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Community Breastfeeding Attitudes and Beliefs

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Community Breastfeeding Attitudes and Beliefs

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The cultural norms of a society have a powerful influence over health behavior decisions such as choosing an infant feeding method. The objective of this study was to explore the community breastfeeding perspective by examining breastfeeding attitudes and beliefs, experiences, and behaviors of a U.S. university community through an online survey. Linear and logistic regressions were used to determine predictors of those who had breastfed and those with positive breastfeeding attitudes and beliefs. Through the findings, the researchers suggest that exposure to breastfeeding

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and increasing positive breastfeeding attitudes and beliefs are important as the focus for public breastfeeding campaigns.

Community perceptions of breastfeeding can influence the choices made by individual families in regards to infant feeding decisions; therefore, in this article we will describe and give results of a study conducted to explore community breastfeeding attitudes, beliefs, and behaviors. The detrimental consequences of not breastfeeding have long prompted international organizations such as the World Health Organization (WHO, 2003) to promote, protect, and support breastfeeding around the world. Breastfeeding as a healthy behavior transcends national boundaries and cultural and discipline differences, thereby making it of high interest to an international audience.

Human breastmilk is designed by nature to meet the specific needs of the human species. Throughout history, there have been various alternative ways to feed infants, ranging from other mammal's milk to food pulp, but there is no question among the scientific community that human milk, because of its known and unknown components, reduces the risks of specified diseases and medical conditions from infancy through adulthood. Other important elements of breastfeeding include the emotional value of the bonding process that takes place between the mother–infant dyad and the reduction of health risks to the woman who breastfeeds (Lawrence & Lawrence, 2005). Breastmilk's significance in health has been well documented in the research literature, and efforts to extend that message publicly have resulted in an increase of breastfeeding rates from a low of 25% in 1971 to its current rate of 74% for infants born in 2006 and breastfed upon hospital discharge in the United States (Centers for Disease Control and Prevention [CDC], 2006; Ryan et al., 1991). The goals of Healthy People 2010 and the recommendations from the WHO (2003), American Academy of Pediatrics (AAP, 2005), and other health profession organizations are to increase breastfeeding rates to improve the health of the world's population (American Academy of Family Physicians, 2007; Office of Disease Prevention and Health Promotion, 2000).

Breastfeeding behavior patterns have been examined in many studies in order to determine effective points of intervention. One important variable identified is the mother's perception of community attitudes toward breastfeeding (Mulford, 1995; Tarkka, Paunonen, & Laippala, 1999). An ecological view of explaining breastfeeding behavior is an appropriate way to account for all the variables that shape the decisions that families make when it comes to feeding their babies, according to a current trend in the breastfeeding literature. However, very few studies have been conducted where the researchers examine community breastfeeding perceptions and behaviors. In a previous CDC (2005) "Babies Were Born to be Breastfed" advertising campaign, an ecological approach that emphasized settings of home, health care, community, and workplace was used. Families make infant feeding decisions not in isolation but in the context of their surroundings and all

that entails. From the Bronfenbrenner ecological model (1979), Ecological Reformulation of the Theory of Planned Behavior for Breastfeeding (Henly, Duckett, Anderson, & Vari, 2005), and Bandura's social cognitive theory of behavior (1977), it is believed that an individual's learning is influenced by his or her environment. Community members' breastfeeding behaviors and reactions to breastfeeding influence others in the social space they occupy, making them a part of the web of informal learning. Community members who are knowledgeable and supportive of breastfeeding can positively influence the health-significant decisions made by individuals. Learning about breastfeeding attitudes, beliefs, and experiences of a community is integral to understanding breastfeeding behavior patterns in a community.

With that understanding, the purpose of this study was to explore a community breastfeeding perspective by examining characteristics of a U.S. Midwestern university community related to their breastfeeding and bottle-feeding attitudes and beliefs, breastfeeding experiences, and breastfeeding behaviors to increase understanding of community breastfeeding perceptions. Additionally, analyses were conducted to understand which sociodemographic and experiential factors best predicted positive breastfeeding attitudes and beliefs and breastfeeding initiation. The natural split between the younger community group composed of students and the older community group composed of faculty, staff, and administrators allowed for further delineation of the variables of interest. Information about community breastfeeding perceptions derived from this study can be important in determining the focus of public health campaigns related to breastfeeding.

Research questions follow: (a) What are the prevalences of breastfeeding experiences, attitudes, and beliefs in the student and faculty/staff/administrators (FSA) community samples? (b) What are the demographic and experiential correlates of positive breastfeeding attitudes and beliefs and for respondents with children, having breastfed?

METHOD

This descriptive study was based on an online survey administered at a Midwestern public university (Peterson, 2006). The population for this secondary analysis study consisted of students and FSAs. An invitation for participation in a survey examining respondents' breastfeeding and bottle feeding attitudes and beliefs, plus breastfeeding experiences was sent via an online electronic listserv. The invitation contained a link that directed potential respondents to an informed consent and the survey. A second reminder was sent one week later. A convenience sample of 776 participants responded to the online questionnaire and were assigned a case number. Fourteen cases were missing all data points and therefore were deleted. Eight additional cases were deleted because all or most of the demographic data were missing.

The final dataset contained 754 participants. Participants were divided into two groups because of the opportunity to explore breastfeeding perspectives based on differences in age. The younger group was made up of the student participants. The older group consisted of the FSAs.

Instrumentation

The survey tool, *Infant Feeding Questionnaire*, used in this study had been previously used in a similar university community study (O'Keefe, Henly, & Anderson, 1998). Items asked on the survey included demographic data consisting of gender, age, marital status, children and ages, highest degree earned, income, and employment status in addition to the breastfeeding variables.

The attitudes portion of the survey was originally used and developed by Manstead, Plevin, and Smart (1984). Duckett and colleagues (1998) and O'Keefe and colleagues (1998) also used the instrument with Cronbach's alpha ranging from .89 to .90. In the current study, the reliability of the breastfeeding and the bottle feeding attitude scales was also high with Cronbach's alpha at .92 and .81, respectively. Content validity was assessed by breastfeeding experts who developed and used the scales (Duckett et al., 1998; Manstead et al., 1984; O'Keefe et al., 1998). The tool used a semantic differential rating scale with items intending to measure the attitude toward the idea and the act of breastfeeding and bottle feeding. A semantic differential scale is used to measure societal attitudes, specifically; a concept is featured whereby two opposing adjectives describing the concept are placed at either end of a 7 point scale. The participant is asked to place a mark closest to the adjective that best describes his or her feeling about the concept: The higher the number, the more positive the evaluative adjective. The four concepts used for this study were the *idea of breastfeeding*, the *act of breastfeeding*, the *idea of bottle feeding*, and the *act of bottle feeding*. A combination of the two scales for breast and bottle feeding was created by combining the idea and act of breastfeeding scale and by combining the idea and act of bottle feeding scale to arrive at a breastfeeding attitude score and a bottle feeding attitude score. There were six adjective pairs used in the semantic differential scale for each concept. The adjective pairs were unpleasant/pleasant, embarrassing/not embarrassing, healthy/unhealthy, repulsive/attractive, convenient/inconvenient, and unnatural/natural. There were seven points on the scale between the adjectives where a mark was made that best represented participants' feeling about the concept based on the adjectives presented to them.

The beliefs about breastfeeding and bottle feeding portion of the survey instrument was developed to measure a person's evaluation of the potential consequences for a mother and baby if that baby was breastfed or bottle fed with formula for 6 months or more. Internal consistency reliability

estimates were .86 and .85 for beliefs about outcomes of breastfeeding and bottle feeding, respectively, in a previous study in which this scale was used (Duckett et al., 1998). In the current study, internal consistency reliability estimates were .89 and .88 for beliefs about outcomes of breastfeeding and bottle feeding, respectively. Of the 18 statements, seven were about infant physical health (“baby will have few illnesses in the first year of life”), six related to mother–baby closeness (“feedings will be a rewarding time”), and five referred to maternal consequences (“mother will return to her prepregnant weight within the year”). Participants rated each potential outcome on a 7-point scale with endpoints of *unlikely* to *likely*. Responses were summed to come up with a breastfeeding beliefs score and a bottle feeding beliefs score. Higher scores reflected belief in desirable outcomes of each of the two behaviors.

Breastfeeding experiences were measured by asking four questions: (a) Were you breastfed as an infant? (b) Did you observe breastfeeding as a child? Identify those persons observed; (c) Were any of your own children breastfed? Indicate overall satisfaction or dissatisfaction with breastfeeding; and (d) Mark places (park, restaurant, etc.) where you have observed women breastfeeding their babies and indicate how you felt about the appropriateness (natural, neutral, inappropriate) of the occurrence (breastfeeding appropriateness in various settings). The number of different persons seen breastfeeding in childhood was tabulated (number of types of childhood breastfeeding observations), as well as the number of setting observations of breastfeeding (number of breastfeeding setting observations). A score to reflect reactions about appropriateness of breastfeeding observed was determined and was named breastfeeding appropriateness in various settings score. Reliability for the scale reflected good internal consistency with a Chronbach alpha coefficient of .92.

Data Analysis Strategy

The dataset was utilized to answer two primary research questions. The first research question was answered by providing descriptive statistics of the following variables for the student and FSA groups: demographics; breastfeeding and bottle feeding attitudes; breastfeeding and bottle feeding beliefs; childhood breastfeeding observations (CBO) and number of types of persons observed; number and reaction to overall observations of breastfeeding; if self was breastfed; if own children were breastfed; and satisfaction/dissatisfaction with the experience. Additionally, *t*-tests and chi-square tests were used to examine any significant differences in the two groups (students and FSAs) on variables of interest.

The second research question was answered by conducting two simultaneous linear regressions and one simultaneous logistic regression. In the first two analyses, the summary score of breastfeeding attitudes and the summary

score of breastfeeding beliefs were regressed on the following variables: gender, age, education, income, marital status, if self was breastfed, number of types of persons observed breastfeeding as a child, and either breastfeeding attitudes (for the breastfeeding beliefs regression) or breastfeeding beliefs (for the breastfeeding attitudes regression).

Additionally, a logistic regression was conducted in which the dichotomous outcome variable “children breastfed” vs. “children not breastfed” was regressed on the same set of potential predictors as described above. The three regression models were conducted separately for students and for FSAs. The statistical computer program used was the Statistical Packages for the Social Sciences (SPSS Version 11). The significance level was set at .05 throughout the study.

RESULTS

There were 262 FSA (34.5%) and 492 Student (64.7%) respondents. The FSA group was made up of 108 faculty (41%), 10 administrators (4%), and 144 staff (55%). Both FSA and student groups had a similar proportion of gender division with females composing 74.8% of the FSA group and 70.1% of the student group. As expected, the FSA and student groups differed significantly on marital status, having children, age, education, and income (see Table 1).

Breastfeeding and Bottle Feeding Measures

Breastfeeding and bottle feeding attitudes. Average scores for the breastfeeding and bottle feeding attitudes scales could range from 1 to 7, with higher numbers indicating more favorable breastfeeding or bottle feeding attitudes. Groups of FSA and students had favorable scores toward both

TABLE 1 Sample Characteristics for Faculty/Staff/Administrator and Student Groups ($N = 754$)

Characteristic	Faculty/staff/ administrator group	Student group	* p
% of total N (n)	34.5 (262)	64.7 (492)	NS
% women (n)	74.8 (196)	70.1 (345)	NS
% married (n)	78.6 (206)	25.6 (126)	<.001
% with children (n)	77.9 (204)	20.8 (101)	<.001
Mean age in years (SD)	42.7 (11.0)	23.8 (6.4)	NS
Mean education (SD)	4.5 (1.2)	2.3 (1.0)	<.001
Mean income (SD)	7.9 (2.2)	4.9 (2.9)	<.001

* = chi square test; NS = not significant.

For education: 1 = grade school, 2 = high school, 3 = associate's, 4 = bachelor's, 5 = master's, 6 = doctoral.

For income in 1000s: 1 = <5, 2 = 5–9.9, 3 = 10–19.9, 4 = 20–29.9, 5 = 30–39.9, 6 = 40–49.9, 7 = 50–59.9, 8 = 60–69.9, 9 = 70–79.9, 10 = 80 and up.

breastfeeding and bottle feeding attitudes. The highest favorable scoring of the two groups for the two scales was FSA with a mean of 5.9 ($SD = 1.06$) for the breastfeeding attitude scale, which was significantly higher than the student's breastfeeding attitude score at 5.62 ($SD = 1.15$). The FSA group also had a significantly higher bottle feeding attitude mean at 5.02 ($SD = 1.16$), with students at 4.72 ($SD = 1.24$). Differences were significant at the $p < .01$ level.

Breastfeeding and bottle feeding beliefs. Responses were averaged to come up with a breastfeeding beliefs score and a bottle feeding beliefs score. Higher scores reflected belief in desirable outcomes of each of the two behaviors, with scores ranging from 1 to 7. The breastfeeding beliefs scores for FSA and students were very similar at 5.54 ($SD = .89$) and 5.61 ($SD = .834$), respectively. Bottle feeding beliefs were significantly different ($p < .01$) at 4.04 ($SD = .78$) for FSA and 3.83 ($SD = .89$) for students.

Breastfeeding experiences. Breastfeeding experiences were measured by asking a series of questions regarding breastfeeding behaviors, observations, and feelings. The results are presented in Figures 1 and 2. The FSA and students with children groups were similar in that around 85% of each group had a breastfed child ($n = 176$, 85.9% and $n = 82$, 84.5%, respectively). The two groups did differ in the level of satisfaction with breastfeeding. The students ($M = 6.47$, $SD = 1.01$) had a significantly higher satisfaction level with breastfeeding than did the FSA group ($M = 5.87$, $SD = 1.50$). There was a significant difference in the number of different persons (mother, other relative, stranger, family friend, other) seen breastfeeding in childhood between the student and FSA groups (number of types of childhood breastfeeding observations). The student group reported seeing between 1 and 2 different persons breastfeeding ($M = 1.56$, $SD = 1.36$). The FSA group reported a lesser number ($M = 1.24$, $SD = 1.21$). There was a significant difference on whether the respondents in the two groups had been breastfed as an infant. A higher percentage of the student group ($n = 331$, 69.5%) had been breastfed as an infant than the FSA group ($n = 101$, 38.8%). The average rating for the breastfeeding appropriateness in various settings score was based on the following scale: inappropriate = 1; neutral = 2; and natural = 3, and was significant between the two groups. Students had an average rating of 2.29 ($SD = .48$), while FSA had an average rating of 2.45 ($SD = .46$). Interesting to note is that the average rating in both groups tended toward neutral, indicating breastfeeding in public places is not viewed as a natural occurrence.

Predictors of Breastfeeding in Participants With Children

Simultaneous logistic regression was conducted with FSA and student groups to determine which independent variables were predictors of whether a respondent breastfed at least one child. Results are presented in Table 2.

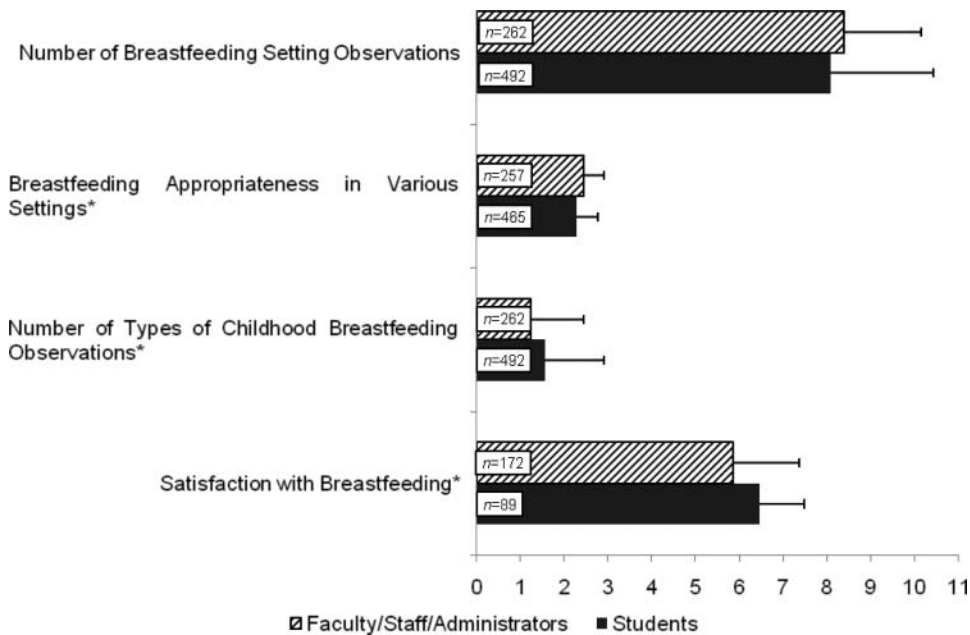


FIGURE 1 Mean number of breastfeeding setting observations, ratings of appropriateness in various settings, number of childhood breastfeeding observations, and ratings of satisfaction with own breastfeeding experiences for the FSA and student groups. *Group means differed significantly at $p < .001$ by the independent samples t test. Error bars represent standard deviations. For number of breastfeeding setting observations, numbers could range from 0 to 9 with higher numbers indicating more breastfeeding setting observations. For breastfeeding appropriateness setting score, average scores could range from 1 to 3 with lower numbers indicating more feelings about various settings being inappropriate for breastfeeding. For number of types of childhood breastfeeding observations, scores could range from 0 to 5 with higher scores indicating more childhood observations of breastfeeding. For satisfaction with breastfeeding, scores could range from 1 to 7 with higher numbers indicating more satisfaction.

Selection of independent variables entered into the regressions was based on variables most often cited as important to breastfeeding in the literature. The only significant predictor was breastfeeding beliefs in the FSA group at $p < .05$. The odds of someone who reports breastfeeding is almost two times higher for those with a more positive breastfeeding belief score. Results for the student group indicate there were no significant predictors of breastfeeding a child.

Predictors of Positive Breastfeeding Attitudes and Beliefs

Two linear regression analyses were conducted for the two groups to determine how well a set of predictor variables correlated with positive breastfeeding attitudes and with positive breastfeeding beliefs. Independent

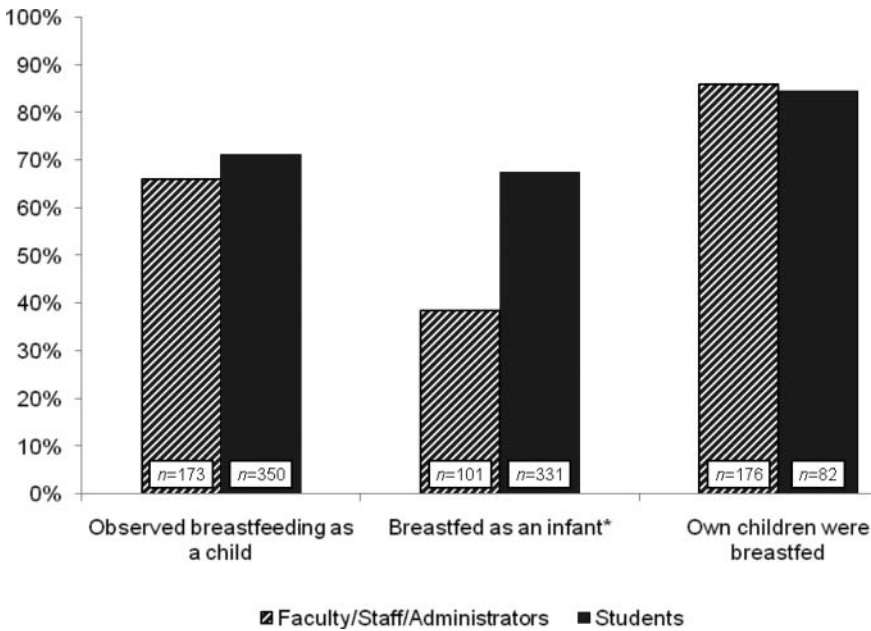


FIGURE 2 Breastfeeding observations and experiences for FSA and student groups. *Group percentages differed significantly at $p < .001$ by the chi square test.

variables were entered simultaneously. The overall model accounted for approximately 40% of the variance in breastfeeding attitudes for the FSA group (Table 3). Only age and breastfeeding beliefs were significant predictors. The unique variance explained by the two model predictors was led by the breastfeeding belief score (33% of the total variance in breastfeeding attitudes is uniquely explained by the breastfeeding belief score), followed by age (2%). The overall model for the student group accounted

TABLE 2 Logistic Regression Analysis Predicting Breastfeeding in a University Sample of Faculty, Staff, and Administrators With Children

Predictor variable	B	SE	Adjusted odd ratio	95% CI
Breastfeeding beliefs	.663*	.322	1.94	1.03–3.65
Age	-.049	.025	.952	.907–1.0
Educ	.118	.247	1.125	.694–1.825
Income	.220	.138	1.246	.951–1.633
Gender	.060	.661	1.062	.291–3.878
Marital	.645	.828	1.907	.377–9.654
Self breastfed	-.904	.564	.405	.134–1.224
Number of types of CBOs	-.147	.215	.863	.566–1.317
Breastfeeding attitudes	.474	.269	1.607	.948–2.722

* $p \leq .05$. CBO = childhood breastfeeding observations.

TABLE 3 Linear Regression Analyses Predicting Positive Breastfeeding Attitudes in FSA and Student Groups

Group	Predictor variable	B	SE	BETA	Part correlation	<i>t</i>
FSA	Age	.015	.005	.153	.148	3.018**
	Breastfeeding beliefs	.699	.060	.591	.571	11.645***
Students	Age	.043	.009	.055	.171	4.638***
	Gender	.302	.095	.120	.117	3.167**
	Number of types of CBOs	.134	.033	.158	.149	4.039***
	Breastfeeding beliefs	.675	.053	.488	.467	12.649***

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$. CBO = childhood breastfeeding observations.

for approximately 39% of the variance in breastfeeding attitudes (Table 3). Age, gender, number of types of childhood breastfeeding observations, and breastfeeding beliefs were significant predictors for breastfeeding attitudes. The unique variance explained by the four predictors was age (3%), gender (1%), number of types of childhood breastfeeding observations (2%), and breastfeeding beliefs (22%).

Analyses to explain the breastfeeding beliefs score for the FSA and student groups was also performed, with results presented in Table 4. For the FSA group, the overall model accounted for 38% of the variance in breastfeeding beliefs. Gender and breastfeeding attitude scores were significant predictors. The unique variance explained by the two model predictors was led by the breastfeeding attitude score (33% of the total variance in breastfeeding beliefs is uniquely explained by the breastfeeding attitude score), followed by gender (2%). The overall model for the student group explained 32% of the variance in breastfeeding beliefs. Education, income, and breastfeeding attitudes were significant predictors. The unique variance explained by the three predictors were breastfeeding attitude score (24%), education (1%), and income (1%).

TABLE 4 Linear Regression Analyses Predicting Positive Breastfeeding Beliefs in FSA and Student Groups

Group	Predictor variable	B	SE	BETA	Part correlation	<i>t</i>
FSA	Gender	-.335	.108	-.163	-.153	-3.091**
	Breastfeeding attitudes	.511	.044	.605	.578	11.645***
Students	Education	-.080	.039	-.097	-.080	-2.049*
	Income	-.027	.011	.094	-.090	-2.316*
	Breastfeeding attitudes	.395	.031	.546	.494	12.649***

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

DISCUSSION

Further explanation of the findings from this study will help form a picture of the breastfeeding perspective of this community and offer insight into the complicated nature of environmental influences related to infant feeding. The conclusion section will contain recommendations related to breastfeeding campaign development based on these findings.

Because of the differences in age between the two groups, we would expect to see differences in their breastfeeding perceptions. This holds true in some areas of the survey results. Positive breastfeeding attitudes have been associated with higher breastfeeding rates (Dungy, Losch, & Russell, 1994; Ryser, 2004) and so is certainly a variable that is important to examine from the community perspective. The FSA group had stronger positive attitudes about breastfeeding than the student group.

Bottle feeding attitudes and beliefs add another dimension to the breastfeeding discussion. Bottle feeding beliefs were significantly different between the two groups. Student respondents were more negative about bottle feeding (attitudes and beliefs) than FSA respondents, but FSA respondents were more positive in their attitudes about breastfeeding. The two groups were similar in their breastfeeding beliefs. What does this indicate? Because the students were more negative about formula, the message about superiority of breastmilk and inferiority of formula may have been heard by this group of students. The FSA respondents heard mixed messages about infant feeding throughout their lives, as formula enjoyed an equal position with breastfeeding as late as the early 1980s. Even though the FSA group has stronger positive attitudes toward breastfeeding, the student group has stronger negative feelings toward bottle feeding. This finding would support the Health and Human Services Department 2003 plan to use an edgy advertising campaign to graphically show the risks of using formula (Kaufman & Lee, 2007).

Other differences noted between the two groups were evident in the breastfeeding experiences section of the questionnaire. The student respondents reported more types of childhood breastfeeding observations than the FSA respondents, reflecting the increased breastfeeding rates in the late 1980s. Students had more childhood opportunities to observe breastfeeding because there were more women breastfeeding than when the FSA respondents were children. Also reflective of the increased rates of breastfeeding when students were infants was the significantly higher percentage of student respondents that were breastfed as infants than FSA respondents. When questioned about any of their own children being breastfed, however, there was no significant difference between the two groups. The 2005 breastfeeding rate for the Midwestern state where the survey was conducted was 73.1%. At 85% of the total respondents who had children reporting breastfeeding, the convenience sample of respondents completing the survey had

a higher rate of breastfeeding than the general population of the state (CDC, 2007). There was a significant difference between FSA respondents and student respondents on their satisfaction with the breastfeeding experience. Students ranked satisfaction with breastfeeding at a higher level than did FSAs, although both groups were satisfied with their breastfeeding experience. Student respondents who breastfed, did so at a time when there were more women breastfeeding and so were breastfeeding in a more supportive environment than when the FSA respondents were breastfeeding. The breastfeeding appropriateness in various settings average rating tended toward neutral, indicating that this generally breastfeeding supportive group viewed public breastfeeding as less than appropriate.

The common significant predictor for both FSA and student groups on breastfeeding attitude and breastfeeding belief was either breastfeeding attitude or breastfeeding beliefs. In the literature this finding is supported by study researchers Swanson, Power, Kaur, Carter, and Shepherd (2006): Those persons who have a more positive breastfeeding attitude tend to have more positive beliefs about breastfeeding. Breastfeeding attitude was also significant for predicting whether a respondent breastfed or not in the FSA group, controlling for demographic variables of age, education, and income. How a person feels about breastfeeding (attitude) and the beliefs they have about breastfeeding (knowledge) appear to have the biggest impact on whether a person breastfeeds or not, which is upheld in the literature (Dungy et al., 1994; Shaker, Scott, & Reid, 2004). It is important to note that positive breastfeeding attitudes and initiation of breastfeeding have a reciprocal relationship; one may have led to the other. In this retrospective study there was no way to determine if positive breastfeeding attitudes preceded breastfeeding.

In other studies, researchers have identified exposure to breastfeeding (operationalized in this study as number of types of childhood breastfeeding observations) as influential in breastfeeding initiation (Meyerink & Marquis, 2002), but exposure to breastfeeding was not a predictor for breastfeeding initiation in the current study. The usual demographic variables of age, education, and income were not significant predictors for having breastfed an infant for the FSA or student groups. Scott, Binns, Graham, and Oddy (2006) also found that demographic variables did not predict breastfeeding initiation. The finding was attributed to the fact that rising levels of breastfeeding initiation made social inequalities less apparent. The higher breastfeeding rate in the current study sample could be a contributing factor to lack of such a finding as well.

For student respondents, breastfeeding attitude was predicted by the number of types of childhood observations of breastfeeding, age, and gender. Swanson and colleagues (2006) reported that age and exposure to breastfeeding predicted breastfeeding beliefs (which contained similar content to breastfeeding attitude in our study) in an adolescent population, and it concurs with the current study findings. In the regression models, the

FSA group had one to two significant predictors, whereas the student group had three to five significant predictors, indicating that differences of age, education, and income (significant predictors of the student group) are less discriminating as age, education, and income increase.

Limitations of this study were the convenience sampling method, which in this case resulted in a sample consisting of participants that breastfed at a rate higher than the general population. The unexpected neutral findings related to observations of breastfeeding in various settings were illuminating though, because they did come from a generally breastfeeding supportive group. The small number of men and the high education levels of the respondents provide an additional limitation. Other limitations of the study were the large number of items per scale and the total length of the survey, which may have impacted the number of incomplete surveys.

CONCLUSION

The strength of the study was that it was one of a few U.S. studies in which the researchers surveyed a community population on a wide variety of breastfeeding questions. The researchers of a national randomized study, HealthStyles (Li, Rock, & Grummer-Strawn, 2007), surveyed the general population, but asked only limited breastfeeding questions. Researchers of a study conducted in France used a broad breastfeeding attitude survey and concluded that society and cultural norms had a strong impact on infant feeding choice. Those authors suggested that if breastfeeding initiation and duration rates were to be increased, society as a whole needed to be educated (Hernandez & Callahan, 2008). We would concur with those statements. Tzu-Ling and colleagues (2010) conducted a recent study in Taiwan and concluded that the perceived level of breastfeeding acceptance was positively associated with breastfeeding at 3 months, which supports the notion of community attitudes affecting breastfeeding behaviors.

We felt there was a unique opportunity to study a community group on numerous variables designed to survey breastfeeding attitudes and then to use those findings to highlight areas to be addressed in community breastfeeding campaigns. Exposure to breastfeeding in the student group was a predictor for positive breastfeeding attitude and feelings about observing breastfeeding in various settings, which is a significant reminder that breastfeeding that is observed by others can be an important tool for improving community attitudes toward breastfeeding. Campaigns that have as a focus the exposure of younger community members to breastfeeding can be an effective method for improving community breastfeeding attitudes. Breastfeeding attitude was a significant predictor for breastfeeding initiation and breastfeeding beliefs, reinforcing the acknowledgment that breastfeeding attitudes need to be addressed at the community level. Portraying breastfeeding

as a loving behavior rather than highlighting facts about breastfeeding would target breastfeeding attitudes and be a valuable campaign focus.

Families make infant feeding decisions not in isolation but in the context of their surroundings, which include community members. Community members' breastfeeding behaviors and reactions to breastfeeding influence those families in the social space they occupy. Community members that are supportive of breastfeeding can positively influence the health-significant decisions made by individuals and families. Learning about breastfeeding attitudes, beliefs, and experiences of a community is integral to understanding breastfeeding behavior patterns in a community. Understanding of community breastfeeding attitudes is fundamental before effective public health campaigns are developed. Since there is a dearth of studies related to community breastfeeding perceptions, additional such studies would be important to yield information valuable in promoting breastfeeding to the community.

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