Effects of acculturation on Somali women's birth outcomes: Implications for healthcare policy

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Abstract: Foreign birth is largely protective against infant preterm birth as noted by the "Latina paradox". As women acculturate to American lifestyles, this protective effect dissipates. This study investigated the effect of acculturation on Somali refugee women's birth outcomes. Results indicated that while individual factors identified to reflect acculturation changed significantly over time, changes in birth outcomes in Somali women were not attributable to these factors.

Methods. Data were extracted from medical records of 584 Somali women delivering infants at a Minnesota hospital between 1993 and 2006. Independent variables included maternal factors, fertility history, pregnancy complications, health behaviors, prenatal care history and acculturation. Dependent variables were infant birthweight and gestational age. Chi-square tests, t-tests and ANOVA determined changes in like variables between two time periods (1993-1999 and 2000-2006). Bivariate analyses measured relationships between independent and dependent variables for the total sample and each time period. Structural equation modeling (SEM) then determined the fit between factors hypothesized to reflect acculturation (structural model) and the data (measurement model).

Results. Significant increases noted over time include substance use/exposure (chi-square = 4.83, p = .0280), body mass index (chi-square = 4.19, p = .0406), hemoglobin levels (t = 6.96, p = .0086), gestational diabetes (chi-square = 6.0, p = .0140) and preterm birth (chi-square = 3.87, p = .0491). A significant reduction in interpreter use was noted between groups with time (chi-square = 9.47, p = .0021). Bivariate analyses showed significance between increased adequacy of prenatal care utilization and reductions in both preterm birth and gestational age. SEM results indicated a poor fit between the hypothesized model and existing data. A post hoc model limited to variables with significant bivariate analysis results indicated a moderate to good fit between the new model and available data (CFI = .985, NFI = .979, RMSEA = .067). A comparison between time periods using the post hoc model showed no differences in the cumulative factors reflecting acculturation (CFI = .996, NFI = .909, RMSEA = .016).

Conclusion. Individual factors shown to reflect acculturation in foreign-born women have increased significantly in Somali women over time. While preterm births among Somali women were shown to increase significantly, the factors identified to reflect acculturation in this study were not significantly related to this change. However, the increase in maternal obesity, gestational diabetes and preterm birth are of concern among this population.

Recommendations. Clinicians should prospectively collect data hypothesized to reflect acculturation associated with preterm birth and low birthweight to identify foreign-born women at increased risk of poor birth outcomes. Policy makers should support and clinicians should implement programs to provide prenatal education for Somali women aimed at reducing risk factors shown to compromise birth outcomes.

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Classification: 0326: Cultural anthropology; 0573: Public health; 0631: Ethnic studies

Identifier / keyword: Health and environmental sciences, Social sciences, Acculturation, Refugee health, Women's health, Preterm birth, Maternal and child health, Somali