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Socioeconomic markers and association with successful initiation of breastfeeding

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Maternal breast milk is the optimal source of nutrition for newborn infants, but numerous barriers exist that reduce the rates of breastfeeding in certain groups, including employment, insufficient education about its benefits, and social norms. In low- and middle-income countries, lower rates of formal education were positively associated with breastfeeding practices. Breastfeeding can save mothers in lower socioeconomic positions the money spent on infant formula, which has helped decrease health equity gaps between rich and poor children. In contrast, breastfeeding is positively associated with socioeconomic position in high-income countries. The difference in the trend between low- and middle-income countries and high-income countries exemplifies the complexity of the impact of socioeconomic position on breastfeeding practices and the need for further understanding of the relationship between socioeconomic status and breastfeeding rates in various contexts. The goal of this study is to evaluate the relationship between maternal education level and maternal food security status and successful initiation of breastfeeding in a midwestern United States cohort. An IRB-approved study enrolled 686 mother-infant pairs at the time of delivery. Maternal highest-attained education level (N=453) and maternal household food security (N=482) was determined by validated questionnaire. Initiation of in-hospital breastfeeding was determined via chart review. Chi-Square tests evaluated the association between socioeconomic markers (college degree obtained vs no college degree obtained and food secure vs food insecure) and successful initiation of breastfeeding. A Mann-Whitney U test assessed differences in birth gestational age between breastfeeding initiation groups. A p-value of < 0.05 was considered statistically significant. Of the 686 mothers, 88.8% successfully initiated breastfeeding after delivery. Maternal college education ($\chi 2 = 12.59$, $p < 0.001$) and high maternal food security was associated with successfully initiating breastfeeding after delivery ($\chi 2 = 23.51$, $p < 0.001$). Successful initiation of breastfeeding was not associated with preterm birth or NICU admission; however, there was a significant difference in corrected gestational age between mothers who initiated breastfeeding successfully compared to mothers who did not (39.14 weeks vs. 38.71 weeks, $p = 0.010$). Our results suggest that lower maternal educational attainment and low food security are disproportionately associated with unsuccessful breastfeeding initiation. This may indicate barriers to obtaining the many benefits of breastfeeding for families in lower socioeconomic positions. Future studies should investigate other socioeconomic markers, such as household income or insurance type, and adjust for relevant confounders such as infant gestational age, maternal age, previous breastfeeding experience, and maternal substance use.