

Parental Acculturation and Child Obesity

Extended Abstract

Hiromi Ishizawa
Antwan Jones

Department of Sociology, The George Washington University

Introduction

Researchers from various disciplines repeatedly find that immigrants are healthier than their native-born counterparts. However, their health advantage weakens as their length of residence in the U.S. becomes longer (Antecol and Bedard 2006; Cho, Frisbie, and Rogers 2004; Hao and Kim 2009; Oh et al. 2011). Past studies have offered several explanations for this healthy immigrant effect, including the theory of unhealthy acculturation. While the operationalization of acculturation is much-debated (Abraido-Lanza et al, 2006; Broesch and Hadley 2012), acculturation is found to be positively associated with poor health and health-deteriorating behavior among immigrant adults (Creighton et al. 2012; Lopez-Gonzalez, Aravena, and Hummer 2005, cf. Ra, Cho, and Hummer 2013).

Among children, however, the support for this theory is mixed. Overall, past studies suggest that not all children of immigrants enjoy a health advantage. For example, while Gordon-Larsen et al. (2003) found that foreign-born Latino children are less likely to engage in overweight-related behaviors compared to native-born counterparts, they did not find differences in rates of being overweight between foreign-born and native-born Mexican children. Also, a study showed the higher levels of physical inactivity and lower levels of participation in sports among foreign-born children compared to native-born children (Singh et al. 2008). However, while much of the past studies on children's health included some characteristics of parents, such as nativity, English proficiency, income, and educational attainment, few studies have examined how the relationship between parental acculturation and child health differs or conditioned by parental socioeconomic status with one exception. Van Hook and Balistreri (2007) found that the association between overweight and immigrant generational status varies by family socioeconomic status and economic development of country of origin. Further, recent research indicates that acculturation is not always positively associated with poor health, particularly among high-SES Korean immigrant adults (Ra, Cho, and Hummer 2013). These findings speak

to segmented assimilation theory (Portes and Zhou 1993), which argues that immigrant incorporation pathways vary by social and economic resources and the context of reception. We therefore, extend the literature by examining how the association between parental acculturation and health of children varies by parental socioeconomic status for various race/ethnic immigrant generational status groups. While there are signs of a leveling off of the obesity rate in the United States (Levi et al. 2013), obesity still remains high: 17 percent of children aged 2-19 are obese (Ogden and Carroll 2010). Moreover, obesity among children is not uniformly distributed across race/ethnic groups. In particular, the obesity rate has increased among black and Latino children during the past two decades. For instance, obesity increased from 14.1 to 26.8 percent among Mexican-American boys and from 13.4 to 17.4 percent among Mexican-American girls between 1988 and 2007 (Ogden and Carroll 2010). Reflecting on the high volume of immigration from Latin American and Asian countries, children of these groups are the fastest growing segments of the US population, thus their health will have a significant impact on the nation as a whole.

Data and Methods

This research relies on data from The National Longitudinal Study of Adolescent Health (Add Health 2013). The public-use data set for Waves I and II contain a nationally representative sample of adolescents in grades 7-12 in 1994 (Wave 1) and 1996 (Wave II). Add Health is the most comprehensive longitudinal study of adolescents to date, and it contains a wealth of information from children as well as parents and other siblings. In Wave I, 6,504 respondents are included in the public-use file, and 4,834 of those respondents appear in Wave II. Using weighted logistic regression, we will test the mediating and moderating effects of parental SES on the relationship between parental acculturation and adolescent obesity risk, and we assess how these effects differ based on racial/ethnic group.

The dependent measure is child *overweight*. Body mass index (BMI) is calculated for every adolescent and is standardized to that child's age and gender. Overweight is defined as being at the 85th percentile of BMI, so children who have a standardized z-score of at least 1.036 are considered overweight.

Parental acculturation is measured by two variables: the generational status (1st, 1.5, and 2nd or higher) and linguistic acculturation (what language the parents speak at home, at work, and with friends). Socioeconomic indicators for the parents include *educational level*, *family income* (logged), *currently employed* and *housing tenure*. Parental characteristics associated with health

include *having insurance, self-rated health, parental BMI, and having a medical condition* (defined as having diabetes, cardiovascular illness or chronic depression). Demographic measures related to the parent include *age, gender, marital status, and household size*.

Child acculturation is measured by two variables similar to the parental measures: generational status (1st, 1.5, 2nd and 3rd or higher) and linguistic acculturation (language spoken during interview). Child characteristics associated with health include scales assessing *physical activity, sedentary behavior and healthy eating*. In addition, child demographic controls include *race/ethnicity, gender and age*.

Expected Findings

Both researchers on this project have worked extensively with the data. Thus, based on our knowledge of the data and the literature reviewed, we expect to find the association between parental acculturation and child overweight will vary by the levels of socioeconomic status. Moreover, we expect that this relationship between acculturation, SES and child overweight will differ based on the race/ethnicity and immigrant generational status of the child. Lastly, we will perform subgroup analyses across pan-ethnic groups to assess how these measures will predict obesity within all racial and ethnic groups.

References

- Abraido-Lanza, Ana F., Adria N. Ambrister, Karen R. Florez, and Alejandra N. Aguirre. 2006. "Toward a Theory-Driven Model of Acculturation in Public Health Research." *American Journal of Public Health* 96(8): 1342-1346.
- Add Health. 2013. "About Add Health". Retrieved September 27, 2013 from <http://www.cpc.unc.edu/projects/addhealth/about>.
- Antecol, Heather and Kelly Bedard. 2006. "Unhealthy Assimilation: Why Do Immigrants Converge to American Health Status Levels?" *Demography* 43(2): 337-360.
- Broesch, James and Crais Hadley. 2012. "Putting Culture Back Into Acculturation: Identifying and Overcoming Gaps in the Definition and Measurement of Acculturation." *The Social Science Journal* 49: 375-385.
- Cho, Youngtae, W. Parker Frisbie, and Richard G. Rogers. 2004. "Nativity, Duration of Residence, and the Health of Hispanic Adults in the United States." *International Migration Review* 38(1): 184-211.
- Creighton, Mathew J., Noreen Goldman, Ann R. Pebley, and Chang Y. Chung. 2012. "Durational and Generational Differences in Mexican Immigrant Obesity: Is Acculturation the Explanation?" *Social Science & Medicine* 75: 300-310.
- Gordon-Larsen, Penny, Kathleen Mullan Harris, Dianne S. Ward, and Barry M. Popkin. 2003. "Acculturation and Overweight-related Behaviors among Hispanic Immigrants to the US: The National Longitudinal Study of Adolescent Health." *Social Science & Medicine* 57: 2023-2034.

- Hao, Lingxin and Julie J. H. Kim. 2009. "Immigration and the American Obesity Epidemic" *International Migration Review* 43(2): 237-262.
- Jackson, Margot, Sara McLanahan, and Kathleen Kiernan. 2012. "Nativity Differences in Mothers' Health Behaviors: A Cross-National and Longitudinal Lens." *The ANNALS of the American Academy of Political and Social Science* 643: 192-218.
- Levi, Jeffrey, Laura M. Segal, Kathryn Thomas, Rebecca St. Laurent, Albert Lang, Jack Rayburn. 2013. *F as in Fat: How Obesity Threatens America's Future*. Washington, DC: Trust for America's Health.
- Lopez-Gonzalez, Larena, Veronica C. Arabena, and Robert A. Hummer. 2005. "Immigrant Acculturation, Gender and Health Behavior: A Research Note." *Social Forces* 84(7): 581-593.
- Ogden, Cynthia and Margaret Carroll. 2010. "Prevalence of Obesity Among Children and Adolescents: United States, Trends 1963–1965 Through 2007–2008." Retrieved September 27, 2013 from http://www.cdc.gov/nchs/data/hestat/obesity_child_07_08/obesity_child_07_08.pdf.
- Oh, April, Kevin Dodd, Rachel Ballard-Barbash, Frank M. Perna, and David Barrigan. 2011. "Language Use and Adherence to Multiple Cancer Preventive Health Behaviors among Hispanics." *Journal of Immigrant Minority Health* 13: 849-859.
- Portes, Alejandro and Min Zhou. 1993. "The New Second Generation: Segmented Assimilation and its Variants." *Annals of the American Academy of Political and Social Sciences* 530: 75-96.
- Ra, Chaelin Karen, Youngtae Cho, and Robert A. Hummer. 2013. "Is Acculturation Always Adverse to Korean Immigrant Health in the United States?" *Journal of Immigrant Minority Health* 15: 510-516.
- Singh, Gopal K., Stella M. Yu, Mohammad Siahpush, and Michael Kogan. "High Levels of Physical Inactivity and Sedentary Behaviors among US Immigrant Children and Adolescents." *Archives of Pediatric Adolescent Medicine* 162(8): 756-763.
- Van Hook, Jennifer and Kelly Stamper Balistreri. 2007. "Immigrant Generation, Socioeconomic Status, and Economic Development of Countries of Origin: A Longitudinal Study of Body Mass Index among Children." *Social Science & Medicine* 65: 976-989.