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## Questioning the Dietary Acculturation Paradox: A mixed methods study of the relationship between food and ethnic identity in a group of Mexican American women

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### Abstract

**Background**—Epidemiological studies have described an “Acculturation Paradox”: Increased acculturation to the United States is associated with increased consumption of dietary fat and decreased consumption of fruits/vegetables.

**Objective**—To expand understanding of the dietary acculturation paradox, this study examined how bicultural Mexican-American women construct ethnic identity and how these identities and identity-making processes relate to perceptions of health and nutrition.

**Design**—Embedded mixed methods (in-depth interviews; survey).

**Participants/setting**—Purposive sampling of English-speaking Mexican-American women ages 18-29 (n=24) in rural California to assess ethnic identity and diet beliefs.

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**Author contributions:** ASR secured funding, conceptualized the study, collected and analyzed the data, and wrote the first draft of the manuscript. TGB analyzed the data and wrote the first draft of the manuscript. JBU and LBG provided practical and theoretical guidance through the development and execution of the study, and assistance with interpretation of data. All authors reviewed and commented on subsequent drafts of the manuscript.

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**Results**—Participants described food as central to expressing cultural identity, usually in terms of family interactions. Mexican food traditions were characterized as unhealthy; many preferred American foods, which were seen as healthier. Specifically, Mexican-American women perceived Mexican patterns of food preparation and consumption as unhealthy. Additionally, traditional Mexican foods described as unhealthy were once considered special occasion foods. Among the participants who expressed a desire to eat healthfully, to do so meant to reject Mexican ways of eating.

**Conclusions**—This study raises questions about the nature of the “dietary acculturation paradox”. While food – the eating of Mexican foods – is central to the maintenance of ethnic identity throughout acculturation, negative perceptions about the healthfulness of Mexican foods introduce tension into Mexican-American women's self-identification. This study suggests a subtle contradiction that may help to explain the dietary acculturation paradox: While previous research has suggested that as Mexicans acculturate to the US, they adopt unhealthy diets, this study finds evidence that they do so at least in part due to perceptions that American diets are healthier than Mexican diets. Implications for interventions to improve Latinos’ diets include an emphasis on the family and use of Spanish linguistic cues. Finally, messages that simply advocate for “traditional” diets should be reconsidered, since that message is discordant with perceptions of the healthfulness of such foods.

### Keywords

acculturation; nutrition; perceptions; Latino; disparities

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### Introduction

The obesity epidemic in the United States disproportionately affects ethnic minority populations; Latino subgroups such as Mexican-American children have some of the highest rates of obesity<sup>1</sup>. Further, epidemiological studies have documented a “Hispanic Acculturation Paradox,” wherein increased acculturation to mainstream U.S. culture is associated with increased risk of obesity and chronic disease through increased exposure to lifestyle-related risk factors such as poor diet quality, sedentary behavior, and stress<sup>2</sup>. The paradox is that this shift occurs despite gains in income and education that would otherwise suggest a protective effect of acculturation<sup>3</sup>. Of these, dietary acculturation, defined as the process of adopting eating patterns of a host country<sup>4</sup>, presents a particularly interesting contribution to the acculturation paradox, as food and eating are central aspects of culture<sup>5</sup>. There is evidence for dietary acculturation as a chronic disease risk factor among Latino/Hispanic populations in the United States. When acculturation is defined as an increasing number of years among immigrant populations, increased acculturation is associated with increased consumption of dietary fat and decreased consumption of fruits and vegetables<sup>6-12</sup>.

Despite the epidemiological evidence suggesting a decrease in dietary quality through acculturation, the mechanism for such an effect is poorly understood. Possible explanations include increased access to foods that were unavailable or unaffordable in immigrants’ home countries<sup>13,14</sup>, a perception that “American” foods have a higher status (possibly associated with their higher costs in the home countries), restricted access to traditional ingredients and

foods<sup>15</sup>, a wider variety of novel, attractively-packaged processed foods available<sup>16</sup>, and school feeding programs that reprogram children's palates to prefer traditional "American" foods<sup>17</sup>.

Food, and sharing food with others, are important aspects of culture and of cultural expression, integral to the maintenance and performance of culture<sup>18</sup>. Foods have strong cultural meaning, they represent a way of welcoming people, and sharing food lets others know they are like family, and are important. Even in families with low economic resources, food is an essential element of being social. For example, Weller and Turkon found that among a disparate group of first- and second-generation middle-class Latinos in Ithaca, NY, food was an important way of constructing and maintaining culture<sup>19</sup>. In a study with low-income women in Los Angeles, food preparation behaviors were strongly influenced by the women's Mexican-American culture and traditions<sup>20</sup>. Previous studies in California's Central Valley have found that more-acculturated mothers serve their children more fast and convenience foods compared with less-acculturated mothers<sup>17</sup>.

Yet unclear in the existing literature is how the dietary acculturation process operates and how food-related cultures relate to general acculturation processes or to the maintenance of origin cultures. Improving understanding of how acculturation influences diet-related health behaviors would be helpful for designing effective diet interventions for the growing population of second- and third-generation Latinos who identify as bicultural and are at increased risk of poor diets and related disease<sup>1,21,22</sup>. To add nuance to this discussion, this study asked bicultural Mexican-American women to discuss their views on Mexican and American cultures and perceptions and knowledge of diet. The study was guided by the following research questions:

1. How do bicultural Mexican-American young adult women express ethnic identity and what it means to be bicultural?
2. How do these identities and processes of identity construction relate to diet perceptions and nutrition knowledge?

## Methods

This study used an embedded mixed-methods approach incorporating qualitative in-depth interviews and closed-ended surveys to elicit a comprehensive understanding of ethnic identity and diet beliefs and behaviors<sup>23–25</sup>. The qualitative component consisted of 24 semi-structured interviews. Saturation was reached with 24 interviewees. The three themes highlighted in the findings section were clear at this point and there were no new patterns in the interviews. The interview guide included questions assessing perceptions of participants' own diets and food preparation behaviors, nutrition knowledge and perceptions, and ethnic identification. Development of the questions was guided by the Integrated Model of Behavior Change<sup>26</sup>, which considers behavior a function of attitudes, norms, agency, skills, and environmental factors, and theories of ethnic identification and acculturation<sup>27,28</sup>. The embedded quantitative component consisted of a closed-ended survey instrument that included demographics and measures of familism<sup>29,30</sup> and ethnic identification<sup>31–33</sup>.

Participants were recruited from a Central California community comprising rural and suburban areas by trained research assistants using passive recruitment strategies including informational booths at health fairs and flea markets and active recruitment strategies such as soliciting potential participants from clinic waiting rooms. Interested participants were screened for eligibility; Mexican-American women ages 18-29 years were purposively recruited. The age range was restricted for theoretical and practical reasons. From a theoretical perspective, since acculturation is strongly influenced by age and time in the U.S., and this study is part of a larger effort to understand how acculturation influences diet in order to create culturally-tailored messages, a relatively homogenous sample was preferred in order to maximize the potential to isolate mechanisms and effects of cultural tailoring. From a practical perspective, the age range was restricted to the most populous age demographic in the region, accounting for 11.8% of the total population of the county<sup>34</sup>. Moreover, at this age many women start making the food purchasing and preparation decisions for themselves and their families.

Eligible participants self-identified as Latina, Hispanic, Mexican, Mexican-American, or Chicana. English language ability was considered a proxy indicator of acculturation<sup>35,36</sup> for the purposes of screening participants, such that eligible participants had to be able to complete the interview in English.

Interviews were conducted and audio recorded by trained, bicultural (Mexican-American) and bilingual (Spanish, English) research assistants in a variety of public locations around the community (e.g., clinic waiting rooms, community centers, and coffee shops). Recordings were professionally transcribed. Consent was obtained prior to the start of the interview. The [blinded for review] Institutional Review Board approved the study protocol.

## Analysis

A multi-step, iterative process<sup>37</sup> involved reading through the transcripts, developing codes for emergent themes, and then returning to the coded themes to uncover patterns. This approach led to three primary themes in the interview data: (i) multiple ethnic identities; (ii) expressions of ethnic identity through food, family, and the Spanish language; and (iii) perceptions of food and health. These three overarching themes guided development of specific codes and sub-themes<sup>38</sup>. A review of healthy eating perceptions guided refinement of specific codes pertaining to perceptions of food and health<sup>39</sup>.

Quantitative results are presented as frequencies from key survey questions; no statistical testing was conducted due to the small sample. Integration of qualitative and quantitative approaches was achieved in the interpretation and reporting stage through comparison and juxtaposition of the results from similar questions in the quantitative and qualitative methods<sup>24,40</sup>. Results are presented thematically, with qualitative and quantitative evidence interwoven. Participants' names have been changed to protect confidentiality.

## Results

Participant demographics are summarized in Table 1. The mean age was 22.7 (SD=3.8, range=18-29). More than two-thirds (n=17) lived with children ages 0-17; these include

children of participants and younger siblings and other relatives. One-third (n=8) were unemployed or currently enrolled in community college or vocational program. Food security was an issue: more than one in three (n=9) participants reported having received food assistance in the past year or running out of food before the end of the month.

### Emergent Themes

The three main themes (ethnic identification; the roles of food, family, and the Spanish language in constructing ethnic identity; and perceptions of food and health) and several subthemes that emerged are described below.

**Multiple ethnic identities**—As a criterion for participation, all participants had Mexican ancestry or had themselves been born in Mexico but currently live in the United States. As such, the country-specific labels “Mexican,” “Mexican-American,” “Chicana,” and “American” could apply, in addition to the pan-ethnic labels “Hispanic” and “Latina.” However, there was a range of ethnic identification, and the qualitative and quantitative methodologies yielded subtle differences. In response to the survey question, “How do you describe your ethnicity?” participants could check all labels that apply, whereas during the in-depth interview, participants were asked to generate their own description to answer the question “How do you identify culturally or ethnically?” In both modalities, most participants selected multiple identities: In the survey, only 8 selected a single identification; in the interviews, no one did. The top labels were Mexican-American (n=18 in survey; n=12 in interview); Hispanic (n=17; n=12); Mexican (n=12 in both); and Latina (n=9; n=8). Although almost one-third (n=7) of participants selected “Chicana” in the survey, only one self-identified that way in the interview, and several expressed discomfort with the label, since it was viewed as a political and even radical declaration of beliefs.

Regardless of the selected labels, most participants' interview responses indicated substantial reflection about how they presented their ethnic heritage to society, and the implications that such identifications might have on how they are perceived or treated as individuals. For example, 27-year-old Barbara described challenges with pan-ethnic labels: “I'm Hispanic. I kind of don't like the term, actually,— I like Latina better, you know,...I think it's been associated with so much bad...in the press or media.”

Despite hesitation about specific labels, most participants had a strong sense of ethnic identification, as indicated by quantitative measures: The vast majority agreed with a variety of statements indicating a strong sense of belonging, pride, and attachment to Mexican culture (Table 2).

**Constructing and expressing ethnic identity: Family, food, and Spanish language**—Three key dimensions emerged in response to interview questions asking participants to elaborate on what it means to belong to the ethnic group(s) they identified: family (n=19), food (n=17), and the Spanish language (n=10).

### Family as central to ethnic identity

The role of the family in Mexican-American and other Latino cultures is well-documented<sup>41</sup>; as such, this theme was unsurprising, although this study did shed some light about how family relates to conceptions of ethnic identity. Nearly all (n=19) participants mentioned the importance of family in response to interview questions about what it meant to them to be part of the group with which they identified. Participants in this study reported that their ethnic identity was tied to their families. Rocio (age 27) makes this clear: “I just love the family orientation that we as Latinos have.” In addition, they reported that people of their ethnic identity expressed their culture by spending time with their families. Survey results were consistent with interview reports regarding the centrality of the family in constructing ethnic identity: Three-quarters of participants (n=18) agreed with the statement, “I will do all that I can to keep alive the traditions passed on to me by my parents and grandparents” (Table 2), a traditional measure of familism<sup>41</sup>.

### Food as a standalone component of ethnic identity

Most participants (n=17) identified food as a core component of their ethnic and cultural identities. For example, when describing what it means to her to be Mexican-American, Jenny (age 20) explained: “Well, I can't speak Spanish, so...the food is, like, the only thing I can really bond with other Mexicans over.” Rebecca, age 24, who self-identified as Mexican and Hispanic, responded: “For me, culturally...it influences the way how we cook, what we cook. We cook Mexican food like beans and rice or tacos or *chilaquiles* [fried tortilla dish]. Things that are pretty Mexican.” Other foods that were commonly named and associated with Mexican culture included spicy foods, rice, beans, tortillas, enchiladas, *pozole* [hominy pork stew], *ceviche* [marinated fish], *tamales* [corn dumpling], grilled steak, *carnitas* [roasted pork], and meats prepared with specialty sauces. Only three participants reported any vegetables (tomatoes, avocados, green salad) besides beans as typical Mexican foods.

### Food and family in constructions of ethnic identity

In addition to being a standalone expression of ethnic identity, the preparation and consumption of specific foods were often tied with family in two ways: Time spent with family revolved around eating, and it was family members (usually mothers and grandmothers; occasionally also fathers and other men) who prepared traditional Mexican foods. For example, for Cecilia (age 21), food and family were inextricably linked as expressions of Mexican culture, “Sharing and family, eating all together. I think that's a really important thing about our culture that we tend to have dinners together and our traditional foods.” Marina (age 26) agreed, elaborating on the preparation of the foods, “Hispanic cultures like to have homemade foods. Like to cook at home. My mom loves cooking so they [Hispanics] like that. I think just the gathering. They like to gather a lot. And talk and drink. They like to make foods. Invite the whole family.” Most participants expressed similar feelings about gathering with family and eating traditional foods.

Although participants described the importance of family and food in maintaining their ethnic identity during interviews, the quantitative assessment revealed some contradictions. For example, although 19 of 24 participants agreed with the statement, “I will do all that I can to keep alive the traditional foods and recipes passed on to me by my parents and



grandparents” (Table 2), many reported in the interviews that they lacked the knowledge and skills to prepare traditional foods, or that they rely on their parents and other family members to do so, suggesting they are in fact not willing to do all they can to keep those traditional recipes alive. For example, when asked what her favorite food was, Rocio responded: “Definitely Mexican food ‘cause that’s my mom’s cooking.” Whereas she cooked “chicken, or shrimp, or fish” for herself, whenever she discussed spending time with family generally or her family’s cooking specifically, she mentioned Mexican foods. Rocio elaborated on her feelings about the foods she eats when she visits family:

...it’s nice to have a home-cooked meal like that – my mom will make or my sisters will make. ... At my mom’s, there’s always *frijoles* [beans]. There’s always tortillas. There’s always *queso fresco* [soft cheese].

Rocio was like many participants: She associates specific dishes with being Mexican and enjoys eating them, but does not cook Mexican foods herself. Other participants expressed similar opinions: They enjoy eating Mexican foods but rely on family members to prepare them. Although many participants did not prepare Mexican dishes themselves, about two-thirds (n=16) agreed on the survey “It is important to eat traditional meals with my family” (Table 2).

### The role of the Spanish language in constructing ethnic identity

In addition to food and family, use of the Spanish language (speaking or hearing it live or via television or radio) was a prominent theme in interview responses. Participants identified the ability to speak Spanish as an important aspect of their ethnic identity, a way to connect with their families, and a source of personal pride, but lamented their relative lack of fluency, relative to their parents. For example, Alejandra (age 19):

I understand Spanish more than I speak it. My mom would speak to me in Spanish and I respond back to her in English. I can understand Spanish. I’ll watch *novelas* [soap operas] with her or something. But when my grandma comes, I have to speak Spanish to her.

Some participants articulated the way that the Spanish language was explicitly linked with maintaining and being proud of their ethnic identity. For example, Teresa (age 28):

I feel very proud to be a Mexican. My father and mother raised me to love my culture and not be ashamed of it and I’m not...I’m proud to be Mexican and most people don’t have the ability to be fluent and that’s one thing I am blessed with, that I can speak Spanish and English like it’s nothing.

For Teresa, as for other participants, the ability to speak Spanish was a way to demonstrate her Mexican heritage. This was true even though all participants, as a condition of recruitment, were fully proficient in English and most reported operating their lives outside of spending time with family (i.e., while at school or work, with friends, and through media choices) primarily in English.

Listening to or viewing Spanish-language media was another way participants reported connecting with family members and maintaining their ethnic identity, even among those with only minimal Spanish proficiency. For example, although two-thirds (n=16) preferred



watching programming in English and only 4 reported autonomously selecting Spanish-language television programming, more than half (n=14) reported that they watch Spanish-language television with their family members. Most participants described spending time with family members – usually parents but often also siblings and extended family members such as grandparents, aunts, and uncles – watching television, and often this was in Spanish.

**Perceptions of diet and health**—In addition to eliciting constructions of ethnic identity, this study sought to understand how bicultural Mexican-American young women understood diet and health. Two themes emerged: the first was a limited understanding of a healthy diet, despite a desire on the part of most participants to know more about how to eat healthfully. The second pertained to attributions of healthfulness or lack of healthfulness for specific categories of foods, including the nearly-universal perception that Mexican foods were unhealthy.

### Conceptions of “healthy diet”

All respondents reported having heard the term, “healthy diet,” although confidence in describing the term varied substantially. Consistent with food perception literature<sup>39</sup>, most participants described healthy diets in terms of specific foods or outcomes. Nearly all (n=22) of the participants described a healthy diet in terms of specific foods (e.g., fruits and vegetables are healthy; fried foods are not healthy). Most (n=16) participants described a healthy diet in terms of specific macronutrients: Carbohydrates (perceived as unhealthy), protein (healthy), and fat (unhealthy). Most participants (n=18) defined healthy eating in terms of the consequences of eating, which were generally perceived as negative. That is, participants described the negative consequences of unhealthy eating as they defined healthy eating. The most common consequence was weight (or being overweight); some participants also discussed food in the context of aging and disease. For example, Marina (age 26), who was generally health-conscious, stated: “What you eat determines how you're gonna live. So if you don't eat healthy, you're more prone to diabetes or stuff like that. So yes, it's very important, how I eat because I do want to live longer.” Concerns about diabetes and the association between diabetes and sugar were common.

Half of the participants (n=12) described a healthy diet as a way of eating, and generally this meant portion size or balance (in terms of quantity and quality of food, as well as a balance of types of foods). Alejandra's description is representative of the way many participants articulated a healthy diet:

A healthy diet's when you're eating good foods. Like maybe a combination of fruits and vegetables and cooking at home. Maybe not too fat – maybe it's OK to eat out, but not like every single day. We eat out sometimes. We cook at home. But sometimes, I know when you cook at home, you can cook even worse. Like maybe cook with not that much grease or animal lard or something. Just have a combination of everything.

Despite their relative confidence in defining a “healthy diet,” when probed, many participants reported having minimal knowledge – but a strong desire – to prepare healthy meals and how to make healthier choices.

## On the healthfulness of Mexican and American foods

Although participants identified specific Mexican foods as traditional and important to maintaining a sense of ethnic identity, they characterized most of these foods as unhealthy. For example, Teresa (age 28) described her desire to eat healthfully as being in direct conflict with family values:

I try to stay healthy, I try but it doesn't go—when you come from a Hispanic family it's difficult because they're used to eating big meal. Your rice, your beans, your tortillas, your tamales. It's your heritage, it's what you do and it's difficult.

Teresa's description was typical. Participants also described Mexican eating patterns negatively in terms of portion sizes: “big” meals, “lots” of meat and greasy foods, and “too much” were common descriptors.

Whereas “American” food was sometimes characterized as unhealthy, such as hamburgers or lasagna, and sometimes healthier, such as salads, grilled chicken, or sandwiches, Mexican foods were nearly always described as unhealthy. For example, respondents were asked to describe their favorite foods. Lucy (age 20) responded: “Mostly like Mexican food, so burritos, tortas, that sounds really unhealthy but rice, beans, salads, sandwiches.” Six participants reported that their favorite food was a typical American food, generally perceived as healthy. Amanda (age 22), for example, who described her favorite foods as a mix between traditional Mexican and typical American foods, described how American foods can be healthy, and distinguished scenarios where she might eat either Mexican or American foods:

Grilled chicken or grilled chicken salad or potato salad or—I'll only eat *pozole* or *tamales* and stuff like that at the restaurant or when my mom makes it. But for myself when I cook for myself, I like to make vegetables or some lasagna or ... stuffed chicken. I always like to have a side salad and something healthy.

When asked what makes it hard to eat healthy foods, participants described financial barriers related to the perception that healthy foods are more expensive, a lack of knowledge and skills about healthy food preparation or what constitutes healthy foods more broadly, and the perception that Mexican foods are unhealthy. The last point is particularly poignant, since participants identified eating Mexican foods as important ways of bonding with family and expressing their identity, placing them in a difficult position. For example, Maria (age 18):

I'm not used to [eating healthfully]—growing up in a Mexican household, a lot of the foods that we eat aren't very healthy so maybe just getting used to it or learning new recipes with these healthy foods would be nice.

Participants bemoaned that to eat healthier they would have to abandon their ethnic eating patterns and specific foods. For example, Carolina (age 28):

If I was interested in eating healthier? Well like I said, we are used to our traditional food that is not the healthiest and that's what we were taught to cook so I find myself going on the Internet and researching stuff to cook healthier.

Amanda (age 22), who was generally more health-conscious than other participants, stated that she believes Mexican food to be “fatty” and generally unhealthy. She has tried to

educate her mother about healthy eating, encouraging her to have “tacos with a salad.” In response, her mother had begun to cook healthier Mexican foods. While several participants described specific ways that they might modify traditional Mexican cuisine to make it healthier, such as avoiding eating the hominy in *pozole*, having whole-wheat instead of refined white flour tortillas, or adding vegetables on the side, most participants described traditional Mexican foods as incompatible with eating a healthy diet.

## Discussion

In this mixed-methods study, bicultural young adult Mexican-American women described the importance of family, the Spanish language, and food in constructing and maintaining their ethnic identities. Participants universally identified eating Mexican foods as an important strategy for expressing and maintaining their Mexican culture, yet these foods were almost equally universally presumed to be unhealthy. Perhaps more importantly for understanding the so-called dietary acculturation paradox, Mexican foods and traditional diet behaviors such as large portion sizes were perceived as less healthy than the foods identified as more “American” that were a regular part of participants' diets. This finding raises questions about the nature of the “acculturation paradox.”

One possible explanation for this study's findings comes from anthropological research suggesting that the immigrant diet is a hybrid of traditional foods from the country of origin, and the availability of certain components of those foods in the host country. The “festival foods” hypothesis would suggest that foods that are traditional in the country of origin – but for special occasions, such as annual festivals or family celebrations – become a part of the immigrant diet because of their associations with tradition, home, and family<sup>42</sup>. Moreover, these once-special occasion foods become a regular part of immigrants' diets because of the increase in accessibility (i.e., availability and cost) of key ingredients such as animal protein, fats, and sugars. Because these foods are associated with good times, they become comfort foods, and consequently are consumed more frequently in the host country than the country of origin. The festival foods hypothesis is consistent with the present study's finding that Mexican foods are perceived as unhealthy, since spending time with family is an important way to express ethnic identity, and that time with family often means “traditional” meals and celebrations. Most of the foods described by participants as being typically Mexican and unhealthy are those that could be described as special occasion foods in Mexico. For example, tamales, typically eaten around Christmas, are considered special because they require considerably more effort to prepare compared with more commonly consumed foods<sup>43</sup>. Our findings suggest this is a viable hypothesis: The majority of participants described regular consumption of foods that were once traditionally eaten only rarely, while only a single participant described traditional holiday foods as limited to special occasions.

A distinct explanation for this study's paradoxical findings may lie in the nature of the foods themselves: The foods consumed in Mexico may not be the same as those consumed by Mexicans in the United States. This may result from relatively simple substitutions, such as replacing corn tortillas with flour tortillas, which are not common in most of Mexico but prevalent in Mexican food in the U.S.<sup>44</sup>. Qualitative studies with immigrant populations who were closer to the food systems in the countries of origin demonstrate that perceptions

of such differences in food systems are common and related to their perceptions of the healthfulness of foods. For example, in one study with immigrants from Latin American countries including Mexico, women described Hispanic foods in the U.S. as less healthy than those in their home countries, pointing specifically to the “chemicals” that are added in their production<sup>45</sup>. In other studies, immigrant women characterized foods in the U.S. as more processed, containing hormones or chemicals, and less fresh, since they are prepared for longer shelf-life, compared with the same foods in their home countries<sup>13,15</sup>.

Another plausible explanation would be that the nutrition transition – the replacement of traditional high-fiber diets with Western pattern diets high in sugars, fats, and animal proteins – has already happened, such that when U.S. Latinos reflect on the “traditional” foods eaten in their countries of origin, they are thinking of the modernized, globalized food system<sup>46,47</sup>. There was minimal evidence for this. However, an ethnographic study with Mexican immigrants found evidence by contrasting how participants characterized traditional Mexican foods with observations of their food shopping, preparation, and consumption practices: Although participants described their diets in Mexico as consisting of fresh, whole, unprocessed foods, they relied substantially on highly-processed foods to prepare family meals in the U.S., describing these processed foods as exactly those they ate in Mexico<sup>48</sup>.

The current study has several limitations that may contribute to a lack of generalizability: small sample size and recruitment approach from a single, largely rural and high-poverty community. The sample was representative of the community in terms of having low socioeconomic position and as such especially vulnerable to diet related diseases. In addition, the deliberate homogeneity of the sample with regard to country of origin (Mexico), age, and generation in the US, allowed for in-depth observations about this specific vulnerable group that would not have been possible with more heterogeneous sample. Potential participants were informed at the time of recruitment that the study was about nutrition and ethnicity. Although the only stated reason for refusal to participate was a lack of time, it is possible that the sample may be biased in favor of participants with an interest in nutrition. Finally, this study did not include a systematic assessment of diet or behaviors pertaining to food procurement and preparation.

Despite the limitations noted above, this study presents an important advance in understanding the relationship between acculturation and perceptions of diet, and additionally raises issues pertaining to the design of diet interventions for U.S. Latino populations. To begin, findings complicate previous understanding of the acculturation paradox. There was evidence that bicultural individuals aimed to make healthy dietary choices, but those decisions were based on potentially flawed perceptions about the relative healthfulness of the two cuisines. These assumptions are not only problematic for diet-related decision-making but also for one's ethnic identity and self-concept.

Findings suggest implications for the design of future nutrition interventions. First, the findings reinforce decades of research on familism, which has consistently found that family is paramount among Mexican-American populations<sup>49</sup>. Additionally of interest is the importance of the Spanish language in ethnic identification, even among individuals who

may not themselves speak Spanish regularly or at all. One implication that merits further study is that using Spanish words could serve as a cue to call attention to bicultural audiences that this message is relevant for them. Such a cue could increase the message's perceived relevance and gain the attention of the target audience, setting in motion persuasion effects <sup>50</sup>.

With respect to the content of future nutrition interventions, the study suggests further research is needed to tease out *what* to communicate about a healthy diet to bicultural Latinos. The current epidemiological literature documenting a Latino dietary acculturation paradox would suggest that nutrition communications should encourage Latino populations to eat more traditional ethnic foods, and at least one previous study has suggested that this would be a worthy approach <sup>15</sup>. However, the present study suggests that such an approach would be counterproductive for bicultural Mexican-Americans, since Mexican foods are perceived as more universally unhealthy compared with American foods. A more promising approach might consider nutrition as an entrée for empowerment. For example, a call to “Decolonize Your Diet” that aims to highlight ancestral (i.e., pre-Columbian) foods simultaneously values traditional cultures and demonstrates the healthfulness of traditional foods <sup>51</sup>. Sukovic and colleagues conceptualize food preparation – mostly done by women in Mexican-American families – as a strategy for the empowerment, suggesting that food preparation is a unique venue in which disempowered women exercise some control for themselves and also for their families <sup>52</sup>.

Underscoring these implications is the notion that dietary acculturation is a much more nuanced phenomenon than current epidemiological data suggest. As such, bicultural populations in the United States warrant unique consideration as intervention audiences, separate from immigrant populations, even from the same countries of origin.

## Conclusion

Through in-depth interviews and closed-ended surveys, bicultural young adult Mexican-American women identified food as central to maintaining and expressing their Mexican heritage, while simultaneously conveying that the Mexican foods they eat are unhealthy. This study complicates understanding of the diet acculturation paradox by introducing a new paradox: Whereas the acculturation and health epidemiological literature suggests that acculturation is a risk factor for poor diet, wherein the implication is that traditional Mexican foods are healthier than typical American foods, bicultural young adults in this study perceived their favorite Mexican foods to be less healthy than the American foods they typically consume. Additional research is needed to improve understanding of the diet-acculturation relationship and disease outcomes. Longitudinal binational epidemiological and mixed-methods studies that include more in-depth qualitative components, for example, may be useful to disentangle how the nutrition transition affects “traditional” diets in countries of origin and how those changes then become manifest in the practices of immigrant groups in receiving countries. Specifically, Mexican American women perceived the ways Mexican foods are prepared (heavy use of fats) and consumed (large portion sizes) as unhealthy. Additionally contributing to perceptions that Mexican foods are unhealthy

were the types of foods described as unhealthy – that is, foods that were traditionally consumed only during special occasions but are now perceived as everyday foods.

Implications for intervention strategies to improve diets of U.S. Latinos specifically include an emphasis on the family and using Spanish linguistic cues. Results also suggest a reconsideration of messages that simply advocate for “traditional” diets, since that message is discordant with the healthfulness of such foods as perceived by the young, Mexican-American women who participated in this study.

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## Research Snapshot

### Research Questions

What role does ethnic identity play in bicultural Mexican-Americans' perceptions of health and nutrition?

### Key Findings

In interviews with English-speaking Mexican-American women ages 18-29 (n=24) in rural California, all participants described food as central to expressing cultural identity, usually in terms of family interactions. Mexican food traditions were characterized as unhealthy, and many preferred traditionally American foods, which were seen as healthier. Among the many participants who expressed a desire to eat healthfully, to eat healthfully meant to reject Mexican ways of eating.

### **Practice Implications**

#### **What is the current knowledge on this topic?**

Epidemiological studies have demonstrated a dietary acculturation paradox – increased acculturation to the U.S. is a risk factor for poor diet; the implication is that traditional Mexican foods are healthier than typical American foods.

#### **How does this research add to knowledge on this topic?**

This study complicates understanding of the dietary acculturation paradox by introducing a new paradox: bicultural young adults perceived their favorite Mexican foods as less healthy than the American foods they typically consume.

#### **How might this knowledge impact current dietetics practice?**

Nutrition education programs for Mexican-American women may work better if they include ideas for ways to prepare healthy Mexican foods that facilitate positive ethnic identification, use linguistic cues, and emphasize family.

**Table 1**

Demographics of 24 Mexican American women participating in semi-structured interviews on diet and food preparation.

	n (%)
Age, years	
18-21	11 (46)
22-25	5 (21)
26-29	8 (33)
Education, highest level	
High School or equivalent	10 (42)
Some college or technical training	9 (38)
College degree	5 (21)
Employment status	
Full-time	5 (21)
Part-time	11 (46)
Not employed	8 (33)
Received food assistance in past year	6 (25)
Run out of food before the end of the month	6 (25)
Have children ages 0-17 in household	17 (71)

**Table 2**

Perceptions of strength of ethnic identification and familism among 24 Mexican American women participating in semi-structured interviews on diet and food preparation.

	Agree n	Neutral n	Disagree n
<b>Strength of Ethnic Identification<sup>1</sup></b>			
I have a clear sense of my ethnic background and what it means for me.	20	2	2
I am happy that I am a member of the group I belong to.	23	1	0
I have a strong sense of belonging to my own ethnic group.	21	2	1
I have a lot of pride in my ethnic group.	20	3	1
I feel a strong attachment towards my own ethnic group.	19	4	1
<b>Familism<sup>2</sup></b>			
I will do all that I can to keep alive the traditions passed on to me by my parents and grandparents.	18	4	2
I will do all that I can to keep alive the traditional foods and recipes passed on to me by my parents and grandparents.	19	2	3
It is important to eat traditional meals with my family.	16	5	3
Sharing traditional meals with my family is very important.	15	8	1

<sup>1</sup>Items assessing ethnic identity adapted from: Phinney JS, Ong AD. Conceptualization and measurement of ethnic identity: Current status and future directions. *J Couns Psychol.* 2007;54(3):271-281. doi:10.1037/0022-0167.54.3.271.

<sup>2</sup>Items assessing familism adapted from: Steidel AGL, Contreras JM. A New Familism Scale for Use with Latino Populations. *Hisp J Behav Sci.* 2003;25(3):312-330. doi:10.1177/0739986303256912.