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Generational status, neighborhood context, and mother-child resemblance in dietary quality in Mexican-origin families

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ABSTRACT

Children of immigrants in the United States often grow up in very different nutrition environments than their parents. As a result, parent-child concordance in diet may be particularly weak in immigrant families. Yet, little is known about parent-child dietary resemblance in immigrant families and how local contexts shape it. This study uses data from the 1999/2000-2009/2010 Continuous National Health and Nutrition Examination Survey to examine mother-child resemblance in dietary quality in Mexican-origin families in the United States. We investigate how immigrant generational status and neighborhood context shape the association between mothers' and children's dietary quality. We find that mother-child resemblance in dietary quality is weaker for first-generation children relative to third-generation children. However, residence in an immigrant enclave strengthens the mother-child association in dietary quality for first-generation children. Findings offer a unique within-family perspective of immigrant health. Results suggest that the healthy eating advantage of Mexican immigrant mothers may not be sustained across family generations and that Mexican immigrant mothers may face unique challenges in promoting healthy eating among their children.

1. Introduction

Mexican immigrant women in the United States (U.S.) have lower obesity prevalence than Mexican American women (Barcenas et al., 2007; Guendelman et al., 2013; Hamilton et al., 2011). Yet, children of Mexican immigrants have similar or higher risks of overweight and obesity and gain weight faster than children born to Mexican American mothers (Baker et al., 2009; Buttenheim et al., 2013). In fact, among young children, Mexican boys in immigrant families have the highest obesity prevalence of all U.S. racial/ethnic groups (Van Hook et al., 2009). This concerning pattern suggests that this immigrant health advantage may not be sustained across generations within families.

Diet, a critical proximate determinant of obesity and various chronic diseases, represents a key behavioral mechanism through which this and other health advantages may be lost or maintained across family generations. Children of immigrants in the U.S. often grow up in different social and nutrition environments than their parents. Foreign-born parents may be unfamiliar with U.S. nutrition environments or retain preferences for food from their country of origin, whereas their children may develop distinct food preferences or consume American foods as a way to fit in with their peers of U.S. parentage (Greder et al., 2012; Guendelman et al., 2011; McArthur et al., 2001). Thus, parent-child resemblance in diet may be particularly weak in immigrant families, potentially leaving children of immigrants more susceptible to external influences on diet. Yet, local social contexts such as neighborhoods—which influence dietary habits (Lee and Cubbin, 2002), parenting behaviors (Pinderhughes et al., 2001), and immigrant adaptation (Portes and Zhou 1993)—likely condition parent-child dietary resemblance in immigrant families. However, to our knowledge, previous work has not directly addressed these questions. Thus, we know little about the intergenerational association in diet in immigrant families and how contextual forces shape it.

The purpose of this study is to examine the intergenerational association in dietary quality among Mexican-origin mothers and children in the U.S. We use dietary recall data from a national sample of Mexican-origin mothers and children in the 1999/2000-2009/2010 Continuous National Health and Nutrition Examination Survey to investigate two research questions: 1) Does mother-child resemblance in dietary quality vary by immigrant generational status? 2) Does neighborhood context—specifically, residence in an

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immigrant enclave— condition the association between generational status and mother-child dietary resemblance?

Understanding whether, how, and in what contexts the dietary quality of children of Mexican immigrants resembles that of their mothers represents an important research endeavor for several reasons. First, it advances knowledge of within-family associations in health behaviors in immigrant families, which can improve understanding of factors that likely contribute to the intergenerational loss of the immigrant health advantage in obesity for Mexican children of immigrants. Second, it elucidates whether Mexican immigrant parents face unique challenges in promoting healthy eating and managing obesity risk among their children. Third, it sheds light on the role that local social contexts play in shaping family associations in dietary behavior in Mexican immigrant families. These new insights have important implications for public health initiatives aimed at improving the diets of and reducing obesity among Mexican-origin children.

2. Background

2.1. Parent-child dietary resemblance

Childhood eating behavior tracks into adulthood such that childhood diet is a significant predictor of adult diet and thus has both short- and long-term consequences for health (Kelder et al., 1994; Mikkila et al., 2004; Nicklaus et al., 2004). Although multiple factors—genetic, psychological, social, and environmental—determine children's dietary behavior (Birch and Fisher, 1998), interventions designed to improve children's diets often target parents as the primary shapers of children's diets (Brown and Ogden, 2004; Golan and Crow, 2004; Wang et al., 2011). Parents can serve both as dietary role models by modeling their eating behavior to their children and as dietary gatekeepers by controlling household food availability and regulating their children's food intake (Brown and Ogden, 2004; Golan and Crow, 2004).

However, there are mixed findings about the strength of the association between parents' and children's diets. Some studies have documented a moderate parent-child dietary resemblance (Mitchell et al., 2003; Oliveria et al., 1992), whereas other studies have found only a weak resemblance (Cullen et al., 2002). (For a review, see Wang et al., 2011). Differences across studies in the strength of the association between parents' and children's dietary intakes can be partially attributed to the use of small, non-representative samples. There have only been two nationally representative U.S.-based studies (Beydoun and Wang, 2009; Zuercher et al., 2011). Although both studies found modest correlations in parent-child dietary intakes, they also found parents' healthy eating to be an important predictor of children's healthy eating. Even after controlling for sociodemographic factors, children's odds of consuming a high quality diet more than doubled if their parents (Beydoun and Wang, 2009) or householder (Zuercher et al., 2011) ate a high quality diet.

Recent work has also called attention to sociodemographic variation (by age, gender, race/ethnicity, and socioeconomic status) in parent-child dietary resemblance (Beydoun and Wang, 2009). However, this literature has not yet addressed parent-child dietary resemblance in immigrant families, a group that warrants increased research attention in this area. Children in immigrant families make up 25 percent of all U.S. children, and children of Mexican immigrants constitute the largest share within this group (Child Trends, 2014). Obesity prevalence among children of immigrants, especially those of Mexican origin, is high (Baker et al., 2009; Buttenheim et al., 2013), making it critical to examine the constellation of distal and proximate determinants of obesity for this group. Moreover, for reasons discussed below, immigrant parents may face unique struggles in promoting healthy eating among their children.

2.2. Parent-child dietary resemblance in immigrant families

Immigration scholars have long been interested in intergenerational processes in immigrant families (Kwak, 2003; Portes and Rumbaut, 2001). Yet, a lack of datasets with information about the health of children of immigrants and their parents has made it difficult to examine intergenerational associations in health in immigrant families. Although no large-scale studies have examined the intergenerational association in dietary behavior in immigrant families, related studies on dietary behavior and weight-related health provide reasons to suspect such associations to be weaker in immigrant families.

2.2.1. Dissonant dietary acculturation

Qualitative literature on dietary behavior in immigrant families points to a divergence in eating behavior among immigrant parents and their children. These studies suggest that different paces of dietary acculturation—the process by which immigrants adopt the average dietary patterns of the U.S.-born population—between immigrant parents and their children contribute to diet dissimilarity. Immigrant parents may experience a relatively slow pace of dietary acculturation and maintain preferences for a traditional diet from their country of origin, which, in the case of Mexican immigrants, tends to be healthier than the average U.S. diet (Batis et al., 2011; Duffey et al., 2008; Gordon-Larsen et al., 2003) (though this pattern may be changing due to the nutrition transition in Mexico (Rivera et al., 2004)). Their children may more quickly develop preferences for American food, especially unhealthy processed food, and eschew foods from their parents' country of origin (Greder et al., 2012; McArthur et al., 2001; Sussner et al., 2008), often out of embarrassment or a desire to assert an "American identity" by fitting in with dominant U.S. dietary culture (Guendelman et al., 2011). As one Mexican immigrant mother notes, "Only my husband and I eat Mexican foods, and my kids eat American foods" (McArthur et al., 2001). Other mothers add that their children dislike Mexican food and prefer American foods such as French fries, hamburgers, and Coke (McArthur et al., 2001).

The general pattern in which children of immigrants adopt U.S. ways faster than their parents is known as dissonant acculturation and is characterized by intergenerational conflict, loss of parental authority, and unfavorable well-being outcomes for children (Portes and Rumbaut, 2001). Applied to dietary behavior, we expect that dissonant dietary acculturation will be associated with weaker mother-child concordance in dietary quality and poorer dietary quality for children of immigrants given that of their mothers.

Although the aforementioned studies reveal clear generational dietary differences in immigrant families and highlight the struggles immigrant parents face in encouraging their children to eat a healthy diet, the samples lack non-immigrant comparison groups. Therefore, it is not clear whether such challenges are unique to immigrant families or are typical of most families in the U.S., where "picky eating" is relatively common among children (Mascola et al., 2010) and obesogenic environments are pervasive and frequently targeted toward children (Harris and Graff, 2011). A key contribution of our study is the incorporation of a non-immigrant Mexican-origin comparison group.

2.2.2. Maternal perceptions of health and U.S. nutrition environments

Mexican immigrant mothers' perceptions of childhood health and familiarity with obesity risk might also contribute to greater intergenerational dissimilarity in dietary quality in immigrant