

**Adolescent Motherhood Across the Generations: The Effect of Race and Neighborhood Income**  
**Alexandra J Edwards MD, Kristin M Rankin PhD, Carla DeSisto MPH,**  
**James W Collins Jr MD MPH**

**BACKGROUND:** Adolescent pregnancy is a public health priority on Healthy People 2020. African American women have significantly higher rates of adolescent pregnancy and motherhood compared to their peers, even when controlling for geographic variation. The two most well studied risk factors for adolescent motherhood in women are poverty and having an adolescent mother. Early childbearing is associated with negative economic and social consequences for both young mothers and their children, however when stratifying by race the outcomes are conflicting. The interrelated nature of prior poverty and subsequent economic potential for intergenerational adolescent mothers is complex, and current longitudinal literature is inadequately racially diverse to examine this relationship in African American women.

**OBJECTIVES:** To determine the extent to which lifelong neighborhood income modifies adolescent childbearing across generations in non-Latina White and African-American women.

**DESIGN/METHOD:** Chicago-born non-Latina White (N=11,047) and African American (N=10,802) mothers who lived in Cook County when they gave birth were studied using the Illinois transgenerational dataset with appended US census income information of infants (1989–1991) and their mothers (1956–1976). Data were stratified by maternal residence in higher or lower income neighborhoods at both the time of the mothers' birth and their infants' birth, thereby estimating maternal lifelong economic context through lifelong neighborhood income. We computed race-specific adolescent birth rates according to maternal age – dividing subjects into 3 cohorts (<18, 18-19 and >19) -- and lifelong neighborhood income. We calculated Mantel-Haenszel chi-square tests of linear trend from contingency tables to evaluate the relationship between generational transfer of early childbearing and economic status.

**RESULTS:** Adolescent births occurred at a rate of 8.3% and 9.5% for White women and 30.6% and 52.9% for African American women in Generation 1 and Generation 2 respectively. Lifelong neighborhood status for African American women was 57.2% low-income and 7.5% high-income. Lifelong neighborhood status for White women was 4.4% low-income and 66.6% high-income. The relative risk of a subject giving birth before the age of 20 was 5.4 for White subjects whose mothers were under age 18 at birth compared to those whose mother was over age 20. The relative risk of a subject giving birth before the age of 20 was 1.6 for African American subjects whose mother were under age 18 at birth compared to those whose mothers were over 20. Lifelong low-income residence was associated with a relative risk of adolescent pregnancy by 2.8 for White women, but did not increase the risk for African American women. Mothers who showed upward mobility, defined as early life residence in a low-income and later life residence in high-income neighborhood, was associated with relative risk of adolescent motherhood of 0.2 in White women and 0.5 in African American women. Downward mobility, defined as early life residence in a high-income neighborhood and later life residence in low-income neighborhoods was associated with relative risk of adolescent motherhood of 4.2 for White women, and 1.4 in African American women. Lifelong neighborhood economic environment was not a significant effect modifier of the relationship between age at birth in Generation 1 and adolescent birth in Generation 2.

**CONCLUSION:** The prevalence of adolescent childbearing and lifelong residence in low-income neighborhoods is greater among African American mothers and their daughters, compared to non-Latina White peers, which is concordant with current national statistics. Maternal adolescent pregnancy is a risk factor for daughter adolescent pregnancy independent of neighborhood income. The magnitude of this association is significantly higher for non-Latina White than for African American women. Lifelong and downward mobility in low-income neighborhoods are risk factors for early childbearing independent of age among non-Latina White mothers. Downward mobility to low-income neighborhoods is a risk factor for teen pregnancy independent of age among African American mothers. In both races, upward mobility, compared to lifelong high-income, appears to be protective against teen childbearing.