

Biocultural Influences on Infant Feeding among African American Mothers

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Introduction

•For optimal infant health, The American Pediatrics Association and the World Health Organization recommend exclusive breastfeeding until 6 months of age with continued breastfeeding until at least the end of the first year of life and introduction of solid non-breast milk foods between 4 to 6 months of age.^{1,2}

•Despite these recommendations, the duration of breastfeeding and age of solid food introduction schedule have varied tremendously among different societies across the world since ancient times.³ Compared to other primates, humans' infant feeding decisions are flexible and humans cease breastfeeding much earlier.⁴

•Because human weaning is flexible, modern mothers must make decisions about infant feeding depending on influences of time, resources (both supportive and material) and cultural beliefs.⁵

Study Aim

•Studies show that mothers who are working, younger, obese and less educated tend to breastfeed for shorter durations and introduce solid foods at an earlier age.⁶⁻¹⁰ Married mothers tend to breastfeed for either a very long or a very short amount of time depending on the husband's preferences.¹¹ Cultural beliefs about breastfeeding and solid introduction also influence infant feeding behaviors.¹²

•Using a biocultural framework, we explore factors that influence infant feeding in a sample of low income first time African American mothers from central North Carolina.

Methods

•We used data from the Infant Care, Feeding, and Risk of Obesity Study, a long term study on 217 mother-infant pairs recruited from WIC clinics and followed at 3, 6, 9, 12, and 18 months post partum.

•At each visit, mothers were asked about their feeding practices, sociodemographic characteristics and beliefs about infant feeding.

•T-tests were used to determine which factors influenced duration of breastfeeding and age of solid introduction. Multivariate linear models were then used to explore the association between these characteristics and beliefs in determining breastfeeding duration and age of solid introduction.

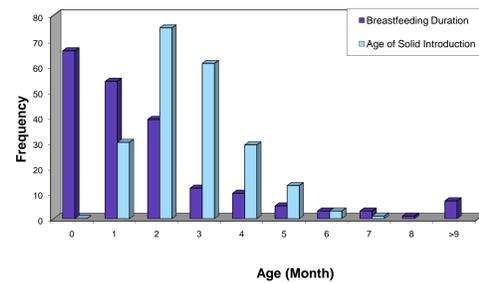
Sample Characteristics

Table 1: Maternal Sociodemographic Characteristics

	Yes (%)	No (%)
Currently working	56.9	43.1
Currently married	9.81	90.2
Currently student	38.8	61.2
Obese/overweight	71.0	29.0
Over 22 years of age	45.2	54.8
Education beyond high school	42.5	57.5

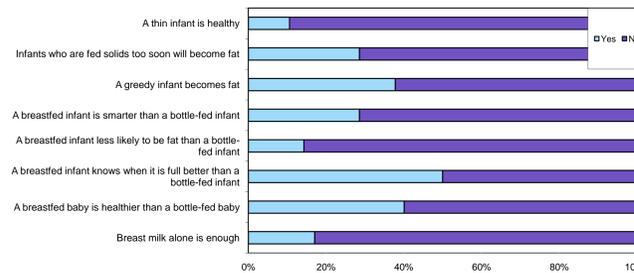
Results

Figure 1: Breastfeeding Duration and Age of Solid Introduction



Feeding Characteristics: Figure 1 shows the distribution of breastfeeding durations and ages of solid introduction in the sample population.

Figure 2: Maternal Beliefs



Feeding beliefs: Figure 2 shows the proportion of mothers in the sample who agreed or disagreed with a certain belief about infant feeding.

Figure 3: Differences in breastfeeding duration for maternal characteristics

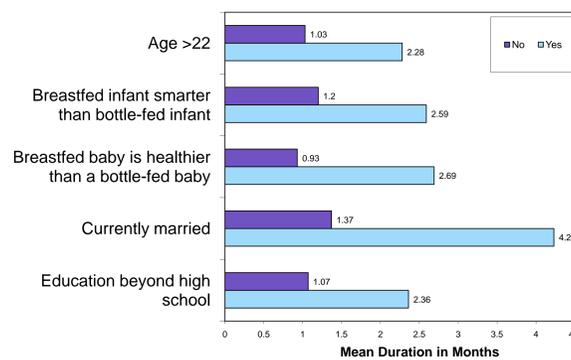
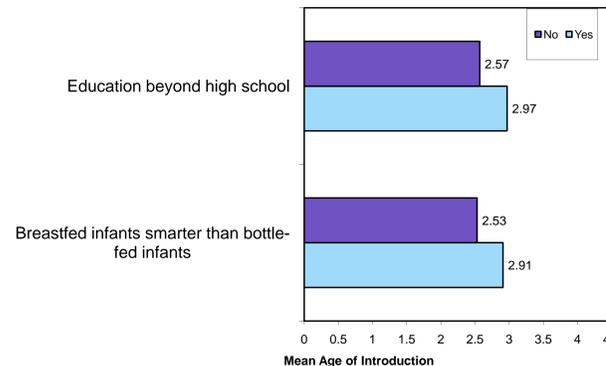


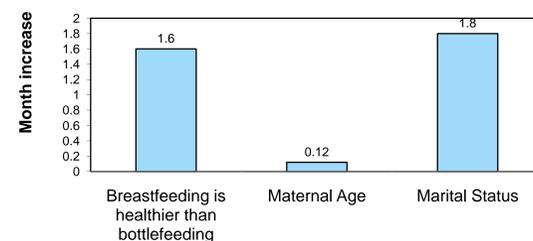
Figure 4: Differences in Age of Solid Introduction for Maternal Characteristics



Bivariate Results: Figures 3 and 4 show result of t-test analyses, comparing mean breastfeeding duration and age of solid introduction among various sociodemographic and belief characteristics. Duration of breastfeeding was more strongly influenced by maternal characteristics than was the age of solid introduction.

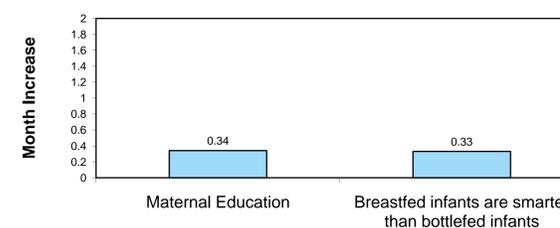
Results significant at $p < .05$

Figure 5: Coefficients of Linear Model for Breastfeeding Duration



Controlling for: belief that breastfeeding alone is enough, belief that greedy infants get fat and maternal education

Figure 6: Coefficients of Linear Model for Age of Solid Introduction



Controlling for marital status

Multivariate results: Figures 5 and 6 show the association between sociodemographic and beliefs and their effects on breastfeeding duration and age of solid introduction. The graphs show the resulting increase of breastfeeding duration/age of solid introduction when the above factors are true for the mother.



Discussion

•The majority of mothers in the sample did not breastfeed their infants for the recommended amount of time and introduced solids at an earlier age than recommended.

•The mean duration of breastfeeding was 1.57 months with a standard deviation of 2.29 months. Only 7% of the mothers breastfed their infants for six or more months. 21.2% of the mothers introduced solid foods to their infants during the recommended 4-6 month time range while 78.3% of mothers introduced solids earlier than recommended.

•Bivariate analyses show that mothers who had more than a high school education, were older than 22, married and believed that breastfeeding would make their babies healthier and smarter breastfed for a longer period of time. Mothers who had more than a high school education and believed that breastfeeding would make their infants smarter introduced solids at a later age.

•Multivariate analyses show that marital status, age and belief in the benefits of breastfeeding have a positive effect on breastfeeding duration. The positive effect of marital status is attenuated when education is included in the model, suggesting that education remains an important factor influencing breastfeeding duration for married women. The results also confirmed that mothers who were educated beyond high school and believed that breastfeeding would make their babies smarter introduced solids at a later age.

Conclusion

These findings show that maternal beliefs and education have a strong positive effect on increased breast feeding duration and later age of solid introduction. Placing these findings in an ecological framework of trade-offs between maternal needs and infant needs, low income African American mothers are more likely to make trade offs in favor of infant nutrition when they believe in the benefits of breastfeeding and later solid introduction. Education can provide mothers with both the knowledge and increased resources for optimal breastfeeding. Supportive resources such as a husband also play a smaller role in improving infant feeding.

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Acknowledgements

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