BREAST-FEEDING INITIATION IN LOW-INCOME WOMEN: ROLE OF ATTITUDES, SUPPORT, AND PERCEIVED CONTROL

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Despite the documented health and emotional benefits of breast-feeding to women and children, breast-feeding rates are low among subgroups of women. In this study, we examine factors associated with breast-feeding initiation in low-income women, including Theory of Planned Behavior measures of attitude, support, and perceived control, as well as sociodemographic characteristics. A mail survey, with telephone follow-up, of 733 postpartum Medicaid beneficiaries in Mississippi was conducted in 2000. The breast-feeding initiation rate in this population was 38%. Women who were older, white, non-Hispanic, college-educated, married, not certified for the Supplemental Nutrition Program for Women, Infants, and Children, and not working full-time were more likely to breast-feed than formula-feed at hospital discharge. Attitudes regarding benefits and barriers to breast-feeding, as well as health care system and social support, were associated with breast-feeding initiation at the multivariate level. Adding the health care system support variables to the regression model, and specifically support from lactation specialists and hospital nurses, explained the association between breast-feeding initiation and women’s perceived control over the time and social constraints barriers to breast-feeding. The findings support the need for health care system interventions, family interventions, and public health education campaigns to promote breast-feeding in low-income women.

Although breast-feeding initiation rates have increased in recent years, rates are still below the Healthy People 2010 objectives, which state that by 2010, 75% of mothers will initiate breast-feeding and 50% will breast-feed until their babies are 6 months old (United States Department of Health and Human Services [DHHS], 2000). In 2001, 69.5% of women initiated breast-feeding, but the rate was significantly lower in the southern states and among women who were black, younger, no more than high school-educated, and enrolled in the Supplemental Nutrition Program for Women, Infants, and Children (WIC) (Abbott Laboratories, 2003).

Low breast-feeding rates persist although the benefits of breast-feeding are well documented. Recognition of the benefits of breast-feeding has led to the adoption of breast-feeding policies by major professional organizations in the United States (American Academy of Family Physicians [AAFP], 1994; American Academy of Pediatrics [AAP], 1997; American College of Nurse-Midwives [ACNM], 1992; American College of Obstetricians and Gynecologists [ACOG], 2000; American Dietetic Association [ADA], 1997; American Public Health Association [APHA], 1982; National Medical Association [NMA], 2000).

Breast-fed infants experience nutritional and growth benefits (Centers for Disease Control and...
that affect a woman’s intent to breast-feed, and those variables parallel the TPB constructs of attitude, support, and control (Janke, 1994). Furthermore, the TPB measures variables amenable to change, which makes it ideal for studying breast-feeding behavior. Both the TRA (Bernaix, 2000; Goksén, 2002; Quarles et al., 1994) and the TPB (Avery et al., 1998; Dick et al., 2002; Wambach, 1997) have been used to examine breast-feeding behavior, with a focus on factors that predict breast-feeding duration among women intending to breast-feed. This analysis focuses on factors associated with breast-feeding initiation in low-income women. We study low-income women because of their low breast-feeding rates and because they experience many barriers to breast-feeding, including embarrassment, time and social constraints (e.g., work and school issues), and lack of support (Best Start Social Marketing, 1996).

Health care system support is key for breast-feeding promotion, particularly during the prenatal and early postpartum periods when lactation is being established (Dermer, 1995; Sikorski et al., 2002). However, gaps exist in breast-feeding knowledge among physicians (Freed et al., 1995; Schanler, O’Conner, & Lawrence, 1999) and nurses (Freed et al., 1996; Hellings & Howe, 2000; Karipis & Spicer, 1999) that limit their confidence in their counseling skills and their active encouragement of breast-feeding (Burglehaus et al., 1997; Patton et al., 1996). Low-income women are frequent users of WIC clinics, and many clinic staff do not perceive themselves as knowledgeable and able to promote breast-feeding (Best Start Social Marketing, 1996). Nonsupportive hospital practices have also been identified as barriers to breast-feeding (Perez-Escamilla et al., 1994).

Recent reviews have also shown that family support is critical for increasing breast-feeding rates (Dennis, 2002; Raj & Plichta, 1998). However, there is little family support for breast-feeding in low socioeconomic communities, where adults believe that breast-feeding is embarrassing, inconvenient, and discourages fathers’ involvement with feeding (Gutman & Zimmerman, 2000; McIntyre, Hiller, & Turnbull, 2001).

In addition to varied levels of support, time and social constraints, such as managing breast-feeding while working or going to school, are a barrier to breast-feeding among low-income women (Gutman & Zimmerman, 2000; Raisler, 2000). About one-third of working mothers return to work within 3 months and about two-thirds within 6 months after delivery (Fein & Roe, 1998; Roe et al., 1999). Low-income women are more likely than other women to return to work earlier and to have jobs that make breast-feeding difficult (Bronner et al., 1996). Worksites and communities that support breast-feeding have therefore been iden-
tified as important for breast-feeding promotion (Gielen et al., 1991; Hills-Bonczyk et al., 1993).

In this study, we comprehensively examine key variables and their impact on breast-feeding initiation in low-income women. The analysis includes sociodemographic characteristics and measures of attitudes, health care system and family support, and perceived control over the time and social constraints barrier to breast-feeding.

Methods

Survey design

As part of the national Loving Support Makes Breast-feeding Work campaign, a mail survey of low-income, postpartum women was conducted in Mississippi in the summer of 2000. The target population was Medicaid beneficiaries who had delivered in the spring of 2000. In Mississippi, eligibility of pregnant women for Medicaid is based on income and number of people in the household. For example, the current income eligibility is $1,926 per month for a pregnant woman with no other children and $2,416 per month for a pregnant woman with one other child. The state’s Newborn Screening Database was used as the sampling frame. The database is part of a statewide surveillance program that collects data on all deliveries, except home deliveries. A random sample of 1,200 Medicaid beneficiaries was selected. The survey was approved by the University of Southern Mississippi’s Human Subjects Protection Review Committee.

Survey instrument

A two-page self-administered questionnaire was developed, pilot tested with 30 low-income postpartum women, revised, and finalized. An extensive literature review established face validity of the questionnaire. Content validity was assessed by breast-feeding experts, including breast-feeding educators and lactation specialists. The questionnaire collected data about infant feeding method, attitudes regarding benefits and barriers to breast-feeding, professional and social support for breast-feeding, perceived control, and sociodemographic characteristics. The questionnaire was mailed to sampled women in July 2000 with a personalized cover letter and a self-addressed stamped return envelope. Women not responding within 2 weeks received a second mailing. Two trained research assistants conducted telephone follow-up with women not responding to either mailing. Respondents received a participation incentive.

Study variables

The outcome variable was infant feeding method. Women indicated whether they were breast-feeding or formula-feeding at hospital discharge. Explanatory variables included measures of the TPB constructs of attitudes, subjective norm, and perceived control, as well as sociodemographic characteristics.

Four true/false survey items measured attitudes regarding benefits and barriers to breast-feeding: 1) breast-feeding is healthier for my baby than formula-feeding; 2) breast-feeding has no health benefits for the mother; 3) breast-feeding can be enjoyable for the mother; and 4) breast-feeding would make me feel embarrassed. Four other variables assessed subjective norm, including health care system and family support: 1) whether or not the woman’s doctor had encouraged her to breast-feed during her last pregnancy; 2) whether or not the hospital delivery nurse had encouraged the woman to breast-feed; 3) whether or not a lactation specialist or peer counselor had encouraged the woman to breast-feed during her last pregnancy; and 4) whether or not the woman’s family encouraged formula-feeding. Two true/false items measured perceived control over the time and social constraints barrier to breast-feeding: 1) I would be able to breast-feed and go to school or work; and 2) breast-feeding takes too much time. Both positive and negative statements were used.

Sociodemographic characteristics included the woman’s age, number of children, race/ethnicity, educational level, marital status, work status, and WIC status.

Statistical methods

Data were entered and analyzed using SPSS version 11 for Windows. The characteristics of women who breast-fed and formula-fed were compared at the bivariate level using t-tests or chi-square tests, as appropriate. A binary logistic regression model examined the association between infant feeding method and explanatory variables. Except for number of children, all independent variables were associated with infant feeding method at the bivariate level and were entered into the regression model.

Results

Description of the sample

A total of 733 women completed the survey, including 532 mail surveys and 201 telephone surveys. The response rate was 61%. The breast-feeding initiation rate was 38%. Table 1 describes the sociodemographic characteristics of respondents by infant feeding method. The average age of respondents was 23.5 years, and more than half had two or more children at the time of the survey. More than half of the women were African-American, and 40% were white, non-Hispanic. Almost two of three women had no college education. Only 39% of women were married, and 28% worked on a full-time basis. The majority were
WIC-certified during their last pregnancy. Except for number of children, all sociodemographic characteristics were associated with infant feeding method. Women who were older, white, non-Hispanic, college-educated, married, and not WIC-certified were more likely to breast-feed than formula-feed at hospital discharge \( (p < .001) \). Work status was associated with infant feeding at the .1 level.

**Bivariate analysis**

Table 2 shows the association between infant feeding method and the explanatory variables of attitude, support, and perceived control. Responses to the attitude items indicated that women were overall knowledgeable about the health and emotional benefits of breast-feeding, but a significant number (28%) felt embarrassed about breast-feeding. Women who breast-fed at hospital discharge were more aware of the benefits of breast-feeding and less likely to feel embarrassed about it than women who formula-fed. Approximately two of three women reported that their doctor and hospital delivery nurse had encouraged them to breast-feed during their last pregnancy, but only 30% of women had been encouraged to

### Table 1. Sociodemographic characteristics of women who breast-fed and formula-fed at hospital discharge

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Breast-Fed ((n = 275))</th>
<th>Formula-Fed ((n = 458))</th>
<th>Total ((n = 733))</th>
<th>(p)-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years (mean, SD)</td>
<td>24.4 (5.67)</td>
<td>23.0 (4.73)</td>
<td>23.5 (5.10)</td>
<td>.000</td>
</tr>
<tr>
<td>Had two or more children</td>
<td>153 (55.6%)</td>
<td>244 (53.6%)</td>
<td>397 (54.4%)</td>
<td>NS</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>152 (55.3)</td>
<td>144 (31.4)</td>
<td>296 (40.4)</td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>97 (35.3)</td>
<td>294 (64.2)</td>
<td>391 (53.3)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>26 (9.5)</td>
<td>20 (4.4)</td>
<td>46 (6.3)</td>
<td></td>
</tr>
<tr>
<td>Educational level</td>
<td></td>
<td></td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>&lt; High school</td>
<td>49 (17.9)</td>
<td>127 (27.9)</td>
<td>176 (24.1)</td>
<td></td>
</tr>
<tr>
<td>High school diploma</td>
<td>88 (32.1)</td>
<td>193 (42.4)</td>
<td>281 (38.5)</td>
<td></td>
</tr>
<tr>
<td>Some college</td>
<td>96 (35.0)</td>
<td>96 (21.1)</td>
<td>192 (26.3)</td>
<td></td>
</tr>
<tr>
<td>College degree</td>
<td>41 (15.0)</td>
<td>39 (8.6)</td>
<td>80 (11.0)</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>Married</td>
<td>149 (54.2)</td>
<td>138 (30.1)</td>
<td>287 (39.2)</td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>102 (37.1)</td>
<td>287 (62.7)</td>
<td>389 (53.1)</td>
<td></td>
</tr>
<tr>
<td>Widowed/divorced</td>
<td>24 (8.7)</td>
<td>33 (7.2)</td>
<td>57 (7.8)</td>
<td>.06</td>
</tr>
<tr>
<td>Work status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Works full-time</td>
<td>65 (23.6)</td>
<td>136 (29.9)</td>
<td>201 (27.5)</td>
<td></td>
</tr>
<tr>
<td>Works part-time</td>
<td>45 (16.4)</td>
<td>52 (11.4)</td>
<td>97 (13.3)</td>
<td></td>
</tr>
<tr>
<td>Does not work</td>
<td>165 (60.0)</td>
<td>267 (58.7)</td>
<td>432 (59.2)</td>
<td></td>
</tr>
<tr>
<td>WIC-certified</td>
<td>204 (76.1)</td>
<td>393 (87.1)</td>
<td>597 (83.0)</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note: \(p\)-values are based on chi-square tests for cross-tabulations and \(t\)-tests for mean differences. SD = standard deviation.

### Table 2. Breast-feeding attitudes, support, and perceived control among women who breast-fed and formula-fed at hospital discharge

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Breast-Fed ((n = 275))</th>
<th>Formula-Fed ((n = 458))</th>
<th>Total ((n = 733))</th>
<th>(p)-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes about benefits and barriers to breast-feeding (BF)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BF healthier for baby than formula</td>
<td>268 (98.2)</td>
<td>399 (88.1)</td>
<td>667 (91.9)</td>
<td>.000</td>
</tr>
<tr>
<td>BF has no health benefit for mom</td>
<td>22 (8.1)</td>
<td>95 (21.0)</td>
<td>117 (16.1)</td>
<td>.000</td>
</tr>
<tr>
<td>BF can be enjoyable for mom</td>
<td>252 (92.3)</td>
<td>316 (70.2)</td>
<td>568 (78.6)</td>
<td>.000</td>
</tr>
<tr>
<td>BF is embarrassing</td>
<td>33 (12.0)</td>
<td>172 (38.0)</td>
<td>205 (28.2)</td>
<td>.000</td>
</tr>
<tr>
<td>Health care system and social support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor encouraged BF</td>
<td>214 (79.3)</td>
<td>290 (64.2)</td>
<td>504 (69.8)</td>
<td>.000</td>
</tr>
<tr>
<td>Hospital nurse encouraged BF</td>
<td>230 (85.2)</td>
<td>247 (55.1)</td>
<td>477 (66.4)</td>
<td>.000</td>
</tr>
<tr>
<td>Lactation specialist/peer counselor encouraged BF</td>
<td>126 (47.2)</td>
<td>91 (20.4)</td>
<td>217 (30.5)</td>
<td>.000</td>
</tr>
<tr>
<td>Family encouraged formula</td>
<td>41 (15.0)</td>
<td>192 (43.5)</td>
<td>233 (32.6)</td>
<td>.000</td>
</tr>
<tr>
<td>Perceived control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Able to BF and work/school</td>
<td>225 (82.1)</td>
<td>266 (58.7)</td>
<td>491 (67.5)</td>
<td>.000</td>
</tr>
<tr>
<td>BF takes too much time</td>
<td>47 (17.3)</td>
<td>147 (32.7)</td>
<td>194 (26.9)</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note: \(p\)-values are based on chi-square tests.
breast-feed by a lactation specialist/peer counselor. One-third of women indicated that their family encouraged formula-feeding. Both health care system and family support were associated with breast-feeding behavior.

Approximately two-thirds of the women thought that they could breast-feed and go to work or school and that breast-feeding did not take too much time. Compared to women who formula-fed, women who breast-fed were more likely to report that they could manage breast-feeding while working or going to school and to believe that breast-feeding was not time-consuming.

**Regression analysis**

Table 3 presents the results of the logistic regression of infant feeding method (breast-feeding versus formula-feeding at hospital discharge). Knowledge of the benefits of breast-feeding was associated with higher breast-feeding rates, while embarrassment about breast-feeding was associated with lower rates. Both health care system and family support continued to be associated with breast-feeding initiation. Women who were encouraged to breast-feed by the hospital delivery nurse or lactation specialist/peer counselor were more than two times likely than other women to initiate breast-feeding. Women whose family encouraged formula-feeding were half as likely as women whose family encouraged breast-feeding to initiate breast-feeding. Perceived control over the time and social constraints barrier (work and school issues) was not associated with breast-feeding initiation at the multivariate level. Interestingly, adding the health care system support variables to the model explained the association between breast-feeding initiation and perceived control.

With regard to the sociodemographic characteristics, women who were black, WIC-certified, and worked full-time were approximately half as likely to initiate breast-feeding as women who were of other race/ethnicity, non-WIC-certified, and worked part-time or did not work. Married women were almost twice as likely as never married, divorced, or separated women to initiate breast-feeding. Also, college-educated women were almost twice as likely as women with a high school degree or less to initiate breast-feeding. The association between age and breast-feeding initiation was not significant.

**Discussion**

In this study of 733 low-income women in Mississippi, the breast-feeding initiation rate was 38%. Rates were lower among younger, African-American, and unmarried women, as well as women who had no college education, a full-time job, and WIC certification. The TPB variables of behavioral attitudes and subjective norms, but not perceived control over the time and social barriers to breast-feeding, were associated with breast-feeding initiation at the multivariate level. Previous studies had found the TPB constructs to be predictive of breast-feeding duration among women intending to breast-feed (Avery et al., 1998; Dick et al., 2002) and of nurses’ supportive behavior towards breast-feeding mothers (Bernai, 2000).

In this study, the TPB construct of subjective norm, and specifically support from lactation specialists and hospital nurses, was strongly associated with breast-feeding initiation. Goks en (2002) had also reported that subjective norm was critical and that intention did not determine behavior unless it was conditioned by enabling factors such as support. Our findings were also consistent with the literature on the role of lactation specialists (Humphreys, Thompson, & Miner, 1998) and hospital practices (Perez-Escamilla et al., 1994) in breast-feeding promotion. We also found that women whose families encouraged formula-feeding were half as likely as other women to initiate breast-feeding. Several studies had documented the influence of family members, particularly fathers and grandmothers, on the woman’s decision to breast-feed (Arora et al., 2000; Bar-Yam & Darby, 1997; Mahoney & James, 2000; Scott & Binns, 1999). In addition to encouraging family support, an effective approach to promoting breast-feeding in low-income populations is peer counseling (Caulfield et al., 1998; Dennis, 2002; Grummer-Strawn et al., 1997; Schafer et al., 1998).

Our study documented the importance of the mother’s knowledge of the benefits of breast-feeding. This was consistent with other findings that women who possess breast-feeding knowledge plan for breast-feeding (Alexy & Martin, 1994; Meyernick & Marquis, 2002; Wambach, 1997).

The study findings are limited by the study design. First, variables, such as prior breast-feeding experience and mother’s health behavior or lifestyle, were not measured, because they did not fall under any of the TPB constructs. However, those variables could affect breast-feeding initiation and therefore confound the interpretation of the results. Second, although the response rate of 61% is good for a Medicaid population, there is a potential for nonresponse bias. We conducted telephone follow-up of women not responding to the mail survey, and it is possible that women who had telephones were overrepresented in the sample than women who did not have telephones. To the extent that households with telephones have a higher sociodemographic status than households without telephones, the reported breast-feeding rate and related data could be overestimates. Third, because the sample only included low-income women in Mississippi, the results could be generalized to low-income women in the deep south but not necessarily...
to low-income women across the country. Finally, data were collected at 3–4 months postpartum, and there is a potential for recall bias, especially if breast-feeding women were more likely to report that they were encouraged to breast-feed than other women. However, it is unlikely that recall bias impacted the findings, because the survey measured major and memorable life events and was conducted shortly after delivery.

**Implications**

Our findings indicate that there is room for improving health care system support. Approximately one of three survey respondents indicated that their doctor and hospital nurse had not encouraged them to breast-feed. Other studies have also discussed the need for improving counseling practices (Hong, Callister, & Schwartz, 2003; Humenick, Hill, & Spiegelberg, 1998; Izatt, 1997). Interventions that include training on breast-feeding counseling and lactation management have generally been effective in increasing breast-feeding knowledge, attitudes, and practices of maternal and child health providers (Health Resources and Services Administration [HRSA], Maternal and Child Health Bureau [MCHB] 1996; Khoury et al., 2002; Phillips, 1991). Similar interventions are needed in the future. Attention should also be given to establishing supportive hospital practices, such as the “Ten Steps to Successful Breast-feeding” as outlined by the World Health Organization and Baby Friendly USA (UNICEF/WHO, 1992; World Health Organization, 1998).

Social support is critical for breast-feeding promotion, but this factor has been difficult to change (Khoury et al., 2002). Researchers have investigated the causes of low-income families’ lack of support for breast-feeding (Best Start Social Marketing, 1996), but further research is needed to support the development of family interventions.

Finally, public health campaigns are needed to educate women about the benefits of breast-feeding and address their fears. The WIC national breast-feeding promotion project, Loving Support Makes Breast-feeding Work, was kicked off in 1997 and represents a social marketing approach for breast-feeding promotion. The campaign has been implemented in various ways across the country. Mississippi has been nationally recognized for implementing a comprehensive and creative Loving Support campaign with five components: communication with WIC staff, women and family education, public awareness, health professional outreach, and community outreach. The evaluation of Mississippi’s campaign showed an increase in breast-feeding rates and public awareness and acceptance of breast-feeding in the intervention relative to the comparison districts (Khoury et al., forthcoming). The positive evaluation results have prompted the U.S. Department of Agriculture to encourage State WIC agencies to participate in the campaign. At present, a team of health planners

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**Table 3. Logistic regression analysis of infant feeding method: estimates of odds ratios of explanatory variables and 95% confidence intervals**

<table>
<thead>
<tr>
<th>Explanatory Variable</th>
<th>Odds Ratio of Breast-Feeding</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes about benefits and barriers to breast-feeding (BF)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BF healthier for baby than formula, true vs false</td>
<td>4.72*</td>
<td>1.24, 17.90</td>
</tr>
<tr>
<td>BF has no health benefit for mom, true vs false</td>
<td>0.52*</td>
<td>0.27, 0.99</td>
</tr>
<tr>
<td>BF can be enjoyable for mom, true vs false</td>
<td>3.18**</td>
<td>1.62, 6.21</td>
</tr>
<tr>
<td>BF is embarrassing, true vs false</td>
<td>0.35**</td>
<td>0.20, 0.61</td>
</tr>
<tr>
<td>Health care system and social support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor encouraged BF vs not</td>
<td>1.69***</td>
<td>0.97, 2.94</td>
</tr>
<tr>
<td>Hospital nurse encouraged BF vs not</td>
<td>2.44**</td>
<td>1.43, 4.16</td>
</tr>
<tr>
<td>Lactation specialist/peer counselor encouraged BF vs not</td>
<td>2.62**</td>
<td>1.68, 4.08</td>
</tr>
<tr>
<td>Family encouraged formula vs not</td>
<td>0.50**</td>
<td>0.31, 0.82</td>
</tr>
<tr>
<td>Perceived control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Able to BF and work/school, true vs false</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>BF takes too much time, true vs false</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Sociodemographics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Race/ethnicity (African-American vs other)</td>
<td>0.44**</td>
<td>0.28, 0.70</td>
</tr>
<tr>
<td>Educational level (college education vs not)</td>
<td>1.72*</td>
<td>1.08, 2.71</td>
</tr>
<tr>
<td>Marital status (married vs other)</td>
<td>1.83*</td>
<td>1.16, 2.91</td>
</tr>
<tr>
<td>Work status (works full-time vs other)</td>
<td>0.60*</td>
<td>0.37, 0.98</td>
</tr>
<tr>
<td>WIC certified vs not</td>
<td>0.44**</td>
<td>0.25, 0.78</td>
</tr>
</tbody>
</table>

NS = not significant.
*5% confidence level.
**1% confidence level.
***10% confidence level.
and breast-feeding educators from Mississippi is available to provide training and technical assistance to participating states. Such efforts should bring the nation closer to achieving its Healthy People 2010 breast-feeding objectives.

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References


Author Descriptions

Amal Khoury is a health services researcher with interests in women’s health care and policy across the life span, and particularly in cancer control and access to care in vulnerable populations of women.

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