ABSTRACT

This dissertation consists of three studies that were undertaken to better understand 1) the role of gestational weight gain (GWG) during early pregnancy on subsequent blood pressure changes and the risk of pregnancy-induced hypertension (PIH), 2) the causal effect of GWG in both early and mid-late pregnancy on the subtypes of preterm births, and 3) the impact of personal capital on the use of perinatal health services (i.e., prenatal care use and preconception care counseling). The first two studies were based on the data from the 1988 National Maternal and Infant Health Survey and the third study employed the data from the 2007 and 2010 Los Angeles Mommy and Baby Survey. In the first study, the latent class growth model revealed four trajectories of GWG in early pregnancy. Then using linear mix model as well as generalized equation method, we found women with high growth trajectory of GWG during early pregnancy had higher blood pressure and in higher risk of PIH. In the second study, using marginal structure models we found that among women who had normal weight before pregnancy, both inadequate and excessive GWGs in mid-late pregnancy were associated the increased odds of spontaneous preterm births, while excessive GWG in mid-late pregnancy increased the odds of medically indicated preterm births. Among women who were overweight or obese before pregnancy, those with inadequate weight gain in early pregnancy were protected from medically indicated preterm births. In the third study, using multilevel analysis, we found that higher personal capital was associated with higher odds of receiving preconception counseling among Whites and Asians and was negatively associated with late prenatal care initiation among Hispanics, Blacks and Asians. Sub-components such as internal resources, partner support, social support and neighborhood supported were associated differently with the utilization of perinatal health services among racial groups. In conclusion, appropriate weight gain in pregnancy holds
promise to reduce the risks of PIH and preterm births and to increase personal capital can be an effective strategy to improve women’s use of perinatal health services.