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Early childhood economic disadvantage and the health of Hispanic children

Kammi K. Schmeer*

The Ohio State University, Department of Sociology, 238 Townshend Hall, 1885 Neil Avenue, Columbus, OH 43210-1222, United States

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ABSTRACT

This research provides a longitudinal view of early childhood economic deprivation and its associations with health among young Hispanic children born in the United States. Of additional interest is whether economic deprivation is associated with child health similarly across all Hispanic children or whether associations differ by maternal nativity or country of origin. Fragile Families and Child Wellbeing data and multinomial logistic regression are used to estimate the effects of total years in poverty, material hardship, and lack of health insurance on Hispanic children's health status at age 5 and change in health status between ages 1 and 5. Results show that multiple measures of early childhood economic deprivation have additive negative associations with Hispanic child health, and that living more years in poverty is associated with declining health status among young Hispanic children. Interaction effects indicate that early childhood poverty has stronger associations with lower age 5 health status and declining health between ages 1 and 5 for children with foreign-born Hispanic mothers than for those with native-born Hispanic mothers. No differences were found in the associations between economic deprivation and child health by maternal country of origin. These results suggest an important role of economic resources for protecting Hispanic child health, and that poor Hispanic children with immigrant mothers may be at particularly high risk of developing health problems as they move out of infancy and into early childhood.

Introduction

Currently, 23% of U.S. children are Hispanic and by 2050 the Hispanic child population is expected to equal the white child population (Federal Interagency Forum on Child and Family Statistics, 2010). Children in our largest ethnic minority group are also some of the most disadvantaged in the country. Recent statistics indicate that Hispanic children are more likely than white or African American children to have poor physical and oral health status and have higher risks of obesity and asthma (U.S. Department of Health and Human Services, 2009). The childhood health disadvantage of Hispanics emerges following their apparent health advantage during infancy, when Hispanic infants have lower mortality (Hummer, Powers, Pullum, Gossman, & Frisbie, 2007), higher birth weight, and are more likely to be breastfed than infants in other racial/ethnic groups (U.S. Department of Health and Human Services, 2009).

Economic deprivation may play a key role in the emerging health disadvantage of Hispanic children. Hispanics (along with African Americans) are more likely to live at less than 50% of the poverty line than other racial groups (Woolf, Johnson, & Geiger, 2006). When immigrant status is considered, Hispanic children with foreign-born parents are least likely to have health insurance (Hamilton, Hummer, You, & Padilla, 2006), are more at risk for hunger (Kersey, Geppert, & Cutts, 2007), and are more likely to live in poverty than those with U.S.-born parents. Of further concern is the lack of social support (including government services) and undocumented status of many immigrant parents, which may limit their ability to protect their children's health during difficult economic periods.

However, research to date has focused on the immigrant health advantage among Hispanics, suggesting that children with foreign-born Hispanic parents (and parents with less time in the U.S.) may have fewer health risks than those with U.S.-born Hispanic parents. Three main explanations have been positive for the Hispanic immigrant health paradox: (1) that immigrants are selectively healthier than their U.S. counterparts (i.e., the healthiest individuals migrate); (2) that there is selective reporting or out migration of the least healthy Hispanics (a data quality issue); and, (3) that immigrants' cultural norms and behaviors protect their health, but this effect decreases with time in the U.S. (an acculturation argument) (Franzini, Ribble, & Keddie, 2001). Although there has been some support for each proposition, the cultural perspective is often the main theory behind differences in foreign-born and U.S.-born Hispanic mothers' birth outcomes and infant health (Hunt, Schneider, & Comer, 2004). This theory suggests that Hispanic

* Tel.: +1 614 247 8110.
E-mail address: schmeer.1@osu.edu.

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cultural norms of strong social and familial ties and maternal health behaviors, protect the health of Hispanic infants and children. Hispanic mothers born in the U.S., although sharing the Latino heritage, may be less connected to these cultural protective factors than Hispanic mothers born in Latin America. Further, the acculturation perspective suggests that the longer mothers (and their children) live in the U.S. and are exposed to U.S. norms and behaviors, the higher the risk of losing protective and gaining risky behaviors with implications for worsening health status (Abraido-Lanza, Chao, & Florez, 2005; Clark & Hofsess, 1998).

Empirical studies supporting these ideas have found that foreign-born Hispanic mothers have healthier behaviors (less prenatal smoking, higher birth weight, longer breastfeeding, and more immunizations) and provide better diets for their children (Flores & Brotanek, 2005; Lora, Giraud, Davy, & Driskell, 2006; Mazur, Marquis, & Jensen, 2003) despite their low socioeconomic position. Accounting for potential data quality issues debated in past research (Palloni & Morenoff, 2001), there is evidence that infants born to Hispanic (particularly Mexican) mothers have lower mortality rates in the first few weeks after birth (when return migration is unlikely) than those born to non-Hispanic white mothers and U.S.-born Mexican mothers (Hummer et al., 2007). Selective return migration may account for some of these noted health differentials, particularly in periods of the life course beyond infancy and in relation to findings of negative acculturation over time (Ceballos & Palloni, 2010).

The Hispanic health paradox among children has been less studied than among infants. One recent study found that five-year old children with foreign-born Mexican mothers did not have significantly different health than children with non-Hispanic white mothers (Padilla, Hamilton, & Hummer, 2009). Another study indicated that immigrant children with foreign-born mothers had worse heath status than those with U.S.-born mothers, net of other factors (Chilton et al., 2009). The most recent evidence suggested that differences in the prevalence of poor child health conditions by child immigrant generation depended on the health condition studied (Hamilton, Cardoso, Hummer, & Padilla, 2011). Thus, although Hispanic health research posits that Hispanic children born to immigrant mothers may have a health advantage in infancy over those with U.S.-born Hispanic mothers, the limited research to date suggests that this advantage may be less prevalent as children move beyond infancy.

In addition to being limited by a focus on infants, the Hispanic health literature has been criticized for the lack of direct attention to the impact of socioeconomic status (SES) and other structural factors on child health (Hunt et al., 2004). Increased risk of poor health as children age may be explained by the negative acculturation process, but to do so requires taking into account the economic experiences of immigrant families over time. Further, although SES measures are used as controls in models of Hispanic health, there has been little work aimed at understanding how economic deprivation may affect the health of Hispanic children differently for those with foreign-born and U.S.-born mothers.

To address these gaps in the literature, this study assesses how economic deprivation in the first 5 years of life is associated with Hispanic children's health status at age 5 and change in health status between ages 1 and 5. Importantly, this study includes measures of material deprivation and access to health insurance, in addition to poverty status, to provide a more complete assessment of the types of economic deprivation that may impact Hispanic child well-being (Aber, Bennett, Conley, & Li, 1997). Of particular interest in this study is how mother's nativity moderates these effects. If children's health is protected from their low structural position in immigrant compared with native U.S. Hispanic families (due to cultural factors or selectivity), we would expect to see less of an impact of economic deprivation on the health of children with foreign-born compared with U.S.-born Hispanic mothers. If, however, Hispanic children's health cannot be buffered from the higher levels of stress and related disadvantages in immigrant families by cultural advantages, economic deprivation may have stronger negative effects on the health of Hispanic children with foreign-born mothers compared to those with U.S.-born mothers.

These are important research questions to address to provide a better understanding of the social determinants of child health in a large and diverse ethnic group in the U.S. The findings also inform broader research on child health among immigrants, and may motivate further research in other settings where immigrant child health develops within social and immigrant policy contexts distinct from those in the U.S.

Methods

Data and sample

The study data come from the Fragile Families and Child Well-being Study, a longitudinal study of almost 5000 children born in large U.S. cities in 1998–2000. Since the study uses publically-available and de-identified data it was exempt from ethics board review. Data were collected through in-person interviews with mothers in the hospital immediately after the focal children's birth, and through telephone interviews when the children were 1, 3, and 5 years old (see Reichman, Teitler, Garfinkel, & McLanahan, 2001 for a detailed discussion). The study sample consists of children born to Hispanic mothers ($n = 1342$), of which 258 were missing age 5 health status and 353 were missing either age 1 or age 5 health status (needed for the change models). An additional 285 cases were missing independent variables. Neither age 1 nor age 5 child health status differed significantly between those with missing data and those with full independent variable data. To avoid dropping these additional cases due missing independent variable information, I use multiple imputation (Allison, 2008). The results did not differ between models run with imputed and non-imputed data.

The final analytical sample is 1084 for the age 5 models and 989 for the change between age 1 and age 5 models. Of the initial baseline sample of children born to Hispanic mothers, those excluded from the sample due to missing health data were more likely to be poor at birth and were more likely to have foreign-born mothers. There was no difference in health at birth (low birth weight) between those who left the survey and those who remained. Children with foreign-born mothers who attritted between age 1 and age 5 ($n = 95$) had a slightly higher mean age 1 health status (higher = worse health) than those who remained in the sample through age 5 (there was no difference for children with U.S.-born mothers). This suggests a possible underestimation of the level of poor health among children with foreign-born Hispanic mothers, although the difference was small (mean 1.98 vs 1.81) and just reached significance at $p < 0.04$. There was no statistical difference between the missing cases and the analytical sample by mother's country of origin (Mexican vs. non-Mexican).

Key measures

The dependent variable utilized in this study is maternal-rated child health (MRCH) status. This measure is comparable to the self-rated health measure asked of adults, which has been used across multiple social and health surveys as a reliable measure of overall health linked with mortality and multiple diseases (DeSalvo et al, 2006; Idler & Benyamini, 1997; Idler & Kasl, 1995). MRCH has been utilized extensively in social science and health research, and