

Promoters and Barriers to Fruit, Vegetable, and Fast-Food Consumption Among Urban, Low-Income African Americans—A Qualitative Approach

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To identify promoters of and barriers to fruit, vegetable, and fast-food consumption, we interviewed low-income African Americans in Philadelphia. Salient promoters and barriers were distinct from each other and differed by food type: taste was a promoter and cost a barrier to all foods; convenience, cravings, and preferences promoted consumption of fast foods; health concerns promoted consumption of fruits and vegetables and avoidance of fast foods. Promoters and barriers differed by gender and age. Strategies for dietary change should consider food type, gender, and age. (*Am J Public Health*. 2010;100:631–635. doi:10.2105/AJPH.2009.172692)

Diet-related chronic diseases—the leading causes of death in the United States^{1,2}—disproportionately affect African Americans^{3–7} and those having low income.^{8–10} Low-income African Americans tend to have diets that promote obesity, morbidity, and premature mortality^{3,4,11,12}; are low in fruits and vegetables^{13–18}; and are high in processed and fast foods.^{19–23}

Factors that may encourage disease-promoting diets include individual tastes and preferences, cultural values and heritage, social and economic contexts, and systemic influences like media and marketing.^{24–30} Because previous research on dietary patterns among

low-income African Americans has largely come from an *etic* (outsider) perspective, it has potentially overlooked community-relevant insights, missed local understanding, and failed to identify effective sustainable solutions.³¹ Experts have therefore called for greater understanding of an *emic* (insider) perspective through qualitative methods.³¹ However, past qualitative research on dietary patterns among low-income African Americans has been limited, focusing mostly or exclusively on ethnic considerations,^{28,29} workplace issues,¹⁰ women,^{32–38} young people,^{38,39} or only those with chronic diseases^{34,36,39,40} and neglecting potentially important differences by age and gender.^{31,41–43}

To build on prior research, we conducted interviews in a community-recruited sample using the standard anthropological technique of freelistings.^{44–46} Our goals were (1) to identify the promoters of and barriers to fruit, vegetable, and fast-food consumption most salient to urban, low-income African Americans and (2) to look for variation by gender and age.

METHODS

We conducted interviews in Philadelphia, Pennsylvania, in a community that was more than 95% African American with 20% of residents below the poverty level.⁴⁷ Select community members participated in the conduct of the study by reviewing and helping revise study documents, providing space to conduct interviews, and advertising the study, which we conducted during the summer and fall of 2008.

Sample

Study participants self-identified as African American adults aged 18 to 81 years living in Philadelphia. Because past literature suggests that 15 to 20 participants are adequate for the methods we used,^{48,49} we recruited 20 men and 20 women. Each gender group included 10 younger adults, aged 18 to 35 years, and 10 older adults, aged older than 35 years. (For the demographic characteristics of the participants, see Appendix Table 1A, which is available as a supplement to the online version of this article at <http://www.ajph.org>.)

Data Collection

The principal investigator (a White male physician) or a trained research assistant (an

African American female undergraduate student) conducted interviews during both daytime and evening hours in a classroom at a local high school. Study participants' age and gender did not differ significantly by other sociodemographic characteristics or by interviewer (see Appendix Tables 1A and 2A). All participants gave informed consent and received a \$15 gift card.

Participants verbalized “freelists” (stream-of-consciousness lists of single-word or short-phrase items) in response to visual cues (not available for publication because of copyrighted images, but available from authors upon request) and 6 different verbal prompts: “Tell me all the reasons you can think of that make it likely [unlikely], for you personally, to eat fruits [vegetables, fast foods].” Interviewers audio-recorded freelists and asked participants to clarify ambiguous items.

Data Analysis

Researchers edited participants' freelists with an established judgment rule⁵⁰ to divide compound items and collapse synonymous items. We strove to preserve intended meanings based on clarifying statements participants made after freelisting. Researchers imported edited freelists into Anthropic version 4983/X (Analytic Technologies, Natick, MA) to calculate Smith S,⁵¹ a measure of saliency, or importance, for each listed item.

RESULTS

For the whole sample (Table 1), taste or flavor promoted the consumption of all foods. Cravings promoted fast foods; preferences promoted fast foods and fruits but were barriers to vegetables. Cost and finances were barriers to all foods. Convenience and availability promoted fast foods but were barriers to fruits and vegetables. Health concerns promoted fruits and vegetables and were barriers to fast foods.

For subgroups (Table 2), men identified family or friends' influence as promoters of vegetables. For women, the concept of being part of a meal was a promoter of vegetables whereas lack of freshness was a barrier; cravings and cheating on diet were promoters of fast foods whereas the fat and sugar content in fast foods were barriers. For younger adults, the energy-giving quality of fruits was a promoter,

whereas having cooked something else already (convenience of alternatives) and schedule (time constraints) were barriers to vegetables. For older adults, ubiquity (being everywhere in the neighborhood) was a promoter of fast foods and bowel function (general digestive health) was a promoter of vegetables.

DISCUSSION

In our community-based interview study among low-income African Americans, we used freelistings to identify and prioritize *emic* (insider) perceptions of promoters and barriers to eating fruits, vegetables, and fast foods, with particular attention to differences by age and gender. The importance of taste,^{28,38,40,52} cost,^{28,29,36,38–40,52,53} convenience and availability,^{29,35,37–39,53} and health concerns^{37,53} is consistent with prior research, as are weight concerns²⁸ and considerations regarding cooking and meals for women.^{28,31} What is new is the influence of family and friends on men—who generally rely on women to shop, prepare meals, and make nutritional decisions²⁸—and the different importance of personal time during the life course (with time and convenience acting as an inhibitor of vegetable consumption only among young adults).

We used a novel method to identify salient influences on diet among urban, low-income African Americans. Taste, cost, health, and convenience and availability were generally salient among participants, but there were important differences in findings by food type, age, and gender. Future research should juxtapose and prioritize identified promoters and barriers to understand their relative and conditional importance. Resulting interventions, derived from such work that accesses *emic* perspective, may be more acceptable in African American communities and therefore more effective at producing sustainable changes toward improved health. ■

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TABLE 1—Top 20 Freelisted Promoters of and Barriers to Consumption of Fruits, Vegetables, and Fast Foods Among a Sample of Urban, Low-Income African Americans: Philadelphia, PA, 2008

Rating	Promoter	Smith S	Barrier	Smith S
Fruits				
1	Health and nutrition ^{a,b}	0.55	Cost and finances ^{a,b}	0.20
2	Taste or flavor ^{c,b}	0.40	Availability and convenience ^{a,b}	0.18
3	Vitamins and minerals ^{a,b}	0.24	Have at home or on hand ^{a,b}	0.14
4	Preferences and likes ^{a,b}	0.22	Craving or taste for ^b	0.14
5	Cost and finances ^a	0.09	Taste or flavor ^{c,b}	0.11
6	Bowel function ^a	0.09	Preferences and likes ^a	0.09
7	Energy-giving	0.07	Freshness ^a	0.09
8	Refreshment	0.06	Away from home	0.08
9	Naturalness	0.05	Allergies or sensitivities	0.07
10	Availability and convenience ^a	0.05	Variety or kinds ^a	0.06
11	Have at home or on hand ^a	0.05	Appearance ^a	0.05
12	Time constraints ^a	0.05	No reason	0.05
13	Balanced diet	0.03	Time constraints ^a	0.04
14	Have resources to grow	0.03	Time of year	0.04
15	Weather, warmth	0.03	Health or nutrition ^a	0.03
16	Essentiality or necessity ^a	0.03	Bowel function ^a	0.03
17	Family or friends' influence ^a	0.03	Weight concern ^a	0.03
18	Heaviness in the stomach ^a	0.03	Ease of preparing or serving ^a	0.03
19	Weight concern ^a	0.03	Value for money ^a	0.03
20	Alternatives better	0.02	Being everywhere	0.03
Vegetables				
1	Health or nutrition ^b	0.47	Preferences and likes ^{a,b}	0.23
2	Taste or flavor ^{c,b}	0.27	Cost or finances ^{a,b}	0.16
3	Vitamins and minerals ^b	0.20	Availability and convenience ^{a,b}	0.14
4	Preferences and likes ^a	0.13	Taste or flavor ^{c,b}	0.12
5	Part of meal ^a	0.12	Freshness ^a	0.10
6	Bowel function	0.10	Preparation style or quality ^a	0.10
7	Cost or finances ^a	0.09	Time constraints	0.09
8	Energy-giving	0.08	Having cooked already ^a	0.08
9	Essentiality or necessity ^a	0.08	Part of meal ^a	0.07
10	Family or friends' influence	0.07	Cravings or taste for ^a	0.07
11	Example to kids	0.07	Away from home	0.07
12	Availability and convenience ^a	0.05	Have at home or on hand ^a	0.06
13	Blood flow	0.04	Appearance	0.05
14	Protein	0.04	Contamination or safety	0.05
15	Weight concern	0.04	Ease of preparing or serving ^a	0.04
16	Upbringing, how raised ^a	0.04	Being everywhere ^a	0.04
17	Balanced diet	0.03	Allergies or sensitivities	0.04
18	Living situation, who cooks	0.03	Forced to, only option ^a	0.03
19	Longevity	0.03	Value for money ^a	0.03
20	Cravings or taste for ^a	0.03	Time of year ^a	0.03

Continued

TABLE 1—Continued

Fast Foods				
1	Taste or flavor ^{a,b}	0.34	Health or nutrition ^b	0.45
2	Availability and convenience ^{a,b}	0.25	Cost or finances ^{c,b}	0.28
3	Time constraints ^{a,b}	0.25	Weight concern ^b	0.27
4	Cravings or taste for ^{a,b}	0.21	Fat or grease content ^a	0.11
5	Preparation or serving ease ^b	0.17	Availability and convenience ^a	0.09
6	No energy or desire to cook ^b	0.14	Cholesterol	0.08
7	Cost or finances ^{c,b}	0.14	Having cooked already	0.08
8	Preferences or likes ^{a,b}	0.09	Sugar content ^a	0.08
9	Being everywhere ^b	0.08	Cravings or taste for ^a	0.07
10	Treat self, cheat on diet	0.06	Salt or sodium	0.06
11	Weekend or day of week ^a	0.06	Discipline	0.04
12	Away from home	0.05	Skin health, acne	0.04
13	Time of day	0.05	Essentiality or necessity	0.03
14	Upbringing, how raised	0.05	Full already, other food eaten	0.03
15	Preparation knowledge	0.04	Have at home or on hand	0.03
16	Satisfying quality	0.04	Heartburn, upset stomach	0.03
17	Fat or grease content ^a	0.04	High blood pressure	0.03
18	Hunger, appetite ^a	0.04	No reason	0.03
19	Filling or satiating	0.03	Same old stuff, tired of it	0.03
20	Value for money	0.03	Sickness	0.03

Note. Smith S is a measure of the item's saliency or importance. Total items per list are as follows: for fruits, 38 promoters and 39 barriers; for vegetables, 43 promoters and 36 barriers; for fast food, 39 promoters and 52 barriers. Mean items per list are as follows: for fruits, 4.2 promoters and 2.8 barriers; for vegetables, 4.1 promoters and 3.0 barriers; for fast food, 4.3 promoters and 3.9 barriers. Complete lists of freelisted promoters and barriers to consumption of fruits, vegetables, and fast foods are available in the appendix tables (available as a supplement to the online version of this article at <http://www.ajph.org>).

^aListed as both a promoter and a barrier (21 items [promoters or barriers] for fruits, 21 items for vegetables, 17 items for fast foods).

^bIndicates most salient promoters or barriers.

^cSalient as both a promoter and a barrier (1 item each for fruits, vegetables, and fast food).

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Contributors

S.C. Lucan conceptualized the study, conducted interviews, and led all aspects of data analysis and writing. F.K. Barg and J.A. Long assisted with conceptualizing the study, performing analyses, and writing and revising the article.

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Human Participant Protection

The institutional review board of the University of Pennsylvania approved this study.

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TABLE 2—Salient Promoters of and Barriers to Consumption of Fruits, Vegetables, and Fast Foods Among a Sample of Urban, Low-Income African Americans, by Gender and Age Category: Philadelphia, PA, 2008

	Men Only	Men and Women	Women Only	Younger Only	Younger and Older	Older Only
Promoters						
Fruits		Health or nutrition Taste or flavor Preferences or likes Vitamins and minerals		Energy-giving Cost or finances	Health or nutrition Taste or flavor Preferences or likes (4) Vitamins and minerals (3)	
Vegetables	Preferences or likes Family or friends' influence	Health or nutrition Taste or flavor	Part of meal Bowel function Vitamins and minerals	Part of meal	Health or nutrition Taste or flavor (3) Vitamins and minerals (2)	Preferences or likes Bowel function
Fast Food		Taste or flavor Time constraints (3) Availability and convenience (2)	Cravings or taste for Preparation or serving ease No energy or desire to cook Cost or finances Treat self, cheat on diet		Taste or flavor Time constraints (3) Availability or convenience (2) Cravings or taste for Preparation or serving ease Cost or finances (7) No energy or desire to cook (6)	Being everywhere
Barriers						
Fruits	Availability and convenience Having at home Away from home	Cost or finances Cravings or taste for Taste or flavor	Freshness	Cravings or taste for Preferences or likes Away from home	Cost or finances Availability and convenience	Having at home Taste or flavor
Vegetables	Availability and convenience	Cost or finances (2) Preferences or likes (1)	Freshness Taste or flavor	Taste or flavor Having cooked already Time constraints Freshness	Preferences or likes (2) Availability and convenience (3) Cost or finances (1)	Part of meal
Fast Food		Health or nutrition Cost or finances (3) Weight concern (2)	Sugar content Fat or grease content		Health or nutrition Weight concern Cost or finances	

Note. Items are listed in decreasing order of saliency. Shared items are listed in order of saliency for men or younger adults (18–35 years). Numbers in parentheses for shared items indicate order of saliency for women or older adults (>35 years).

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Effects of Work Permits on Illegal Employment Among Youth Workers: Findings of a School-Based Survey on Child Labor Violations

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We compared self-reported child labor violations between teenagers with and without work permits. Data were obtained from a school-based survey of working teenagers in 16 randomly selected high schools in North Carolina. We examined associations between work hour violations (performance of illegal tasks), and possession of a work permit. Work permits appear to be protective against performance of illegal tasks but not against work hour violations, demonstrating the need for stricter enforcement policies and improvements in work permit screening processes. (*Am J Public Health*. 2010;100:635–637. doi:10.2105/AJPH.2009.160812)

North Carolina is one of 41 states requiring working minors younger than 18 years to obtain work permits.¹ To date, there have been no systematic evaluations of existing federal and state work permit regulations designed to protect young people from the deleterious effects of illegal employment.² Although 1 study revealed that 40% of adolescents were working in violation of work permit requirements and 2% to 11% were working in violation of hour provisions, that study lacked an adequate sample size of adolescents younger than 16 years, thus violations in this subcategory were underestimated.³

We examined differences in self-reported work hour violations and hazardous order

violations between teenagers in North Carolina with work permits and those without permits. Findings such as those from this study have implications for interventions and policies related to youth workers in other states that mandate the issuance of work permits.

METHODS

Cross-sectional surveys of students from 16 high schools in North Carolina were conducted in fall 2005. Details of the survey methods and the sociodemographic variables assessed are described elsewhere.⁴ Respondents reported whether they had a work permit for the paid job in which they had worked the most hours in the 2 years prior to the survey (they could also respond “don’t know”). They were asked to refer to this job when responding to all questions related to work experience.

Hazardous order violations were defined as performance by adolescents younger than 18 years of any of 11 illegal tasks and use of equipment prohibited by North Carolina and federal child labor laws. Work hour violations were defined as reported violations of the daily and weekly work hour standards for adolescents aged 14 to 15 years and of hour restrictions on school nights for adolescents younger than 18 years.

Teenagers younger than 16 years were queried about work during and outside of the school year. In the case of working late on a school night, we applied the federal and state standard of working no later than 7 PM for adolescents younger than 16 years⁵ and the state standard of 11 PM for adolescents aged 16 to 17 years.⁶

We weighted our data to adjust for differences in selection probabilities.⁷ Using survey logistic procedures and SAS software,⁸ we conducted univariate analyses to test the effects of work permits on violations.

RESULTS

The sample consisted of 844 eligible working students. We calculated response rates using the Council of American Survey Research Organizations method, which adjusts for the number of ineligible nonrespondents; our response rates ranged from 73.8% to 86.6%. Details on response rate