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This article is available in In Situ: https://repository.upenn.edu/insitu/vol2/iss1/4
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Over the past decade, research on the long-term benefits of breastfeeding has greatly increased. Women all over the world, particularly in industrialized countries, which in the past tended to have a low prevalence of breastfeeding, are becoming more aware of the advantages of breast milk over formula milk and bottle-feeding. Several researchers have turned their attention toward the myriad factors associated with women’s decision to initiate and continue breastfeeding. Although the past few decades have seen a dramatic increase in breastfeeding, from 25% in 1970s to 73.9% in 2005, the optimal breastfeeding rate is still not being met (CDC). There are several medical benefits to breastfeeding, both for the child and the mother (WHO). Yet, a large number of women still continue to bottle-feed (Earle, 2002). A number of social, cultural and political factors significantly affect the initiation and duration of breastfeeding. Infant feeding decisions depend on attitudes toward breastfeeding that may be developed as early as adolescence (Martens 2001). Therefore, from a public health perspective, it is extremely important to identify the factors responsible for breastfeeding beliefs from an early age.

The goal of this study is to describe the attitudes and intentions toward breastfeeding in a group of university students in the United States, and to determine if any demographic or behavioral variables can be designated as predictors of these feelings. This study also explores whether some variable, such as student or family income, cultural differences, or exposure to breastfeeding at home, is associated with attitudes toward breastfeeding. Through a review of the medical benefits of breastfeeding, contemporary barriers that women face, and worldwide cultural trends, my paper will explore the different variables responsible for certain attitudes and intentions toward breastfeeding.

Breastfeeding conveys vast health advantages to both the child and the mother (Stuart-Macadam & Dettwyler, 1995). The most obvious advantage is the nutritive function of breast milk. Breast milk is also rich in antibodies that protect infants from disease. Breast milk contains antibodies circulating in their bloodstream, which they acquire from the mother; however, the immune system is not yet functional and requires long-term exposure to the environment before it becomes active. In the meantime, babies have to rely on antibodies contained in the mother’s milk (Stuart-Macadam & Dettwyler, 1995). Breastfeeding also prevents the growth of antibiotic-resistant bacteria in babies.

Many studies also point to the benefits of breastfeeding in the long-term development and health of the infant. For example, bottle-feeding is correlated to Crohn’s disease (which causes inflammation of the digestive tract) and hypersensitivity to allergens (Kellietko 1989). Early feeding practices have also been associated with coronary pathologies, disorders of immune regulation, and psychomotor development (Lucas 1998, Cunningham 1995). Some theories also link infant diseases to cow’s milk (Stuart-Macadam & Dettwyler, 1995). Breastfeeding also benefits the mother’s health. The fertility-reducing effects of lactation benefit both the mother and her current and future offspring. Close-spaced births, i.e. less than 2 years apart, lead to an increased rate of infant mortality, not only of the firstborn child in a sequence, but also the second (Mouamder et al 2009). The repeated suckling of the baby helps release oxytocin and prolactin, also known as the “hormone of love,” and the “mother’s hormone,” respectively (Stuart-Macadam & Dettwyler 1995). Oxytocin is particularly important because it helps the mother feel calm and relaxed, and also helps the uterus contract and return to the pre-pregnancy stage (Bouchier, 2005). Furthermore, mothers who breastfeed can remain amenorrheic for several months, which helps maintain iron levels in the mother’s body and provides natural spacing for future pregnancies. Mothers who bottle-feed are denied this benefit, and resume their menstrual cycles within six to eight weeks after giving birth. Other long-term health benefits for the mother include optimal metabolic profiles, reduced risk of ovarian and uterine cancers, and better mental health (Dernier 2001).

Breastfeeding provides any woman with the opportunity to breastfeed her child, regardless of her educational level, income, or other factors that may be developed as early as adolescence (Martens 2001). Therefore, from a public health perspective, it is extremely important to identify the factors responsible for breastfeeding beliefs from an early age. The ability to breastfeed is more than just having the knowledge to do so. The act of breastfeeding is influenced by a number of social, political and cultural factors. According to Azora and colleagues, the top three barriers to breastfeeding in the US include the mother’s perception of father’s attitude, uncertainty regarding quantity of breast milk, and return to work (Azora et al 2000). Other major barriers include sexualization of the breast and the stigma associated with breastfeeding in public. Such anxieties are a product of the rise of women in the workforce, the rise of feministic beliefs, and the rise of pharmaceutical companies. Together, these factors form an intricate web of events, which have constantly reinforced each other to shape the trends of breast and bottle-feeding in the United States.

Interestingly, hardly any scientific evidence exists to explain why breasts are considered erotic and are therefore sexualized. According to a 1999 conducted by Dettwyler, this is most likely a culturally learned phenomenon. When Dettwyler questioned Malian women about sexual foreplay involving the breasts, the women were either “bewildered or horrified” by the idea that a woman’s breasts could sexually arouse a man (Stuart-Macadam and Dettwyler). Sexualization of breasts appears to be a culturally and socially constructed western phenomenon. Furthermore, the stigma attached to public breastfeeding is societal, and not a product of individual self-consciousness. In 1997, California passed a legislation that “allows a mother to breastfeed her child in any location, public or private, except the private home or residence of another, where the mother and the child are otherwise authorized to be present” (National Conference of State Legislatures). This exception was made to clarify that breastfeeding is legal behavior, not public nudity.

Artificial feeding first appealed to women because it released them from purely reproductive roles and allowed the mother to return to the workforce. Should they be allowed a private space for breastfeeding or should they challenge the dominantly male environment? This raised an important question for lactating mothers in the workplace: Should they be allowed a private space for breastfeeding or should they challenge the dominantly male environment by refusing privacy? Modern notions of breastfeeding are intrinsically tied to feminism. However, the position of feminism regarding infant feeding is contradictory. Modern feminism is caught between trying to minimize gender differences, and embracing and enhancing these differences (Sen & Grom 1987). Because the act of breastfeeding is sex-specific, it challenges the feminist perspective of gender-neutal child-bearing. Some believe breastfeeding limits the mother to an object of nourishment, unable to expand herself as a person (Latvier 1998); while others believe it relieves the mother from her role as a reproductive machine. Others feel that bottle-feeding denies a woman of a uniquely feminine experience. Women who breastfeed often feel more connected to their motherhood (Bajaj, 2002). When women first arrived in the workforce, they entered on unequal footing and were forced to conform to an already established male-environment. This raised an important question for lactating mothers in the workplace: Should they be allowed a private space for breastfeeding or should they challenge the dominantly male environment by refusing privacy? Modern notions of breastfeeding are intrinsically tied to feminism. However, the position of feminism regarding infant feeding is contradictory. Modern feminism is caught between trying to minimize gender differences, and embracing and enhancing these differences (Sen & Grom 1987). Because the act of breastfeeding is sex-specific, it challenges the feminist perspective of gender-neutral child-bearing. Some believe breastfeeding limits the mother to an object of nourishment, unable to expand herself as a person (Latvier 1998); while others believe it relieves the mother from her role as a reproductive machine. Others feel that bottle-feeding denies a woman of a uniquely feminine experience. Women who breastfeed often feel more connected to their motherhood (Bajaj, 2002).
The survey variables were calculated for descriptive statistics. Each questionnaire was scored with a total possible score ranging from 17 to 85 with the higher score representing more knowledge regarding breastfeeding. The median for the score range was 63 and was used as a division between overall negative and positive attitudes. Individual questions range from a score of 1 to 5 and therefore the median was 3. Data analysis was done using JUMP.

Statistical procedures were completed at a significance level of 5%. Pearson bivariate correlations for the overall sample was performed to investigate possible relationships between factors such as intention to breastfeed, whether the participant was breastfed as a child, and whether the mother will support breastfeeding. Finally, in order to predict breastfeeding intentions, regression analysis was conducted. Predictors were picked after an examination of the bivariate correlations. The predictors that were most highly correlated with intention to breastfeed were chosen for regression analysis.

The average age of the participants was 20.29 ± 1.63 (n=27). None of the participants were married or had any children. Less than half (48.1%) reported to be in a stable union. Average annual income of family was reported as $33,214, and 66.66% of students were currently employed. 59.25% of the sample was born outside the U.S. with a majority (48.14%) of those people being born in India. The most popular languages spoken at home besides English were Hindi and Spanish.

About 85% of the women planned to have children. Of those that planned to have children, 73.9% intended to breastfeed their child, and 11.1% said they did not know whether they would breastfeed. Of the 15% who did not intend to breastfeed, some of the most common reasons provided were “disagreement with the thought of breastfeeding,” “not knowing how to,” and “saying breasts.” Of those who intended to breastfeed, about 39% intended to also feed their child foods other than breast milk. 73.7% reported being breastfed as children, and 13% did not know whether they had been breastfed or bottle-fed. Almost all women (92.5%) felt that their mother would support them if they decided to breastfeed. Only 25.9% had seen someone breastfeed in public, while only 1 in 3 had seen someone breastfed at home.

An interesting result showed that annual income significantly impacted the probability of intending to breastfeed (p<.003). The relationship between the intention to breastfeed and whether the student’s mother would support breastfeeding was marginally significant (p=.050). Language spoken at home did not have any correlation with exposure to breastfeeding publicly or at home. Participants from India and Puerto Rico were more willing to breastfeed their children as compared to those from the US and UK. There was a strong correlation between a participant’s country of origin and intention to breastfeed (r=.776). Overall, participants had significant knowledge regarding breastfeeding practices. Only 11.1% of participants felt that formula milk was better than breast milk. About 85% of the participants would support them if they decided to breastfeed. Only 25.9% had seen someone breastfeed in public, while only 1 in 3 had seen someone breastfed at home.

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The survey was used to gain demographic and quantitative information about the participants (age, ethnicity, major, annual income, marital status; intentions and attitudes toward breastfeeding; and exposure to breastfeeding, both in public and at home). Questions asked whether the participants were breastfed as a child and whether they would feed their child in the future via bottle or breast milk. In addition, the questionnaire obtained information about students’ knowledge of breastfeeding. The questionnaire consisted of 17 questions in which the participants were asked to indicate how strongly they agreed or disagreed with the statements, presented on a scale of 1 to 5.

The objective of the interviews was to collect in-depth information about attitudes, beliefs and exposure regarding breastfeeding. Because of the descriptive nature of the study, interviews were not randomized, so there was only one group of participants. Base questions were already developed, but the interview took its own course based on the data from the surveys and questionnaires.

The survey variables were calculated for descriptive statistics. Each questionnaire was scored with a total
generally do not breastfeed their kids. The most common reasons given by women who intended to breastfeed were health benefits, feeling close to their child, a natural process, and benefits to the mother. The most common reasons for bottle-feeding were convenience, concern with work, physical issues such as gaining weight and sagging breasts, and uncertainty about the process in general.

This study has several limitations. One major drawback was the relatively small sample size. Since only 27 women were interviewed, the data is likely highly skewed and not an accurate representation of the general attitudes, intentions and beliefs of students at the University of Pennsylvania. The recruiting of samples may have also skewed data. Since this was a small-scale research project, most of the participants recruited were friends and other acquaintances. There was also no racial variability, which is important in a university setting. Anonymity could not be maintained as the surveys and questionnaires were administered by e-mail and no codes were assigned to any of the participants.

Additional research regarding attitudes and intentions toward breastfeeding in college students should be conducted, as few empirical research studies in this field exist. Gender differences should also be further researched, targeting young men who have not yet had children. Previous studies have shown that male partners significantly influence whether a woman will initiate breastfeeding (Anora et. al 2000). Cross-cultural studies should also be conducted to observe cultural and social differences in the way we understand breastfeeding. Furthermore, courses and workshops to increase knowledge about breastfeeding should be introduced. Universities should encourage students to develop campus organizations facilitating child health care, and health care providers and nursing schools should target students to increase awareness about breastfeeding (Kuang et. al 2005). Breastfeeding as a topic need not be presented exclusively, but can instead be included in workshops or courses dealing with women's body image, myths surrounding women's bodies, child health, etc.

The attitudes and intentions toward breastfeeding are the result of a complex interaction of factors such as exposure in public or at home, perceived knowledge about breastfeeding, and accessibility of information regarding breastfeeding. This study shows that at the college level, the majority of women have good knowledge regarding breastfeeding practices. Attitudes and intentions toward breastfeeding are formed independently and are not correlated to whether one was breastfed as a child. Cultural differences impact the decision to breastfeed as well. Therefore, people from collectivist countries are more likely to initiate breastfeeding as compared to those from individualist countries.