Area deprivation and Francophone-Anglophone Disparities in Fetal Growth, Montreal

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Introduction: Fetal growth is often used to measure health of populations. Cultural-linguistic differences in fetal growth have reversed over recent decades in Montréal, a large Canadian metropolitan centre that is linguistically diverse. In the past, trends in fetal growth were more favourable for Anglophones. Today, trends have reversed and fetal growth is not as favourable for Anglophones compared with Francophones. We sought to determine whether neighbourhood disadvantage at time of birth was related to the reversal in these disparities over time.

Methods: Data included live singleton term births (≥37 weeks of gestation) to Francophone and Anglophone mothers in residing metropolitan Montréal for 1989-2008 (*N*=569,182 births). We used maternal mother tongue to identify Francophone and Anglophone language status. We measured neighbourhood disadvantage at time of birth using a composite score of local-area census socioeconomic data. Poor fetal growth was operationalized as small-for-gestational-age (SGA) birth, defined as birth weight below the 10th percentile for sex and gestational age per national Canadian norms. We examined time trends in the relationship between neighbourhood disadvantage and SGA birth for Anglophones and Francophones separately over four periods from 1989-2008.

Results: The prevalence of SGA birth declined monotonically for Francophones from 12.1% in 1989-1993 to 7.9% in 2004-2008. This decrease occurred across all levels of neighbourhood disadvantage. The prevalence of SGA birth also declined for Anglophones, but an initial decrease was followed by an increase from 7.5% in 1999-2003 to 8.4% in 2004-2008. The prevalence of SGA birth in Anglophones increased in both the most and least disadvantaged neighbourhoods.

Discussion: The recent reversal in Francophone-Anglophone inequality coincides with an increase of SGA birth prevalence among Anglophones in disadvantaged as well as advantaged neighbourhoods of Montréal. These results do not imply that neighbourhood disadvantage is causally related to poor fetal growth for either linguistic group. Rather, the results suggest that the Anglophone minority in Montréal is increasingly at risk of poor fetal growth, and that Anglophones are an emerging vulnerable minority language group.

More detailed information on this study is available in: Auger N., Park A. L., Daniel M. (2013). Contribution of local area deprivation to cultural-linguistic inequalities in fetal growth restriction: Trends over time in a Canadian metropolitan centre, *Health & Place*, *22*, 38-47. doi:10.1016/j.healthplace.2013.03.003

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