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# What influences Latino grocery shopping behavior? Perspectives on the small food store environment from managers and employees in San Diego, California

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## Abstract

To inform the design of a multilevel in-store intervention, this qualitative study utilized in-depth semistructured interviews with 28 managers and 10 employees of small-to-medium-sized Latino food stores (*tiendas*) in San Diego, California, to identify factors within the *tienda* that may influence Latino customers' grocery-shopping experiences and behaviors. Qualitative data analysis, guided by grounded theory, was performed using open coding. Results suggest that future interventions should focus on the physical (i.e., built structures) and social (i.e., economic and socio-cultural) dimensions of store environments, including areas where the two dimensions interact, to promote the purchase of healthy food among customers.

## Keywords

Food environment; grocery shopping; health behavior; Latinos; qualitative

## Introduction

Retail food stores are unique, varying in terms of a store's architecture or layout, color schemes employed, marketing strategies used, pricing strategies, and the number and role of

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employees, among other variables (McGoldrick 1990). A retail food store's uniqueness often influences who shops at the store, or its customer base, and what foods and beverages are purchased (Martineau 1958; Theodoridis and Chatzipanagiotou 2009). It is this uniqueness that makes up the in-store food environment (herein referred to as the consumer food environment). Given the increasing evidence linking the consumer food environment and diet, as will be detailed further, it is important to understand what aspects of the consumer food environment (Glanz et al. 2005) hinder or facilitate the purchasing of healthy food. In this study, we focus on the consumer food environment to understand which aspects could be improved or modified to encourage the purchasing of healthy food and, ultimately, healthier diets.

Examination of the consumer food environment has largely focused on the price, promotion, and placement of foods and beverages (Glanz et al. 2005; Holsten 2009). The availability of healthy foods within stores has a positive influence on customers' purchasing behaviors; for example, shelf space dedicated to fruits and vegetables is positively associated with their purchase (Bodor et al. 2008; Gittelsohn, Rowan, and Gadhoke 2012). Studies have found that point-of-purchase (POP) and pricing strategies are associated with fewer purchases of unhealthy food (Foster et al. 2014; Glanz and Yaroch 2004; Thow, Downs, and Jan 2014). Most research has focused on large food stores, such as supermarkets, which tend to offer a greater variety of healthy foods, year-round, at lower costs than smaller, independent food stores (Caspi et al. 2012). Limited attention has been given to small-to-medium-sized ethnic food stores, such as those catering to the Latino community. This is a concern given that a majority of food shopping for Latino communities occurs within these stores (Escaron et al. 2013).

Known as *tiendas* within Mexican-origin communities (Emond, Madanat, and Ayala 2012), these small-to-medium-sized stores are important segments of the retail market as they are a major source of food for Mexican-origin populations (Ayala et al. 2005). Individuals of Mexican origin have greater access to *tiendas* than they do supermarkets even after accounting for demographics, socioeconomic status, and neighborhood commercialization (Lisabeth et al. 2010). Previous research demonstrates that *tiendas* typically provide greater access to healthy foods, such as fresh fruits and vegetables, than do other small-to-medium-sized food stores (Emond, Madanat, and Ayala 2012). Latino customers, including those of Mexican origin, shop more frequently at small independent food stores, like *tiendas*, than at big-box stores or supermarkets (FMI 2005). In addition, on average, Latino customers make 26 grocery trips per month, three times more frequently than the general U.S. shopper (FMI 2005). Given this increased access to *tiendas* and these grocery shopping behaviors, understanding the *tienda* consumer food environment is necessary to improve the purchasing behaviors and overall diet of Mexican-origin customers (Cortés et al. 2013). This is important for the development of targeted, culturally appropriate in-store interventions aimed at improving food-purchasing behaviors of Mexican-origin adults in the United States. Development of such an intervention may have significant implications for their diets given the accumulating evidence that the consumer food environment is a significant determinant of diet (Caspi et al. 2012; Giskes et al. 2012).

To better understand the potential to improve the consumer food environment of *tiendas*, it is important to include the perspectives of key constituents, such as *tienda* managers and employees. *Tiendas* often have fewer employees compared to big-box stores or supermarkets (Huddleston et al. 2009) and the employees often serve in multiple roles. As such, they frequently interact with and observe store customers (Huddleston et al. 2009) and may have unique perspectives on the customers' grocery-shopping experiences and factors that may influence purchasing behavior. Previous research conducted with small-food-store managers has predominantly examined barriers and facilitators to implementing small-food-store interventions as opposed to understanding the small-food-store grocery-shopping experience (O'Malley et al. 2013; Pitts et al. 2013; Song et al. 2011). Filling this research gap is important given that managers and employees have direct and indirect influences on customers' grocery-shopping experiences (Webber, Sobal, and Dollahite 2010). Characterizing the *tienda* shopping experience from the perspectives of managers and employees is important for developing effective in-store interventions as the managers and employees are the decision makers and, in some cases, implementers of proposed intervention strategies. Understanding their perspectives and recognizing their on-the-job knowledge allows for the development of intervention strategies that build off what managers and employees already know works within their *tiendas*. Simply increasing access to healthy foods without recognizing important characteristics of the grocery-shopping experience and the *tienda* environment itself, may not be sufficient to result in positive changes in purchasing behaviors (Blitstein, Snider, and Evans 2012; Story et al. 2008).

In this qualitative study, we examined the customer's *tienda* shopping experience from the perspectives of *tienda* managers and employees as part of a formative research study to develop a multipronged *tienda* intervention. The purpose of the current study was to answer three research questions: (1) What are the grocery-shopping experiences and food-purchasing behaviors of *tienda* customers? (2) What factors influence the grocery-shopping experience and food-purchasing behaviors of *tienda* customers? (3) In what ways are the perspectives of *tienda* managers and employees similar or different, and how can these perspectives be used to design in-store interventions?

## Methods

### Study design

Trained bilingual research staff conducted face-to-face in-depth interviews with 28 *tienda* managers and 10 employees in San Diego County between November 2010 and March 2011.

### Setting

San Diego County is an ethnically diverse region of Southern California with a population of 3.2 million of which 33% are Latino (United States Census Bureau 2015). Of the Latino population, approximately 90% are of Mexican origin (Pew Research Center, 2010). San Diego County's close proximity to Mexico (20 miles from downtown San Diego) facilitates bicultural environments and communities. Many *tiendas* cater to these communities by offering Mexican products, hiring bilingual staff, and displaying bilingual advertisements,

all important factors for persons of Mexican origin in selecting where to shop for groceries (Ayala et al. 2005; Geisler 2011).

### Recruitment of tiendas and respondents

*Tiendas* were purposively sampled from San Diego County following an extensive enumeration process to identify stores that (1) could be eligible for a future intervention given their geographic location (i.e., target area) or (2) were not eligible for the future intervention, also given their geographic location (i.e., non-target area). We sought to minimize biasing target-area store respondents for the future randomized controlled trial (RCT) by not asking a series of questions about the proposed intervention.

To identify target-area stores, we conducted a search in north, east, and midcity regions of San Diego County. Given our focus on Mexican-origin communities, approximately 40% of the zip codes were excluded: regions of the county in which less than 20% of the residents self-identified as Latino. We identified 566 target-area stores for Internet or phone call verification. Those that were determined to be food stores or that were unable to be verified remained in the pool for in-person verification ( $n = 339$ ).

Following the same zip code criteria, a second search was conducted in the South Bay region, a non-target area for the future RCT; 119 stores were identified. These non-target-area stores were included in the formative research study to explore potential intervention strategies in greater depth.

Next, stores were visited in person to determine study eligibility: (1) customer base was primarily Latino; (2) employees were bilingual (English/Spanish language) or Spanish speaking; (3) has bilingual and/or Spanish-language in-store product signage and advertisements. In addition, *tiendas* were required to have serviced meat and fresh produce departments. The 339 target-area stores were randomly ordered, and 177 of these target-area stores were visited according to the randomly ordered list. Of these 177 target-area stores, 63 (35%) met initial eligibility criteria; 106 (60%) were ineligible; and 8 (5%) refused. Of these 63 initially eligible stores, 42 (67%) were screened, and 31 (74%) were approached for participation in a manager interview. Of the 199 non-target-area stores, 29 (24%) were approached; 15 (13%) were not approached due to study completion (met targeted sample size); and 75 (63%) did not exist. From the 29, 9 (31%) were deemed ineligible, resulting in 20 (69%) eligible non-target-area stores.

Managers were approached first at both target-area and non-target-area stores. After receiving their permission, all available employees in non-target-area stores only were recruited. Employee recruitment was limited to non-target-area stores to maximize the breadth of information collected and to prevent the potential to introduce bias associated with discussing intervention ideas among future potential control condition stores. Priority was given to employees within the serviced meat and/or prepared foods departments, as well as the cashier department; however, other *tienda* staff were also recruited. After a brief introduction to the study's purpose, research staff administered a short eligibility screener: (1) 18 years of age or older, (2) fluent in English and/or Spanish, (3) worked at least 30 hours per week for the *tienda*, and (4) employed at the *tienda* for at least six months.

Respondents who refused to be audio recorded were excluded from the study; no respondents refused to be audio recorded. All respondents provided verbal informed consent following protocols approved by the Institutional Review Board at San Diego State University.

### Data collection

An unstructured interview asked about (1) customers, (2) store management, (3) the produce department, and (4) employees. The non-target-area interview guides included additional questions on job characteristics (e.g., description of job duties, types of customer interactions), proposed intervention strategies (e.g., use of various POP materials such as reusable bags), and customer food-shopping behaviors and preferences (e.g., characteristics of a typical customer, the influence of price and promotions on purchasing). The 45-minute interviews were audio recorded. Demographic data were also collected. Audio files were transcribed verbatim by bilingual staff and retained in their original language for data analyses. A 10% random sample of interviews was checked for accuracy by listening to the audio and comparing it to the transcribed text. The interviews were then imported into ATLAS.ti (version 7.1.2) for data analysis purposes.

### Data analyses

A grounded theory approach was used to identify prominent themes, a theory-generating versus theory-testing approach (Creswell 2012; Strauss and Corbin 2007). Prominent themes were examined from the perspective of each respondent type and condensed to reflect each perspective adequately. Three of the co-authors, J. Sanchez-Flack (JCS), B. Baquero (BB), and G.X. Ayala (GXA) selected a random sample of transcripts from each respondent type for open coding to create an initial list of codes that captured overarching themes across the respondent types. This began the iterative process of conducting open coding on additional transcripts to allow the authors to modify the code list by the removal or addition of new codes or by refining a code (e.g., a code was deconstructed into subcodes). The code list was finalized once saturation was achieved and developed into a codebook. All codes were operationally defined and entered into a codebook, which included the code name, definition, and example of how the code was to be applied. All interview transcripts were then coded by JCS with the final codebook. To assess reliability, a 10% random sample of transcripts was coded by BB and GXA and compared with JCS. Discrepancies in coding were discussed until 100% consensus was achieved. Any significant coding discrepancies that occurred resulted in the recoding of all transcripts so that any new coding agreements could be incorporated into the analyses. Through memoing and content analysis, JCS identified prevalent themes from within the coded texts until triangulation of data successfully occurred by respondent type (manager and employee). Results were then summarized by respondent type and prevalent theme and used to discuss areas of convergence and divergence. All quantitative data were cross-checked and verified by GXA to ensure accuracy. Descriptive analyses, conducted in IBM SPSS Statistics (Version 20), were used to characterize the respondents.

## Results

### Recruitment of respondents

Of the 31 target-area *tienda* managers approached for interviews, 11 (36%) refused, and 1 (3%) completed only a partial interview, yielding 19 (61%) completed interviews. Sixteen of the 20 non-target-area *tienda* managers were approached for interviews. Three (19%) refused; one (6%) was ineligible; one (6%) was unavailable, and the study elected not to pursue two (12.5%) due to time limits, resulting in nine (56%) completed interviews. For employee recruitment, 17 were approached, 4 (23%) refused, and the study elected not to pursue three (18%) employees due to time limits, resulting in 10 (59%) completed interviews.

### Tienda and respondent characteristics

Per managers, the average area of *tiendas* was 7,045 square feet, and the average length of time the *tiendas* had been in operation was 20 years (Table 1). All employees and 60% of managers were of Latino descent. The two respondent types were of similar age (approximately 43 years old), and most of the managers and employees were male (64% and 60%, respectively). Most managers (43%) and employees (60%) reported interacting with customers for a majority of their day, and both reported working at the *tienda* for over five years.

### Prominent themes and dimensions

Three themes were revealed during analyses: (1) physical dimensions, (2) social dimensions, and (3) their intersection, labeled as dual dimensions (see Figure 1). The physical and social dimensions are factors within the *tienda* that either facilitate or prohibit the purchase of or the intention to purchase healthy food items. Physical dimensions were defined as built structures within the *tienda*, including tangible marketing materials (e.g., displays, floor stickers, reusable bags); social dimensions were defined as economic and socioculturally-driven concepts (e.g., price, family, health and nutrition, and customer service). These dimensions are consistent with existing theories illustrating the physical and social factors that can influence health behaviors (Glanz, Rimer, and Viswanath 2008). Perspectives on these various dimensions are presented in Table 2 by respondent type.

### Physical dimension: structural and tangible marketing materials

**Displays**—Managers and employees discussed the importance of displays within a *tienda* and the importance of their visibility. Putting a food item on display essentially highlights the item within the *tienda*, making it more obvious to customers. Therefore, displays need to be visually appealing. As one employee stated, “You need to make a good display right where everyone can see it. It needs to be pretty, it needs to be clean, and it also needs a pretty sign so that [customers] can see it.”

Respondents discussed how displays are attention grabbing, drawing the customers’ eye to the food item, making items more noticeable than other food items in the *tienda*. Some respondents suggested placing displays toward the front of the *tienda* given their visually-

demanding presence. In addition, respondents stated that displaying healthy products may help to increase sales because of a display's visual command.

**Floor stickers**—In the discussion of floor stickers as a POP item, responses varied by respondent type. Employees preferred floor stickers because of limited space. *Tiendas* are typically small, so arranging shelves, displays, cash registers, promotional materials, food items, and other products can be challenging. According to employees, creating a pleasant shopping experience for customers includes the designation of adequate space for customers to walk down the aisles comfortably. When asked why floor stickers were favored, an employee said, “When people are walking through, I think they will be able to see [the floor stickers] and ... because we don't have that much room, it's not that big of a store, and the aisles are really small.”

Managers, on the other hand, did not like floor stickers, noting that they were inconspicuous. Managers discussed how customers always rush around the *tienda* with their heads up versus down, looking at the floor. Many managers also disliked floor stickers because of their lack of functionality. For example, managers stated that floor stickers required additional maintenance because they often peeled off. This, thereby, takes time away from the myriad of other tasks to be done within the *tienda*.

**Reusable bags**—Managers and employees agreed that reusable bags would be an effective POP item to promote the purchase of healthy food. Reusable bags were considered both in terms of functionality and marketing potential. In terms of functionality, both respondent types stated the superiority of reusable bags to plastic and paper bags given that customers could use the bags to carry groceries as well as for other errands.

In terms of marketing potential, some managers discussed effective placement of reusable bags, similar to the discussion of displays, to make them more noticeable. For example, one manager suggested hanging reusable bags near refrigerated items. Some managers also discussed how reusable bags could be marketed as a gift from the *tienda*. In addition, employees shared ideas of how to incorporate healthy eating information on or within the reusable bags. One produce stocker suggested the following: “You can do a little promotion with (the reusable bags), to go green and also it's kind of convenient for the customer, you can have health tips on it ... (it's) where you can go to find more information.”

### **Social dimensions: economic and sociocultural**

**Price**—Both managers and employees deemed price the most influential factor in food-purchasing behavior, but each respondent type discussed price differently. Managers, for example, discussed price in terms of sales or customer savings. Most managers reported that customers focus on savings. Managers stated that customers like to purchase food items that are on sale and that if customers can see the amount they are saving, they are more likely to make that purchase. Some managers also reported that customers rarely buy food items for full price. For instance, one manager said, “When I see customers buying more healthy foods it's because it's on sale, it's cheaper. When you put it on regular price they won't buy it as much.”

Employees talked about price in terms of coupons. According to employees, coupons are particularly important to customers because many of them “are really tight on money and ... at the end of the month we see them counting pennies.” Many employees thought coupon dispensers would be effective in *tiendas* and reported that coupons for produce would be extremely effective. Employees noted that customers often want to purchase produce but do not because of price. This demonstrates that both managers and employees agreed that the price of food items, and potential savings, are important to customers.

**Family**—Both respondent types agreed that family was an important factor for customers during the *tienda* shopping experience. Most of the respondents said that customers are traditional, and therefore, the idea of family resonates while shopping. As customers are shopping, they are thinking about their family and which food items their family members would prefer. Some respondents limited their discussion of families to children. These respondents stated that when children are present, family becomes even more important while shopping. Compared to other family members, children have a bigger influence on the food-purchasing behaviors of customers. One butcher said, “A lot of families come here, lots of people with children. I’ve noticed that they always ask the children, ‘What do you want to pick out? What do you want me to buy?’ [Customers] take a lot of notice in what the children want. I’ve worked in grocery stores for a long time, and I’ve always noticed how people are with children. ‘What do you want me to cook for you? Do you like this? Do you not like this? You pick.’”

**Health and nutrition**—There were mixed responses by respondent type on the discussion of health and nutrition as a theme to promote the purchase of healthy food. Employees thought a health and nutrition theme would be effective because of its relevance to *tienda* shoppers. As one employee said, “A lot of times [customers] ask us how many calories are in something, how much fat, and how much salt.” Many employees reported that customers are consciously considering the nutritional content of food items purchased yet reported their own, and customers’, limited knowledge on the subject.

Managers on the other hand were split in their responses regarding a health and nutrition theme. Some managers saw health and nutrition as an important and potentially relevant theme to customers while other managers disagreed. Managers who were more skeptical of the health and nutrition theme discussed the need to first convince customers that they should care about health and nutrition. These managers stated that health and nutrition are not fundamentally important to customers. As one manager stated, “You have to convince [customers] of the quality and nutrition of your products. You have to say, ‘Do you know something? This is good for you, it’s good for your health to eat this.’ Convince them.”

**Customer service**—Both respondent types agreed that customer service is important to the *tienda* shopping experience. However, respondent types had varying views on the definition of customer service. Managers defined customer service as providing recommendations and informing customers of the various food items available in the *tienda*. Making a connection with customers through recommendations is vital in making sales. As one manager reported, “Suggestions [are important], but you can’t make too many suggestions because [customers] know I’m here to make business. But when making



suggestions, you have to be positive, tell them about the quality items you have. If you do that, you can sell rocks.” Managers also reported that an important aspect of customer service is directing customers to sales because, as discussed earlier, price and savings are important.

Employees viewed customer service as the entire *tienda* shopping experience, from when the customer enters the *tienda* to when they leave. Employees reported that it is important for all customers’ needs to be met and to ensure an overall pleasant shopping experience. This includes creating both a clean and inviting physical environment and a positive social environment where employees are happily greeting the customers. Employees explained that a pleasant shopping experience leads to more loyal and repeat customers.

### Dual dimensions: interactions within tienda departments

**Food demonstrations**—Food demonstrations were discussed positively by both respondent types. Respondents discussed how food demonstrations are effective in influencing purchasing. Trying a sample and enjoying the taste ultimately leads to the immediate purchase of the food item. In addition, some respondents discussed how food demonstrations also help with the continual sales of food items.

Respondents also discussed the appropriate uses of food demonstrations. All managers and employees discussed how food demonstrations are most effective with new food items. Some employees discussed how food demonstrations are effective not only for food items new to the *tienda* but also food items that are “new” to customers. One employee discussed this in terms of Chinese melons: “In my personal experience, it’s not like too foreign, but say [customers] are used to the regular watermelon ... you cut some open, Chinese melons, something that Latinos aren’t too used to, we sample those.” Food demonstrations for unknown foods are effective both in introducing the food and for sales according to employees.

Managers also discussed how food distributors often conduct demonstrations. For new food items, mainly nonproduce food items, distributors come to the *tienda* to set up a demonstration with tables, signage, and other promotional materials. As one manager stated, “The vendor will bring some-one over the weekend and give out samples of that product to get that product known.”

**Prepared foods**—Perspectives on prepared foods within the *tienda* varied by respondent type but were consistently positive. Managers viewed prepared foods as great sellers, mainly because of their convenience. Many managers discussed how customers are in a rush, so it is convenient for customers to just grab something from the prepared foods section. Most managers discussed prepared foods in terms of produce (e.g., fruit and/or vegetable salads). Some managers talked about the importance of making prepared foods visually appealing. As one manager said, “We prepare the mangoes so they’re neatly situated, we put it in a nice container with the fork attached, and you can’t imagine the magnitude to which it sells.”

Most of the managers also discussed how the convenience of prepared foods takes priority over cost. As discussed by many managers, prepared foods tend to cost more than

unprepared foods because of packaging and labor. Many of the managers believed that the additional cost was not an issue for customers because customers would pay extra for the convenience.

Employees also discussed prepared foods in terms of convenience. Like managers, employees viewed the customer shopping experience as rushed, and therefore, prepared foods offer a level of convenience that unprepared foods cannot. Many employees also discussed the convenience of prepared foods in relation to a lunch crowd—customers on their lunch break looking for something quick to eat. The level of convenience of prepared foods is important to customers and a motivator to purchase healthier prepared food.

## Discussion

The study objective was to contextualize the *tienda* shopping experience of Mexican-origin customers, from the perspectives of managers and employees, and to identify where perspectives converged and diverged. The three dimensions identified (physical, social, and dual) provide a framework for understanding the *tienda* shopping experience and for identifying potential avenues to pursue in the development of in-store interventions to improve the purchasing behaviors of Mexican-origin adults in the United States. These findings both support and extend current retail food environment research.

Similar to other research in this area, managers and employees indicated that displays are important in the shopping experience as they are highly visible and attention grabbing (Nakamura et al. 2014; Rose et al. 2010; Thornton et al. 2012). This supports the use of displays to promote the purchase of healthy food among Mexican-origin populations (Ayala et al. 2013). In addition to supporting current research, this study identified unique aspects of the physical consumer food environment to be studied in other populations and tested in future in-store interventions. Unique aspects include the use of reusable bags and floor stickers as POP items. The two respondent types identified reusable bags as a functional and effective marketing tool, highlighting their potential to promote the purchase of healthy food. Utilizing reusable bags to display the intervention's name or primary goals (e.g., increasing consumption of fruits and vegetables) has the potential to resonate with Mexican-origin shoppers. However, respondents differed on their perspectives of floor stickers. Employees perceived floor stickers as a functional marketing tool given the limited space of *tiendas*. Managers, on the other hand, saw floor stickers as a high-maintenance POP item, therefore creating additional work for store employees. In addition, many managers did not think floor stickers were even noticeable to customers. This conflicting perspective between managers and employees is an example of how potential *tienda* intervention strategies may be accepted or rejected by differing key constituents within the *tienda* environment. Such conflicting perspectives have the potential to undermine an intervention strategy, therefore limiting an intervention's potential adoption, implementation, and maintenance.

As for the social dimension, the current study and previous research have demonstrated that price is one of the most important factors influencing purchasing (Burns, Cook, and Mavoia 2013; DiSantis et al. 2014; Thow, Downs, and Jan 2014). Overall, managers and employees agreed that their customers will not purchase what they cannot afford and that discounts on

items motivate purchasing. This highlights the potential to develop intervention strategies that provide or highlight discounts on healthy foods to price these items as competitively as unhealthy foods. For example, one potential strategy is providing coupons for healthy foods such as produce (Duerksen et al. 2007). Family was another social dimension where the perspectives of the two respondent types converged. Similar to other research, all respondents stated that family, especially children, had a major influence on customer purchasing decisions (Baranowski et al. 2008; Wingert et al. 2014). Future in-store intervention research should consider marketing strategies that highlight the theme of family or that appeal to children. Previous *tienda* intervention work has demonstrated that a healthy-food marketing campaign is viable within these types of consumer food environments (Baquero et al. 2014). However, findings from the current study suggest that this approach needs to be taken one step further to appeal to Mexican-origin children and their families.

Perspectives on health and nutrition varied among respondents. Employees thought that the nutritional content of food items was important, but managers disagreed. This inconsistency reflects findings from previous research as well (Gittelsohn et al. 2012; Pitts et al. 2013; Song et al. 2011). Given the inconsistencies in the current study, and in the literature, more research is needed on the relevance of health and nutrition among Mexican-origin shoppers. Understanding the relevance of health and nutrition is critical for determining how best to begin promoting healthy food items, as well as for determining whether stores would even be willing to stock healthy food items (Gittelsohn et al. 2014). Store managers need to know there is a demand for a food item before stocking it for fear it will not sell (Gittelsohn et al. 2014).

Another notable aspect of the social environment was customer service. Both types of respondents differed on what aspect of customer service is important, yet both agreed that it is a key factor in the grocery shopping experience. This aligns with previous research findings and highlights an opportunity to educate employees on how to promote healthy products within their stores. This also demonstrates an opportunity to develop intervention strategies that focus on managerial and employee skills (Webber, Sobal, and Dollahite 2010). Focusing on managerial and employee skills may not only improve the purchasing behaviors of customers but also help with the overall business of a store. Almost three-quarters of service industry purchases are made by repeat customers (Rice, Austin, and Gravina 2009). Only 14% of customers change the location of where they shop because they are unhappy with a product; customers generally switch locations because they are dissatisfied with customer service (Rice, Austin, and Gravina 2009). Therefore, offering quality customer service is one way *tiendas* can survive in an increasingly competitive economy.

The last dimension, the dual dimension, identified two aspects important to grocery shopping behaviors. The first, food demonstrations, was said to be effective in influencing purchasing decisions and for introducing new food items. These findings are supported by previous research, which illustrates the potential effectiveness of using food demonstrations within an in-store intervention to encourage the purchase of healthy food (Ayala et al. 2013; Gittelsohn et al. 2007). Conducting food demonstrations where healthy food items are

promoted is suitable in engaging Mexican-origin customers in conversations about healthy foods, encouraging the purchase of healthy food, or even introducing new healthy items. Food demonstrations that are simultaneously led by intervention program staff and store staff may lead to maintenance of food demonstrations postintervention. The last notable factor within the dual dimension was that of prepared foods. Consistent with previous research, both respondent types agreed that prepared foods are convenient and therefore appealing to customers (Lee-Kwan et al. 2014; Noormohamed et al. 2012). In addition, it was noted that although the price of prepared foods matter, Mexican-origin customers are willing to pay a little more for convenience. This demonstrates an opportunity to further understand how healthy prepared food items can be effectively promoted given the rising popularity of prepared foods among Mexican-origin populations (Langellier et al. 2015). Last, understanding the relationship between price and prepared foods is important given the finding that Mexican-origin customers are willing to pay more for prepared foods. This relationship may give insight into what pricing strategies should or should not be utilized to promote the purchasing of unprepared healthy foods.

The study is limited by the small sample size. *Tiendas* are a challenging setting in which to recruit participants for a research study. Managers and employees are focused on their jobs, often filling multiple roles. Second, the exclusive focus on Latinos living on the U.S.-Mexico border restricts broad generalization to other racial/ethnic groups and other geographic regions. Third, to minimize the potential to introduce bias among store employees randomized to the control condition in Phase 2 of this study, employees were only interviewed at non-target-area stores. This limited the potential to collect additional data from employees at target-area stores. Despite these limitations, this study demonstrated strengths in its in-depth interviews that allowed for probing and rich contextual information on the grocery shopping experience. In addition, recruiting *tiendas* from throughout San Diego County, a county with a population of 3.2 million, increased confidence that the findings were not limited to specific *tiendas* or to a specific region of the county.

## Implications

*Tiendas* are a relatively new place for conducting research, but they are a place where Mexican-origin populations shop often, return regularly, and develop store loyalty. The physical and social dimensions of *tiendas*, particularly from the perspective of managers and employees, have received limited attention in the published literature yet, as shown in the current study, provide rich information for planning in-store interventions. The findings from the current study demonstrate the importance of seeking input from managers and employees and for developing targeted intervention strategies. Such targeted strategies include customer-service training to promote healthy foods and to maintain loyal customers, as well as implementing and maintaining healthy food demonstrations. In addition, strategies can be used whereby managers and employees are included in the development of structural-change strategies. This can include identifying which POP items fit the environment of the *tienda* and/or participating in the process of designing the POP items. If such processes are not feasible, all POP items chosen and developed by intervention program staff should be preapproved by managers and employees so that they are accepted and are practical to their stores. The various dimensions of a consumer food environment (physical, social, and dual)

are important to consider in terms of the perspectives of store managers and employees for the development of in-store interventions (Gittelsohn et al. 2007; Rose et al. 2010). Doing so will help to identify which dimensions are most relevant to specific consumer food environments and grocery shoppers, which in turn will help to identify potential avenues for intervention. Utilizing such an encompassing approach has the potential to positively alter the structure of the consumer food environment to influence purchasing behavior and has previously demonstrated success (Gittelsohn et al. 2014). Simply providing more access to healthy food may not change purchasing behavior when there are multiple sources of influence on this behavior (Larson and Story 2009); therefore, the complex behavior of grocery shopping needs to be approached from all relevant avenues.

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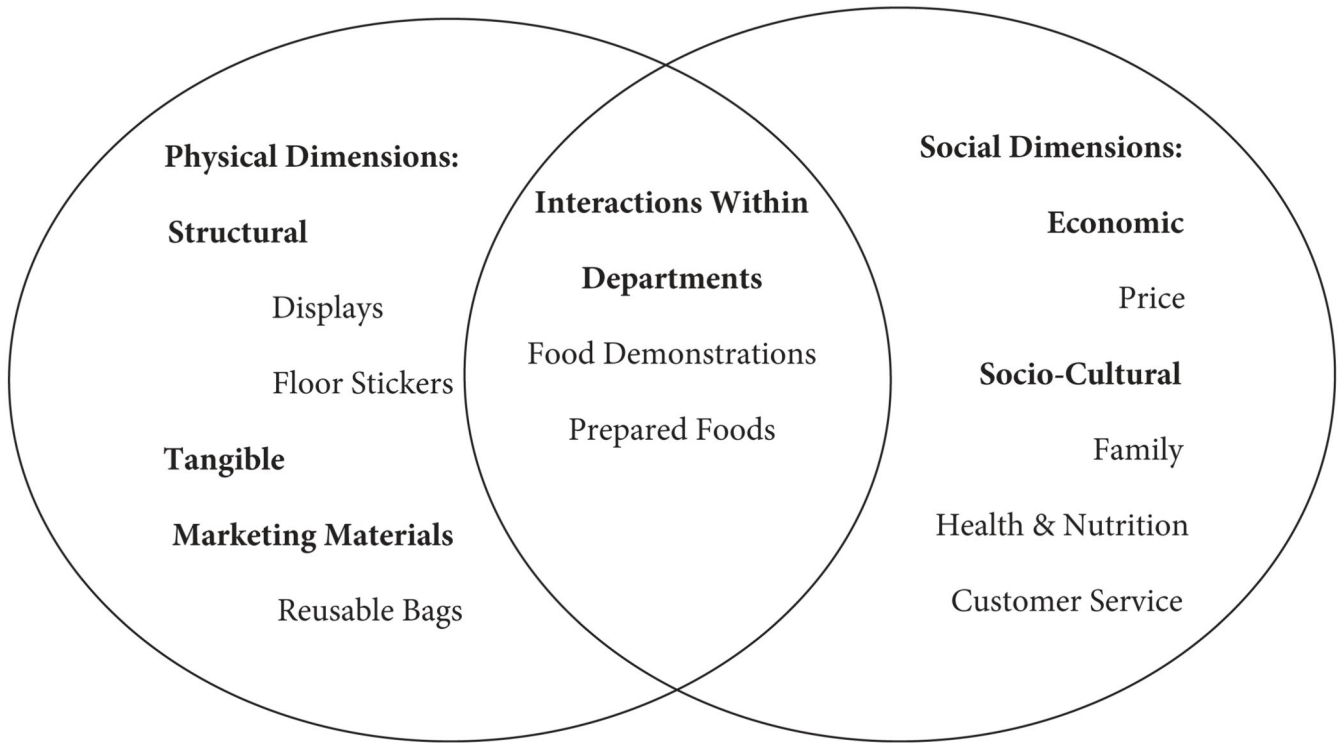
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**Figure 1.**  
Physical and social dimensions of *tiendas*.

**Table 1**Sociodemographic and Work-Related Characteristics of Respondents ( $N = 38$ ).

	Managers ( $n = 28$ )	Employees ( $n = 10$ )
	Mean (SD) or % ( $n$ )	
Age	42 (9.6)	42 (11.9)
Male	64% (18)	60% (6)
Education		
No high school	18% (5)	50% (5)
High school	29% (8)	30% (3)
> High school	54% (15)	20% (2)
Latino ethnicity	61% (17)	100% (10)
Spanish-language interview	57% (16)	80% (8)
Time spent interacting with customers		
One-quarter of the day	25% (7)	10% (1)
Half of the day	18% (5)	10% (1)
Three-quarters of the day	14% (4)	20% (2)
All day	43% (12)	60% (6)
Years worked at store	7 (6.3)	9 (6.2)

**Table 2**

Physical, Social, and Dual Dimensions by Respondent Type.

	Convergent themes		Divergent themes	
	Both respondent types	Managers	Employees	
Physical dimensions				
Displays: Physical structures that contain products.	Important for displays to be visible and attention grabbing.			
Floor stickers: Point-of-purchase material to affix to the floor with adhesive.		Inconspicuous and difficult to maintain.	Conducive to <i>tiendas</i> due to limited space.	
Reusable Bags: Cloth, plastic, or other material-type container that is used to carry groceries.	Functional and effective marketing tool.			
Social dimensions				
Price: The cost of a food or beverage item.		Sales and visible savings important to customers.	Coupons important to customers.	
Family: The influence of relatives on purchasing behavior.	Grocery purchasing decisions are influenced by family preferences.			
Health and nutrition: The consideration of the nutritional value of a food item.		Health and nutrition irrelevant to customers.	Nutritional content of food items important.	
Customer service: Interactions between customers, store employees, and/or managers.		Suggesting and promoting food items to customers.	Overall grocery shopping experience.	
Dual dimensions				
Food demonstrations: Distribution of prepared food samples to customers.	Effective in influencing purchasing decisions and for introducing new food items.			
Prepared Foods: Premade or pre-cut food sold within the <i>tienda</i> .	Convenience is more important than cost as it saves customer's time.			