Healthy migrant effect or artefact? The impact of the gestational age estimate method on birth outcome disparities between migrants and Swedes

S Jua´rez
CHESS, Stockholm, Sweden
Contact: sol.juarez@ches.su.se

Prior studies have shown that the offspring of migrant women have equal or lower risks of preterm births compared to those of natives (healthy migrant paradox). We evaluate whether this advantage is consistent across methods of estimation of the gestational age. This population-based register study includes all singleton live births occurred in Sweden (1992-2012) with information on gestational age estimated through the last menstruation period (LMP), ultrasound (n = 1,317,265). Using multinominal regression, we compare gestational age outcomes (preterm, moderate and late preterm, post-term) between migrants and natives comparing different gestational age methods. We performed sensitivity analyses using a subsample of 718,191 uncomplicated pregnancies. Foreign-born mothers showed lower odd ratios of delivering preterm (OR: 0.98 [95% CI: 0.98, 1.01]) and late preterm (OR: 0.95 [95% CI: 0.92, 0.98]) using ultrasound while higher risk when LMP was used instead (respectively, OR: 1.10 [95% CI: 1.07, 1.14] and OR: 1.09 [95% CI: 1.06, 1.13]). These differences do not equally affect all migrant groups. The largest differences are found among women coming from Africa and, to a lesser extent, those from Eastern Europe & Russia, and the Middle East. Disparities in gestational age outcomes by mother’s origin strongly depend on the method used to estimate gestational age. While the health advantage is partially confirmed in almost all categories of gestational age using ultrasound (except for early preterm), foreign-born mothers show worse outcomes when LMP is used instead. This finding points out that the information used might have a sensitive impact on the comparison between migrants and natives across countries and time. Further studies should disentangle which method of estimation captures health differences among migrants better in order to improve maternal and child health surveillance.