Asian Americans comprise a large and growing portion of the U.S. population, and Korean Americans constitute the fifth largest ethnic group of Asians in the United States (Census 2010). The size of the Korean American population has increased dramatically from 70,000 in 1970 to 1,076,872 in 2010. Nevertheless, there are few studies of Korean Americans and their patterns of prenatal care use and birth outcomes. Studying this is important because of their growing numbers and the impact it can have the health of the nation, as well as to design policy that can inform the health of other populations.

This study examines: 1) which subgroups of Korean American are more disadvantaged, by examining the effect of maternal race and nativity and educational attainment on birth outcomes; 2) how the “healthy migrant effect,” which explains the association of maternal foreign-born status and favorable birth outcomes, and “epidemiological paradox,” which explains the association of low socioeconomic status and favorable birth outcomes are applied to Korean Americans; and 3) what are the protective factors and risk factors of birth outcomes that could be applied to the general population in the U.S.

Statistical analysis was performed on data from the Linked Birth and Infant Death Cohort Files for 2000-2004 compiled by the National Center for Health Statistics. The study sample includes 3,168 U.S.-born Korean Americans, 46,504 foreign-born Korean Americans, and 49,672 matched non-Hispanic whites using the Propensity Score Matching method. Binary logit analysis for low birthweight and preterm birth and multinomial logit analysis for three categories of birthweight are employed.

The results of multivariate models controlling for maternal demographic, obstetric, and prenatal care characteristics demonstrate the significant effect of maternal race and nativity and educational attainment on low birthweight, preterm birth, and birthweight. Being a foreign-born Korean American significantly decreased the odds of low birthweight (OR=0.1, p<0.005), preterm birth (OR=0.2, p<0.0005), and prematurity relative to normal birth (OR=0.004,p<0.0001). Thus, healthy migrant effect is present in low birthweight, preterm birth, and prematurity. For maternal educational attainment, the different effect between U.S.-born and foreign-born Korean Americans was found only in preterm birth. Maternal college and higher education significantly decreased the odds of preterm birth for both U.S.-born Korean Americans (OR=0.75, p<0.0001) and foreign-born Korean Americans (OR=0.88, p<0.05). Some maternal college education significantly decreased the odds of low birthweight (OR=0.82, p<0.005), preterm birth (OR=0.84, p<0.0005), prematurity (OR=0.83, p<0.05) and intra-uterine growth restriction (IUGR) relative to normal birth (OR=0.81, p<0.05). Also, maternal college and higher education significantly decreased the odds of low birthweight (OR=0.78, p<0.0005), prematurity (OR=0.79, p<0.05) and IUGR relative to normal birth (OR=0.75, p<0.05). Therefore, maternal educational attainment turned out to be a significant protective factor, and epidemiological paradox is not present for all of birth outcomes among Korean Americans.

The multivariate models also show other significant protective factors and risk factors of birth
outcomes. Other significant protective factors that decrease the risk of low birthweight, preterm birth, prematurity, and IUGR include high parity and first birth and more prenatal care visits for non-Hispanic whites (for low birthweight), parental race concordance, start of prenatal care at 2\textsuperscript{nd} and 3\textsuperscript{rd} trimester, more prenatal care visits, first birth for foreign-born Korean Americans (for preterm birth), first birth for U.S.-born Korean Americans and more prenatal visits, and inadequate and intermediate prenatal care for non-Hispanic whites (for prematurity), and teenage birth and intermediate prenatal care for foreign-born Korean Americans (for IUGR).

The significant risk factors that increase the risk of low birthweight, preterm birth, prematurity, and IUGR include maternal age of 35 and more, unmarried marital status, high parity, first birth, C—section delivery, medical risks, previous loss (for low birthweight and preterm birth), paternal age of 35 and more, high parity, first birth (not for U.S.-born Korean Americans), C-section delivery, medical risks, previous loss, more prenatal visits for Korean Americans, and inadequate and intermediate prenatal care for Korean Americans (for prematurity), and age of 35 and more, high parity, first birth, C—section delivery, medical risks, smoking during pregnancy, inadequate prenatal care, and intermediate prenatal care for U.S.-born Korean Americans and non-Hispanic whites (for IUGR).

These findings have policy implications. The policies aimed at promoting better birth outcomes of Korean Americans can have implications not only for U.S.-born, undereducated, or underserved Korean Americans, but also for other populations who fit these characteristics. Policies aimed at enhancing better birth outcomes of all populations in the U.S. should focus on protective and risk factors of birth outcomes found among Korean Americans and non-Hispanic whites in this study.

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