

African Americans' Access to Healthy Food Options in South Los Angeles Restaurants

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Researchers and community activists have recognized the link between ecological factors (e.g., access to quality food) and the onset of medical conditions (e.g., cardiovascular disease, diabetes).^{1,2} Disparities exist across different neighborhoods in terms of access to healthy or higher quality foods; these disparities put certain communities at higher risk for illnesses. Studies have shown that neighborhoods with a higher proportion of African American residents have fewer supermarkets and fewer high-quality food options,^{3,4} as well as a disproportionate number of fast food restaurants.⁵

Numerous studies have demonstrated that regular consumption of fast food can lead to higher body mass index scores, which contributes to obesity and related illnesses.^{6,7} However, few studies have focused on the availability of healthy options in a community's nutritional resource environment.⁸ Meals purchased away from home continue to play an increasingly important role in American diets. Guthrie et al.⁹ reported that between 1977–1978 and 1994–1996, consumption of food prepared away from home increased from 18% to 32% of total calories consumed. Typically, meals purchased away from home contain high calorie content and large portion sizes.^{6,9,10} Health care providers and researchers have expressed concern that the increase in eating away from home has contributed to the growing epidemic of obesity in the United States.¹¹ Understanding the range of choices available in different communities may help public health advocates develop a strategy to reduce the adverse health effects of meals purchased away from home for groups at elevated risk within our society.

Individual food choices also are influenced by a sociocultural environment in which commercial advertising, marketing, and promotion attempt to influence the food and beverage

Objectives. We examined availability and food options at restaurants in less affluent (target area) and more affluent (comparison area) areas of Los Angeles County to compare residents' access to healthy meals prepared and purchased away from home. We also considered environmental prompts that encourage the purchase of various foods.

Methods. We designed an instrument to assess the availability, quality, and preparation of food in restaurants. We also assessed advertisements and promotions, cleanliness, and service for each restaurant. We assessed 659 restaurants: 348 in the target area and 311 in the comparison area.

Results. The nutritional resource environment in our target area makes it challenging for residents to eat healthy away from home. Poorer neighborhoods with a higher proportion of African American residents have fewer healthy options available, both in food selections and in food preparation; restaurants in these neighborhoods heavily promote unhealthy food options to residents.

Conclusions. Environment is important in understanding health status: support for the healthy lifestyle associated with lower risks for disease is difficult in poorer communities with a higher proportion of African American residents. (*Am J Public Health*. 2005;95:668–673. doi:10.2105/AJPH.2004.050260)

preferences and purchasing behaviors of target audiences. A growing body of literature documents cultural variations across the range of commercial advertisements that may contribute to health risk behavior disparities.^{12–21} A pattern of findings demonstrates significantly fewer advertisements for healthier food and beverage products (e.g., fruits, vegetables, and dairy products) in magazines and television shows that target African Americans specifically compared with those that target more general audiences. In addition, a significantly greater number of advertisements for unhealthy products (e.g., sodas, candy, and alcoholic beverages) appear in magazines and television shows that target African Americans.^{14,20} In the only “successful” litigation in this arena to date, General Foods settled a class action suit to address advertising of high-fat/high-sugar breakfast cereals with false claims of healthfulness that targeted low-income children of color.¹

An ecological approach to health promotion examines people's opportunities to choose. This approach includes health care

options, such as access to hospitals and other health care providers, and food services in the form of markets and restaurants. A rich resource environment provides greater opportunities for people to make choices that will lead to a healthier life.¹ Conversely, when nutritional resources are limited, such as in those areas researchers have termed “food deserts,” the environment makes it more difficult for residents to sustain any effort to eat a healthy diet.^{22,23}

The richness of an area's resource environment can be measured by the services offered and by residents' access to those services. We suggest that access to healthy options in a restaurant, in addition to counting the types of restaurants, is a critical measure of the richness of an environment that supports healthy living. We examined the availability of restaurants and food options within these restaurants in more affluent and less affluent areas of Los Angeles County. We hypothesized that residents in South Los Angeles (target area) would have fewer healthy options in neighborhood restaurants than residents of West

Los Angeles (comparison area). In addition, we examined the environmental prompts that encourage the purchase of various foods (e.g., point-of-sale posters and other print advertisements at the restaurants), postulating that healthy food choices would be promoted less in South versus West Los Angeles.

METHODS

Study Context

Community Health Councils, Inc., (CHC) is a nonprofit health advocacy organization that has been launching programs to involve community residents in discussions about the health care system in Los Angeles County for more than 10 years. In 1999, CHC initiated the African Americans Building a Legacy of Health coalition in an effort to bring together organizations and individuals to combat health disparities and issues of access to health care. CHC led this coalition's effort to apply for funding from the Racial and Ethnic Approaches to Community Health (REACH 2010) programming initiative of the Centers for Disease Control and Prevention.

CHC received a planning grant in 1999, followed by 4 years of funding, to institute a series of interventions in South Los Angeles, Inglewood, and North Long Beach, areas with high proportions of African Americans. The African Americans Building a Legacy of Health coalition identified several intervention areas and organized advisory groups that focused on organizational wellness, racial justice, education and prevention, and economic parity. University of Southern California (USC) and University of California at Los Angeles (UCLA) faculty and staff have served as evaluators of the project from its planning phase.

We conducted community assessment activities as part of the economic parity intervention. The economic parity advisory group is a fluid pool of individuals and organizations interested in improving the community's recreational and nutritional resource environments through community assessments and subsequent community development. An exemplar of community-based participatory research, members of the workgroup developed instruments, conducted

the assessments, and presented findings to their respective communities.

Area Descriptions

The research was predicated on the assumption that a community's nutritional purchases range beyond the area defined by a census tract. Some individuals within a community might have considerable travel restrictions that limit their mobility; others might travel well beyond any 1 zip code to eat at a particular restaurant. We decided on the zip code area as the unit of analysis on the basis of these assumptions. The study areas were made up of zip codes that represent neighborhoods with of a high proportion of African American residents (target area) compared with zip codes that include fewer African American residents (comparison area).

The target area consisted of 4 noncontiguous areas: 2 in South Los Angeles and 1 each in Inglewood and North Long Beach. The comparison area included zip codes in west Los Angeles. Restaurant surveys were used to inventory healthy food options in the selected target and comparison areas. Although these 2 areas were selected as part of the AABLH/REACH 2010 Project, they do not cover the entire AABLH project area. Because of the large number of restaurants, we confined our restaurant survey to specific zip codes within the larger AABLH project area to achieve a comprehensive inventory of restaurants within the specified areas (Figure 1).

In the target area, African Americans made up a significant portion of the population (35%) with moderate to low incomes (median=\$35 144). The difference in percentage of African American residents between the zip codes was broad, ranging from 14% in 90001 to 87% in 90305. The comparison area for this project had few African Americans (7.8%) and a higher median household income (\$47 697). However, for zip codes 90007 and 90001 in the target area and 90034 and 90035 in the contrast area, the proportion of African American residents was roughly the same.

Study Design and Data Sources

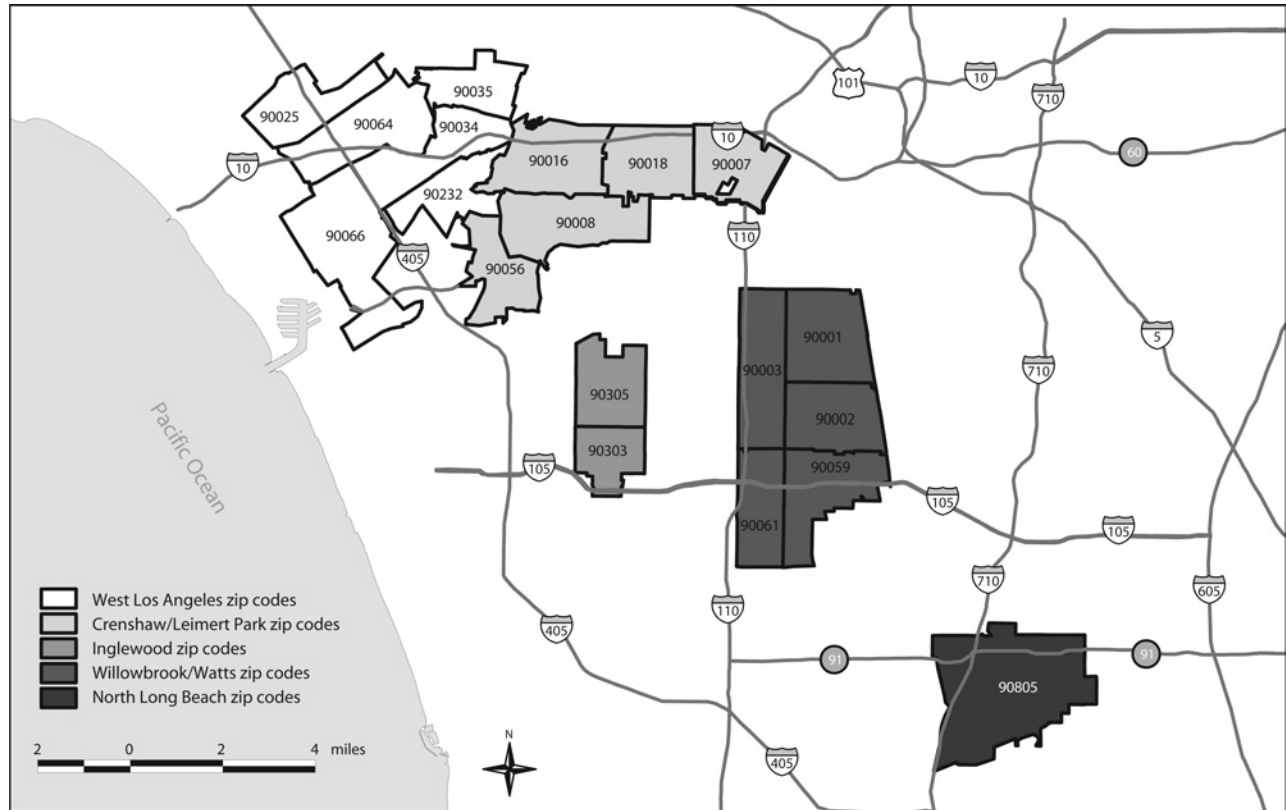
CHC created a "mini grant" process through which community organizations ranging from local churches to chapters of national African

American sororities could be granted small amounts of funding (up to \$5000) to assess restaurants in their communities. Through a competitive review process, 5 community organizations received funding to assess restaurants in the target area. The comparison area restaurants were assessed by students in the Master of Planning Program from USC. These students also conducted supplemental community inventories in the target area, as needed. All of the surveyors participated in the same training program, which served to reduce variation across surveyors.

A list of restaurants by zip code was extracted from an electronic database from each city's environmental health office. Surveyors were instructed to inventory at least 60 restaurants in their assigned zip codes; specifically, they were instructed to randomly survey 20 restaurants from each of the following 3 categories: fast food (i.e., food already prepared), fast casual (i.e., self-seating of patrons, food prepared after placing order), and sit down dining (i.e., hostess/wait staff seating, wait staff takes and submits order) restaurants. Surveyors noted that within some target area zip codes, the desired breakdown was impossible to achieve because of a lack of restaurants (i.e., not enough sit-down dining restaurants—a significant finding in and of itself).

After discussions with the AABLH coalition about what needed to be measured, justification for these measures, and related health issues surrounding restaurant use, we developed an instrument to inventory each restaurant. The questions covered issues identified by a literature search and community members to be crucial to understanding the healthiness of restaurants. The instrument was designed to assess the availability, quality, and preparation of food on the basis of a restaurant's menu to provide the least biased data. We used the menu as a source of information to allow for a standardized response to the questions and to obviate the need for interaction between the surveyor and restaurant employees. In addition, selected observational elements about the restaurant were assessed, including advertisements and promotions, cleanliness, and quality of service.

The instrument contained 21 main questions, some of which had multiple parts, for



Note. Adapted from Slone DC, Diamant AL, Lewis LB et al. *J Intern Med.* 2003;18:568-575.

FIGURE 1—Target and comparison neighborhoods, by zip code: Los Angeles, Calif.

a total of 62 separate questions. Items included information provided to the customer in the restaurant, such as pointing out healthy foods and providing nutritional information related to the selection. In addition, the instrument collected information about the types of food offered and options about healthy food preparation and whether customers could request a healthy alternative. Healthy food preparation options included the following: stir fry or sauté, broil, bake, boil, raw (no cooking needed), steam, roasted or rotisserie, grilled, or other (specify). Healthy menu options included the following: green salad, entrée salad, side order of cooked vegetables (without butter, cream, or oil), baked potato (without butter), brown rice, fresh fruit, fish, turkey burgers, soy/tofu, vegetarian, or other (specify). The survey also included questions about beverage options, meal prices, and store characteristics, such as access to parking, public transportation, cleanliness, and security.

Data Analysis

We used SAS, version 8.0 (SAS, Inc., Research Triangle Park, NC) to perform all statistical analyses; the results were presented in bivariate form. The bivariate significance tests used χ^2 and Fisher exact tests. The population data presented were taken from a compilation of US Census material provided by the United Way of Greater Los Angeles.²⁴ We used that population data and data from the US Economic Census for North American Industry Classification System number 7221 and 7222 to calculate ratios of restaurant to population.

RESULTS

Restaurant Environment

Table 1 provides a zip-code-by-zip-code comparison of the total population, African American population, and number of restaurants. The comparison area is home to a larger number of restaurants per population than the target area. According to the US Eco-

nomics Census, although the comparison area had 1 restaurant for every 542 residents, the target area had 1 restaurant for every 1910 residents. In addition, the census indicated that the 2 areas have very different restaurant profiles. The census distinguished between “full service” (i.e., customers order and are served while seated and pay after eating) and “limited service” restaurants (i.e., customers order and pay before eating, there are no wait staff, and services are limited).²⁴ Although 58% of the restaurants in the comparison area were full service, only 27% of the restaurants in the target area were full service.

We further explored this issue by examining local government online listings of restaurants in our target and comparison areas. We found that the average comparison area resident had 50% more restaurants to choose from than a resident in the target area.

We inventoried 659 of these restaurants (Table 2) in the 2 areas: 311 (47% of all restaurants listed in each city’s environmental

TABLE 1—Zip Code-by-Zip Code Comparison of Area Restaurants in South Los Angeles, Calif

	Zip Code	Population			No. Restaurants		
		Total	African American	%	Full Service	Limited Service	Total
Target area							
North Long Beach	90805	91 663	21 414	23	11	38	49
Inglewood	90303	27 773	10 746	39	4	10	14
	90305	13 763	11 975	87	1	3	4
Crenshaw/Leimert Park	90007	45 021	5 561	12	15	39	54
	90008	30 840	23 943	78	9	16	25
	90016	46 968	22 026	47	7	18	25
	90018	47 127	20 092	43	6	17	23
	90056	8 108	5 792	71	3	2	5
Willowbrook/Watts	90001	54 481	7 608	14	9	18	27
	90002	44 584	15 837	36	0	7	7
	90003	58 187	18 356	32	9	16	25
	90059	38 123	17 199	45	1	7	8
	90061	24 503	10 923	46	1	11	12
Total ^a (%)		531 141	191 472	36	76 (27%)	202 (73%)	278
Comparison area							
West Los Angeles	90025	41 170	1 230	3	70	51	121
	90034	58 199	8 573	15	20	24	44
	90035	27 792	3 428	12	28	17	45
	90064	24 489	594	2	73	43	116
	90066	55 194	2 130	4	29	23	52
	90232	15 175	1 304	9	16	15	31
Total ^b (%)		222 019	17 259	8	236 (58%)	173 (42%)	409

^a1 restaurant for every 1910 persons.
^b1 restaurant for every 542 persons.

TABLE 2—Restaurant Physical Environment Profile in South Los Angeles, Calif

	Target Area (n = 348)	Comparison Area (n = 311)	P
Restaurant type (%)			
Fast food restaurants	25.6	11.2	<.001
Restaurant environment (% excellent)			
Cleanliness	3.6	21.6	<.001
Customer service	3.9	22.8	<.001
Clear menu	5.5	25.5	<.001
First impressions	3.0	19.6	<.001
Parking	4.9	20.0	<.001
Public transportation	4.6	26.2	<.001
Safety/security	2.7	24.0	<.001

health office restaurant database) in the comparison area and 348 restaurants (43%) in the target area. (The Environmental Health Offices must survey restaurants annually, making it a

more accurate count of restaurants.) The comparison area clearly has a greater diversity of dining options than the target area. We inventoried more fast food restaurants in the target

area (25.6%) than in the comparison area (11.2%). More detailed analysis is needed to determine the effect of the greater number of fast food restaurants in the target communities. In particular, there is evidence that the majority of fast food restaurants (particularly the large chains, such as McDonald’s) are adding healthy menu options.

The target area restaurants were also significantly less likely than comparison area restaurants to receive high marks on assessments of the restaurant environment (i.e., what do customers experience or see when they arrive at a particular restaurant?) Here, fewer than 5% of the target area restaurants receive an “excellent” for cleanliness, customer service, first impressions, accessible parking, ease of access to public transportation, and safety/security (response categories were excellent, very good, average, fair, and poor).

Promotion and Availability of Healthy Options

Table 3 displays findings on the marketing or promotions and availability of healthy options. Diners were exposed to many more promotional prompts in the target area, with one third of the restaurants promoting specific items. However, those promotions were significantly less likely to be for healthy items than the smaller number of promotional items found in the comparison area. Comparison area restaurants were significantly more likely to make it easier for diners to find healthy food items by labeling them and providing nutritional information. Nine percent of the restaurants in the comparison area labeled healthy food options compared with 6.5% of the restaurants in the target area.

Restaurants in the 2 areas were significantly different in providing healthy options for diners. Comparison area restaurants were significantly more likely to offer options that were prepared in a healthier way (i.e., broiled instead of fried) and to offer a range of such options. In particular, almost 40% of the restaurants in the comparison area provided diners with 5 or more healthy preparation options compared with only 27% of the restaurants in the target area.

Similar results were noted when we explored healthier options on the menu. Some of

TABLE 3—Marketing and Availability of Healthy Options in Restaurants in South Los Angeles, Calif, Restaurants

	Target Area (n = 348)	Comparison Area (n = 311)	P
Marketing (% yes)			
Promotional advertisements	33.4	20.9	<.001
Healthy promotions	9.1	13.4	<.001
Healthy items labeled	6.5	9.1	<.05
Nutritional information	3.1	5.3	<.05
Availability of healthy options (% yes)			
5 or more healthy preparation options	27.2	38.8	<.001
5 or more healthier choice options	36.0	41.6	<.001

the items we looked for on the menus were a green salad, a side order of cooked vegetables, baked potato, brown rice, fresh fruit, fish (not fried), turkey burgers, soy or tofu dishes, and vegetarian entrees. Nearly 42% of the restaurants in the comparison area offered 5 or more of these healthy options compared with 36% of the restaurants in the target area.

DISCUSSION

Findings from our study indicate that communities in our target area offered a nutritional resource environment that makes it more challenging for residents to eat a healthy diet. Barriers to eating a healthy diet increase the risks for developing such conditions as obesity, cardiovascular disease, and diabetes. Our findings also support earlier research that US neighborhoods differ dramatically by race and socioeconomic factors in their out-of-home dining options. Poorer neighborhoods with a higher percentage of African American residents have fewer choices and more fast food restaurants. In addition, these restaurants heavily promote unhealthy food options to attract residents to eat in their restaurants and are significantly less likely to promote healthy items than restaurants in our comparison area. Our findings fit with a pattern that other researchers have found: African American communities are sites for promoting foods that do not support a healthy lifestyle.

Our findings go a step further by indicating that diners in the target area have fewer healthy options available to them in restaurants, both in the food selections and in food preparation. These findings have several implications. First, public health officials at-

tempting to improve the health of communities need to recognize that the environment in which residents live affects their ability to choose a healthier diet. In our target area, individuals may be motivated to eat better, but as demonstrated in a 2003 study of markets³ and now with our study of restaurants, residents do not have easy access to a wide range of healthy options. In addition, they are confronted by a barrage of prompts that encourage unhealthy options. Addressing these issues will require a variety of community advocacy strategies (e.g., conditional use business permits, advertising regulation, and labeling requirements).

Second, researchers need to study not only the number of fast food and other restaurants in a community but also the menu options available and promotional items once a customer enters the restaurant. As others have noted, fast food restaurants have responded to national concerns about obesity and are changing their menus to offer more healthy items. The issue is not simply a matter of restaurant categories (i.e., fast food versus other types of restaurants) but what menu options are available, the type of food preparation, and the customer's ability to make healthy substitutions (the latter of which was dismal according to our examination of restaurant menus).

Finally, health care providers and researchers have begun to understand and demonstrate that the nutritional resource environment is linked to individual health outcomes. Findings from the most recent Los Angeles County Health Survey indicate disproportionately higher rates of obesity, diabetes, hypertension, and cardiovascular disease in our target area than in the comparison area.²⁵

Limitations

The inventories used in this study were completed over a relatively long period of time, between 2002 and 2004. During that time, the atmosphere for healthier options was changing quite quickly. The inventories in the comparison area were conducted after those of the target area, which may have biased the findings. Moreover, the inventories were conducted as part of a community participatory research study that relied on community members to consistently and correctly record their inventories. Although CHC staff and evaluators trained community members to conduct the assessment, limited resources prevented us from verifying these data. Furthermore, we recognize that given our methodology, the results need to be replicated in other communities.

Some items were difficult for surveyors to categorize consistently. We found the clarity of menus was not equal, particularly when pointing out healthy options. However, the most difficult item was the category of restaurant. Surveyors struggled to distinguish between casual and sit-down restaurants. For this reason, we combined these categories and only reported on the distinction between fast food and other restaurants. In addition, the survey instrument was limited in that if an item was not mentioned on the printed menu, that information was lost. For example, if the restaurant offered a healthy special of the day, the item would not have been captured on the survey.

Conclusions

Our study examined the basis for the growing belief among health researchers that the environment is an important element in understanding the health status of American residents. We believe that our findings demonstrate the need to support further economic development in poorer areas and those with a higher proportion of African American residents by improving existing restaurants and by bringing new, health-oriented restaurants into the community so those areas can have a broader range of healthy options. Through these and other actions that expand access to healthy choice, we hope that the health disparities that plague our society will diminish, allowing all US residents to live longer and healthier lives. Further research needs to be conducted to replicate these findings in other

diverse cities and to distinguish the effects of race/ethnicity and income in determining the outcomes. ■

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Contributors

L. B. Lewis supervised the study and the data analyses. D. C. Sloane led the writing. L. M. Nascimento assisted with the study and helped complete the analyses. A. L. Diamant, J. J. Guinyard, A. K. Yancey, and G. Flynn assisted with the study and analyses. All authors helped to conceptualize ideas, interpret findings, and review drafts of the article.

Human Participant Protection

This study was approved by the University of Southern California's institutional review board.

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