

Pregnancy Outcomes in a Cohort of Black and White Adolescents

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Introduction

There is a limited research on the relationship between race, adolescent pregnancy, and weight retention. This study aims to assess the discrepancies that exist across race in adolescent post-partum girls in the NGHS cohort, comparing various pregnancy outcomes in Black and white girls.

Hypothesis

We hypothesized that Black females in this cohort would have higher oral glucose levels, give birth to infants with lower birth weight, and have higher levels of post-partum depression than their white counterparts.

Methods

All analyses were conducted using SAS leveraging data from Black and white women from the NHLBI Growth and Health Study across all 3 sites.

Results

The cohort consists of 357 girls who gave birth before age 20, 75.1% Black (B) and 24.9% White (W). The average age of delivery was 17.4 for B girls and 17.9 for W girls (P-value 0.008). 63% of B girls came from households with a parental income < \$20,000, compared to 40.3% of W girls (P-value 0.0006). In the subset of 114 girls with Glucose Loading Test (GLT) results, there is significant difference in the relationship between BMI percent pre-pregnancy and GLT results by race (P-value 0.009). In white girls, GLT results increase with greater BMI; in Black girls this relationship is negative. This persists after adjusting for gestational weight gain and is not confounded by SES (parental education, parental income, number of parents in household, mom age at delivery). Birth weight also differs by race, with children born to white moms being heavier by 151 grams \pm 70 grams (P-value 0.032). This difference remains after adjusting for gestational weight gain, pre-pregnancy BMI, sex of baby, gestational age, and SES. Finally, there is a significant difference in depression by race, with average CES-D of 16.2 in B girls (depression threshold = 16) and 13.5 in W girls (P-value 0.04). However, it is unclear whether these differences already existed prior to pregnancy.

Conclusions

Our analyses show that there are differences in birth weight and depression across race in adolescent post-partum girls in the NGHS cohort. There is also an interaction between BMI and GLT across race. These results suggest that further analysis is warranted.

Acknowledgements

This study was supported in part by NIH grant T35 DK060444.