Breastfeeding really is the best way to feed children				
Breastfeeding helps the mother lose weight				
Both formula feeding and breastfeeding provide all the nutrition a baby needs				
Breastfeeding provides extra immunity for the baby				
Unless there is a physical problem, all moms should breastfeed				
The physician should counsel all mothers that breastfeeding is best				
Counseling women to breastfeed will help my practice				

	Strongly Agree	Agree	Disagree	Strongly Disagree
The physician should refer mothers with problems to a breastfeeding specialist				
There is no need to teach women how to breastfeed				
Women should make the decision to breastfeed on their own, without medical input				
It is difficult for women to breastfeed if they work				
Most of the mothers in my practice want to breastfeed				
I think women want to talk about breastfeeding with me				
Most of the mothers in my practice expect me to counsel them about breastfeeding				
I don't have time to discuss breastfeeding during office visits				
Babies who are formula fed are more susceptible to illness than those who are breastfed				
Women who are counseled by their physician to breastfeed are more likely to do so				
My physician colleagues refer most patients for breastfeeding counseling				
Most of the mothers in my practice prefer not to breastfeed				
I don't have time to discuss breastfeeding issues with mothers during visits				
I don't think women want to talk about breastfeeding with me				
My medical school faculty taught me that breastfeeding should be encouraged				

18. Do you share your own experiences with breastfeeding with your patients?

Yes No N/A

19. Did you have a lactation course in medical school?

Yes No

20. Have you been exposed to lactation/breastfeeding assessment and treatment during residency?

Yes No

21. I have attended _____lectures/trainings on breastfeeding.

0 to 2 3-5 more than 5

22. Are you familiar with the UNICEF Baby friendly initiative?

Yes No

23. How confident are you that you can teach a new mother how to breastfeed?

Very confident
Somewhat confident
A little confident
Not at all confident

24. How confident are you that you could help a new mother who was having difficulty with breastfeeding?

Very confident
Somewhat confident
A little confident
Not at all confident

25. How confident are you that you could refer a woman for breastfeeding counseling?

Very confident
Somewhat confident
A little confident
Not at all confident

26. When you were a baby, were you ever breastfed?

Yes No I don't know

27. About how many of your friends and relatives have breastfed their babies?

None have breastfed
Few have breastfed
Most have breastfed
All have breastfed

28. Would you encourage your friends to breastfeed?

Yes No

29. How old was your baby when you began working for pay after your delivery? (If you are not sure, give your best estimate).
If you don't have children please skip these last two questions.

Child no. 1	Days_____	Weeks_____	Months _____
Child no. 2	Days_____	Weeks_____	Months _____
Child no. 3	Days_____	Weeks_____	Months _____
Child no. 4	Days_____	Weeks_____	Months _____

30. Post-delivery did your workplace:

Have a private place to pump breast milk?	Yes	No	I don't know
Allow break time to pump breast milk?	Yes	No	I don't know

Follow Up Postcard

April 28, 2011

A few days ago, a questionnaire seeking your opinions towards recommending breastfeeding to expectant mothers was mailed to you. If you already completed and returned the questionnaire, please accept our sincere thanks. If not, please do so today. We are especially grateful for your input. It is only by asking people like you to share your opinions that we can understand obstetricians-gynecologists opinions toward recommending breastfeeding to expectant mothers.

If you did not receive a questionnaire, or if it was misplaced, please email me at blpigg@olemiss.edu. Also, if you have any questions or comments about this study, I would be happy to communicate with you through email.

Sincerely,
Brandi Pigg
Graduate Student
Department of Nutrition and Hospitality Management
University of Mississippi

VITA

Brandi Pigg was born in Poplar Bluff, Missouri on February 3, 1988 to her parents, Von and Sharon Pigg. She was raised in Doniphan, Missouri and graduated from Doniphan High School in 2006. She attended the University of Mississippi from 2006 to 2009, where she graduated with a Bachelor of Science in Dietetics and Nutrition in December of 2009. In fall 2010, she began the Dietetics Coordinated Program at the University of Mississippi, where she completed her dietetic internship as well as received a Master of Science in Food and Nutrition Services in May 2012.

Brandi is a member of the Academy of Nutrition and Dietetics as well as the Memphis Area Lactation Consultant Association. She is also an alumnus of Gamma Beta Phi. Brandi will be working as a clinical dietitian at Baptist Desoto Memorial Hospital.