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Retailers' Perceptions of FDA Tobacco Regulation Authority

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Human Subjects Statement

This research was approved by the Institutional Review Board at the University of Southern California (HS#13-00647).

Conflict of Interests Statement

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Abstract

Objectives: Research is limited on tobacco retailers' perceptions of the Food and Drug Administration's (FDA) tobacco regulatory authority overall, and less exists related to retailers in predominantly African-American or other racial/ethnic neighborhoods. We assessed differences in perceptions of the FDA's tobacco regulatory authority and barriers to compliance among retailers in African-American and non-African-American neighborhoods in Los Angeles, California.

Methods: Overall, 700 tobacco retailer interviews assessed demographic characteristics and perceptions of the FDA.

Results: Retailers in African-American neighborhoods self-identified as Hispanic/Latino (43.9% vs 39.6% non-African-American), African-American (21.2% vs 2.6% non-African-American) or Asian (19.7% vs 19.5% non-African-American). Retailers in African-American neighborhoods were significantly less likely to perceive the FDA as a trustworthy source ($p = .03$; vs non-African-American), but more likely to report that they do not know the federal rules ($p = .002$), do not understand the federal rules ($p = .004$), and that tobacco companies encourage them not to follow the federal rules ($p = .04$).

Conclusions: Tobacco control agencies can use this information about retailer perceptions to design education/training materials in order to increase trust, mitigate barriers, and enhance compliance.

Keywords

tobacco retailers; tobacco control; compliance; retailer perceptions

Overall smoking prevalence among adults in the United States (US) has declined in recent years; however, current (every day or some day) cigarette use among African-American adults aged 18 years and older is slightly higher (14.9%) than the national average (14.0%).¹ Research²⁻⁴ suggests many contributing factors including African Americans may have less access to smoking cessation resources,² and more access to combustible tobacco products, via exposure to a dense concentration of tobacco retail stores in predominantly African-American neighborhoods.⁴ Since the Attorney General's Master Settlement Agreement⁵ in 1998, in which 7 major tobacco companies agreed to limit tobacco advertising that could expose youth through magazines, events, and billboards, tobacco advertising has focused largely on the retail environment, capturing about 92% of advertising expenditures.⁶ Specifically, more marketing for menthol cigarettes in the retail environment has been documented in predominantly African-American neighborhoods, which may have contributed to an estimated 80% of African-American smokers preferring menthol cigarettes.^{2-4,7}

Notably, the 2009 Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act)⁸ contains several marketing and sales provisions related to the retail environment, such as changes in sales practices (eg, requiring face-to-face product sales and prohibiting the sale

of single cigarettes and self-service displays (except in adult-only facilities), a ban on flavored cigarettes (except menthol cigarettes), and bans on the sale or distribution of tobacco product promotions (eg, brand-identified non-tobacco item). Thus, tobacco retailers located in African-American neighborhoods play a significant role in tobacco product availability/access and retailers' compliance with the Tobacco Control Act can potentially impact African-American consumers.

Few empirical studies have examined retailers' perceptions of compliance with federal regulations, or whether retailers' perceptions vary by the racial/ethnic neighborhood in which the stores are located. To advise the Food and Drug Administration's (FDA) tobacco retailer compliance and enforcement effort under the Tobacco Control Act, in the current study, we sought to: (1) describe and compare the sociodemographic characteristics of tobacco retailers in predominantly African-American and non-African-American neighborhoods in Los Angeles County; and (2) analyze differences in retailer perceptions of the FDA as a regulator of tobacco products and of barriers to compliance with regulations. Los Angeles County has a racially/ethnically diverse population and history of strong tobacco control laws at the state and local levels. Retailer compliance with these regulations is an important step in protecting the public from tobacco-related risks.

METHODS

Study Sample

The target sample was 700 stores with tobacco retailer licenses in Los Angeles County. A cross-sectional study design was employed. Small, independent stores were classified into one of 5 categories: (1) convenience with or without a gas station; (2) beer, wine, and liquor; (3) grocery/discount stores that primarily sold food; (4) tobacco-focused; and (5) others, such as donut shop. Excluded from this study were pharmacies, big chain markets/supermarkets, and vape shops.

Table 1 presents the threshold adopted in this study for zip code selection for each of the 4 racial/ethnic neighborhoods (Hispanic/Latino, African-American, non-Hispanic white, and Korean-American). The percent ethnicity and median household income of Hispanic/Latino, African-American, non-Hispanic white, and Korean-American neighborhoods are different in Los Angeles County for each neighborhood; therefore, thresholds were established based on those 2 criteria of each target population in Los Angeles County. For example, Los Angeles County has 8.7% of its population that identifies as being African American. So, for a zip code to be included in the African-American neighborhood, it had to have more than 30% of its residents that identified as African-American and have a median household income of \$42,000. Based on these thresholds, zip codes were selected for each neighborhood.⁹

We used a 2-step approach for the selection of retail stores from each of the 4 racial/ethnic neighborhoods. For step one, all zip codes that met the threshold described in Table 1 were included and grouped by ethnic neighborhood. The selected zip codes in each ethnic neighborhood were then rank ordered by percent of that specific ethnicity.⁹ For a zip code selected for more than one ethnic neighborhood, its ranks across different ethnic

neighborhoods were compared. That zip code was selected by the neighborhood in which it was ranked higher. For example, if zip code A met the threshold for both African-American and Korean-American neighborhoods and was ranked higher in the African-American neighborhood, that zip code was selected for the African-American neighborhood. For step 2, retail stores were randomly selected from ranked zip codes using the California Department of Tax and Free Administration list of stores with tobacco retailer license.¹⁰

Data Collection

Retailer interview survey.—Between January 2016 and April 2017, trained community health workers (CHWs) from each identified ethnic neighborhood completed retailer interviews (N = 700) on-site, in stores located in predominantly African-American (N = 200) and non-African-American (N = 500: Hispanic/Latino N = 200; Korean-American N = 100; non-Hispanic white (N = 200) zip codes in Los Angeles County. Storeowners, managers, or clerks in identified stores were eligible to participate and provided consent to complete a 75-question survey that lasted up to 20 minutes. The CHW interviewed one person per retail outlet and the survey was administered in the retailer's preferred language, using an electronic tablet. At least one of the 2 CHWs that administered the survey in each store visit represented the predominant race/ethnicity of the neighborhood and/or spoke the language of the retailers. Retailers were compensated with a \$75 gift card for participating in the interview and received a leave-behind packet that contained FDA tobacco compliance information (English, Spanish, and Korean).

Measures

Retailer characteristics.—Retailer characteristics included respondent age, race/ethnicity, sex, languages spoken at home (English, Spanish, Korean, Armenian, Arabic, Russian, other), education (graduated high school or no), English reading ability (excellent, okay, poor), store position (owner, manager, clerk, other) and current cigarette smoking status (every day, some days, not at all).

Store type.—Store type included gas/convenience, liquor, grocery, discount, tobacco, and other (eg, donut shop/bakery).

Retailer beliefs about the FDA and perceived barriers to compliance with retail marketing and sales federal regulations.—Retailers were asked to report whether they thought the FDA was a trustworthy source of information on tobacco rules (yes/no/do not know) and if they believed the FDA has the right to regulate the sale of tobacco products in their store (yes/no). Retailers also were asked to report potential barriers to compliance with FDA and government tobacco control rules, by asking: "What can make it hard for you to follow FDA/Federal government tobacco rules?" (check all items that apply (later each item was recoded yes or no): (1) no access to educational materials; (2) customers want me to sell singles or get free samples; (3) do not know the rules; (4) do not understand the rules; (5) received pressure from tobacco distributors that come to my store; (6) tobacco companies encourage tobacco retailers not to follow the FDA rules; (7) receive too much information from different sources that confuse me; (8) information is not offered in the language I understand the best; (9) other; and (10) none of the above.

Preferred sources and language of communication regarding FDA tobacco regulation.—Retailers were asked: “Which of the following could help you or others follow FDA tobacco rules” (check all items that apply (later each item was recoded yes or no): (1) educational materials/training/webinars; (2) enforcement of the rules; (3) learning more about what happens if I do not follow the rules; (4) checklists or posters with the rules by the checkout counter; (5) other; and (6) none of the above. Retailers were also asked in which language they would prefer to have FDA and government tobacco rules explained in (English, Korean, Spanish, Armenian, Arabic, Russian, or other).

Data Analysis

We used frequency distributions and cross-tabulations for statistical descriptions of retailers’ demographic factors, store environment factors, and retailer opinions on FDA tobacco regulation authority of retailers in African-American and non-African-American zip codes. Chi-square analyses were performed to examine associations among all categorical variables. Fisher exact p-values were reported when more than 25% of the cells were less than 5. For languages spoken at home, chi-square analyses were only performed when there were sufficient data. Associations were considered statistically significant at the p-value of $<.05$. Data were analyzed using SAS version 9.3 (SAS Institute Inc., Cary, NC).¹¹

RESULTS

Retailer Characteristics

Table 2 shows the total number, proportion, and chi-square comparisons of selected retailer characteristics across African-American and non-African-American zip codes. Among the 700 stores in all zip codes, most retailers were male (64.0%), with a mean age of 43 years (SD = 13.7). Among the 200 respondents interviewed in African-American zip codes, the largest proportion identified their race/ethnicity as Hispanic/Latino (43.9%), followed by African-American (21.2%), and Asian (19.7%). Similarly, among the 500 respondents interviewed in non-African-American zip codes, 39.6% identified their race/ethnicity as Hispanic/Latino, followed by non-Hispanic white (25.0%), and Asian (19.5%). The majority of retailers in African-American and non-African-American zip codes had a high school degree or equivalent, 84.3% and 84.8%, respectively. Approximately, 2/3 of retailers in African-American (65.3%) and non-African-American zip codes (67.4%) reported excellent ability in reading in English. Retailers in African-American and non-African-American zip codes were similar in the proportion that were an owner, manager, or clerk and in personal cigarette use. No statistically significant differences were found between store zip code for respondent sex, high school education, language spoken at home, store position, or personal cigarette use. There was, however, a statistically significant association between store zip code and retailer ethnicity ($p = .001$), where 21.2% of retailers were African-American and 8.1% were non-Hispanic white in African-American zip codes, compared to 2.6% and 25.0%, respectively, in non-African-American zip codes.

Store Type

Overall, most stores were convenience stores (37.6% in African-American vs 35.3% in non-African-American zip codes) or grocery stores (29.4% African-American vs 27.4% non-African-American zip codes).

Retailers' Perceptions and Barriers on Compliance

Table 3 describes the number, proportions, and chi-square comparisons of retailer perceptions of the FDA as a tobacco regulator. There was a statistically significant association between store zip code and whether retailers thought the FDA was a trustworthy source of information ($p = .03$), where fewer retailers in African-American zip codes thought the FDA was trustworthy (56.3% African-American vs 61.6% non-African-American). The association between store zip code and whether retailers thought the FDA had the right to regulate tobacco products was not statistically significant ($p = .52$). Approximately 30% of retailers in African-American and non-African-American zip codes did not think the FDA had the right to regulate tobacco products. There were also statistically significant associations between store zip code and what retailers thought made it difficult to follow rules, including: 'do not know the rules' (18.6% African-American vs 10.0% non-African-American, $p = .002$); 'do not understand the rules' (11.0% African-American vs 5.0% non-African-American, $p = .004$); and 'tobacco companies encourage retailer not to follow the rules' (3.5% African-American vs 1.0% non-African-American, $p = .04$).

No statistically significant differences were observed between store zip code, ethnicity and retailer perceptions of the sources of information they believed could help them follow FDA and government tobacco rules. Overall, 49.3% of retailers indicated educational materials from the FDA would help, 44.0% identified checklists or posters with the rules by the checkout counter, 30.0% suggested trainings/webinars, and 27.3% reported it would help if they learned about what happens if the rules are not followed. Retailers in non-African-American zip codes were more likely than those in African-American zip codes to report that none of the items listed would help them follow the rules (13.0% non-African-American vs 6.5% African-American, $p = .01$). In 'other' sources of information that could help retailers follow FDA tobacco rules, retailers suggested letters from the FDA, listening to media that will update them, more transparency by the FDA, instore FDA visits, rules printed on cigarette cartons/packs, and rules printed on store window displays. Slightly over half of retailers in African-American and non-African-American zip codes preferred English language for the information explaining FDA tobacco rules ($p = .002$) (58.5% in African-American zip codes; 53.4% in non-African-American zip codes), followed by Spanish preference (20.1% in African-American zip codes; 17.5% in non-African-American zip codes), and lastly Korean (9.6% in African-American zip codes; 9.5% in non-African-American zip codes).

DISCUSSION

This study adds to our understanding of perceptions of regulatory authority among tobacco retailers and suggests that tobacco retailer perceptions of the FDA differ between retailers of

stores in African-American and non-African-American neighborhoods. For example, retailers in African-American neighborhoods are less likely than other retailers in this study to believe the FDA is a trustworthy source of information on tobacco rules. They are more likely than retailers in non-African-American neighborhoods to identify the following barriers to tobacco regulatory compliance: they do not know the rules; do not understand the rules; and for a small number of respondents, they report the tobacco companies encourage them not to follow the rules. Lastly, significantly more retailers in non-African-American neighborhoods compared to African-American neighborhoods reported none of the items listed would help retailers follow the rules.

A higher percentage of African-American retailers in African-American zip codes were reported compared to the proportion of African-American retailers in non-African-American zip codes, which may explain lower levels of trust in the FDA. Documented historical accounts have shown how African-Americans have been directly harmed by US government agencies, which may influence the attitudes, beliefs and perceived trust in the FDA among African-American retailers. A qualitative study¹² conducted with African-American stakeholders in Los Angeles to understand their views of the trustworthiness of the FDA to regulate tobacco products revealed an immense distrust in the FDA, and contributing factors included influence by the tobacco, agricultural, and pharmaceutical industries, and lacked technical capacity and competence to regulate tobacco products.

Our results can inform tobacco control practitioners in the development of educational strategies that can be used to reach and inform retailers about FDA rules. Only half of the respondents thought that FDA educational materials would improve compliance. These materials could be focused to help with barriers to compliance they identified, such as not knowing or understanding the rules. Their views regarding the credibility of the FDA support previously published work.¹³ In a nationally representative adult survey, respondents reported that the FDA was moderately credible in regulating tobacco.¹³ In a similar study, retailers in neighborhoods with more African-American residents were more likely to report that not having a formal source of information about regulations, and making changes to how tobacco is sold, hurts their business.¹⁴ Collectively, these findings and literature suggest there may be racial and geographic disparities that exist in the dissemination of FDA tobacco control rules, and information on how to implement those rules without losing profit. Key areas for exploration may include examining access to FDA rules or communication of these rules across geographic racial/ethnic areas, retailer preferred language, and cost-benefit analysis of business practices that comply with regulations. Increasing visibility of the FDA and enhancing communication between retailers and FDA could potentially improve the trustworthiness of the FDA.

None of the types of educational methods and materials listed in this study's survey were favored by a majority of retailers as being potentially helpful in following FDA tobacco rules. (eg, educational materials, trainings/webinars, checklists or posters). Some points made by retailers for 'other' sources of information that could help retailers follow FDA tobacco rules included letters from the FDA, listening to media that will update them, more transparency by the FDA, in-store FDA visits, rules printed on cigarette cartons/packs, and rules printed on store window displays. Whereas these are not suggestions by the majority,

they open up a list of additional sources that could be assessed in planning retailer education. In the current study, retailers were mostly from small independent stores without corporate educational materials on regulations or time off for training, so their time and access to regulatory education may be limited. Future assessments could explore whether monetary incentives such as tax breaks or reduced licensing fees could increase training and compliance with FDA tobacco rules.

This study had several strengths. It included a large sample size of retailers and their stores operating in a geographic area that has a level set of regulations affecting all stores uniformly. Furthermore, it is one of the few studies that includes retailer opinion about FDA as a tobacco regulator. It analyzed respondent views by the race/ethnicity of the neighborhoods in which they work, thereby identifying potential discrepancies. Future research may determine if differences in perceptions and barriers to compliance may reside in conditions unique to those neighborhoods, such as less trust in regulatory authorities, or increased likelihood that tobacco companies in African-American neighborhoods would say that regulatory compliance is not needed, compared to other neighborhoods.

One of the FDA's priorities is to understand tobacco related risks for vulnerable populations, including youth and racial/ethnic populations. It has developed education efforts directed at retailers including age of sale cash register signage, posters, stickers, and instruction booklets that are sent to all retailers.¹⁵ The current national tobacco educational program, *This is our Watch* includes a toolkit of resources for retailers.¹⁵ Additional resources are available to retailers, including online training videos, webinars, companion guidance documents related to compliance, and an age calculator smartphone application.¹⁵ To our knowledge, there are no available data on the current program's impact in neighborhoods of color. Future research could assess this program's overall impact in retailers in different neighborhoods including those in neighborhoods of color.

Limitations

This study was a cross-sectional study, so measuring outcomes at multiple time-points was not possible. Stores in the various neighborhoods were not equitably observed before and after the FDA's 2016 deeming rule that expanded regulations to alternative tobacco products, so compliance with the post-deeming rule was not assessed. The 'other/multi-race' in the race/ethnicity of the retailer variable was excluded from the analyses due to sparse data. It is unknown whether retailers live in the neighborhoods in which they work in. If retailers do live within the neighborhood of their store, then they may have a deeper understanding of what is going on in that neighborhood and reasons why certain behaviors/health conditions are having an impact. Lastly, the sample in the current study may not be representative of retailers that have tobacco outlets located in African-American or non-African-American neighborhoods that are above median household income.

IMPLICATIONS FOR TOBACCO REGULATION

Most tobacco retailers perceive the FDA as a credible source of information on tobacco rules. However, a lower proportion of tobacco retailers in African-American neighborhoods do so compared to other neighborhoods. Increasing retailers' knowledge of the Tobacco

Control Act and regulations at the point-of-sale, in addition to improving retailers' trust in the FDA's regulatory role, may mitigate barriers and improve compliance, especially among retailers in African-American neighborhoods.

Our findings could assist future tobacco regulation researchers, tobacco control practitioners, and FDA communication efforts with vulnerable neighborhoods and tobacco retailers. Retailers play an essential role as the gatekeepers between the distributors of tobacco products, and the residents of the neighborhood. There are some forms of education and some perceived barriers to compliance that could be addressed, especially in African-American neighborhoods. Retailers' understanding of and opinions about FDA tobacco regulations may influence implementation of the Tobacco Control Act provisions.

There are future directions for empirical research that can enhance these results. Follow-up observations could document whether compliance improves over time as retailers become more familiar with them. The low rate of support for existing and proposed forms of FDA education suggest there needs to be better understanding of educational approaches that would be more regarded as more effective among retailers. Content and imagery of FDA information and other messages should be further explored (eg, qualitative and culturally appropriate methods). Lastly, local governments and FDA could develop materials/sources of information based on adequate input from local residents who have experience with living in the neighborhood and knowledge of neighborhood history.

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Percent Ethnicity and Median Household Income in Los Angeles County, and Established Thresholds

Table 1

	Los Angeles County			Thresholds	
	Total Number	Percent Ethnicity	Median Household Income	Percent Ethnicity Threshold for each Racial/Ethnic Zip Code Cluster	Median Household Income Threshold for each Neighborhood (Rounded to the nearest thousand)
Total Population	9,818,605	-	\$55,909	-	-
Korean- American	216,501	2.2%	\$49,753	Above 10%	\$50,000
African- American	856,874	8.7%	\$42,071	Above 30%	\$42,000
Non-Hispanic White, not Hispanic or Latino	2,728,321	27.8%	\$71,768	Above 50%	\$72,000
Hispanic or Latino (of any race)	4,687,889	47.7%	\$44,989	Above 80%	\$45,000

Number and Percent of Tobacco Retailers in African-American Neighborhoods and in non-African-American Neighborhoods

Table 2

Covariate	Total (N = 700) ^a		Retailers in African-American Neighborhoods (N = 200) ^a		Retailers in non-African-American Neighborhoods (N = 500) ^a		Probability
	N	Row %	N	Row %	N	Row %	
Age (yrs) mean (SD)	43.09 (13.7)	-	43.5 (13.0)	-	42.9 (14.0)	-	-
Race/Ethnicity of Retailer							.001*
African-American	55	7.9	42	21.2	13	2.6	
Hispanic/Latino	284	40.9	87	43.9	197	39.6	
Asian	136	19.6	39	19.7	97	19.5	
South Asian	65	9.4	12	6.1	53	10.7	
Non-Hispanic White	140	20.1	16	8.1	124	25.0	
American Indian	3	0.4	0	0.0	3	0.6	
Other ^b	12	1.7	2	1.0	10	2.0	
Sex							.30
Male	446	64.0	122	61.0	324	65.2	
Female	251	36.0	78	39.0	173	34.8	
Languages spoken at home^c							-
English	311	45.7	86	43.9	225	46.5	.54
Korean	98	14.4	30	15.3	68	14.1	.67
Spanish	263	38.7	74	37.8	189	39.1	.75
Armenian	47	6.9	0	0.0	47	9.7	-
Arabic	43	6.3	6	3.1	37	7.6	-
Russian	12	1.8	0	0.0	12	2.5	-
Other	149	21.9	38	19.4	111	22.9	.31
Graduated high school	586	84.7	167	84.3	419	84.8	.88
English reading ability							.55
Excellent	463	66.8	130	65.3	333	67.4	

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Covariate	Total (N = 700) ^a		Retailers in African-American Neighborhoods (N = 200) ^a		Retailers in non-African-American Neighborhoods (N = 500) ^a		Probability
	N	Row %	N	Row %	N	Row %	
Okay	160	23.1	51	25.6	109	22.1	
Poor	70	10.1	18	9.1	52	10.5	
Store position							.96
Owner	212	30.5	62	31.2	150	30.2	
Manager	232	33.3	64	32.2	168	33.8	
Clerk	236	33.9	69	34.7	167	33.6	
Other	16	2.3	4	2.0	12	2.4	
Cigarette use							.53
Every day	88	12.9	24	12.3	64	13.2	
Some days	61	9.0	14	7.2	47	9.7	
Not at all	531	78.1	157	80.5	374	77.1	

* P .05

Note.

^a: May not sum to column total due to missing values

^b: Other is all other racial/ethnic groups including other race and multi-race

^c: May sum to more than column total due to multiple selections by respondent

Table 3
Opinions of Retailers on the Food and Drug Administration (FDA) as a Tobacco Regulator

Covariate	Total (N = 700) ^d		Stores in African- American neighborhoods (N = 200) ^d		Stores in non-African- American neighborhoods (N = 500) ^d		Probability
	N	Row %	N	Row %	N	Row %	
FDA trustworthy							.03*
Yes	417	60.1	112	56.3	305	61.6	
No	107	15.4	42	21.1	65	13.1	
Do not know	170	24.5	45	22.6	125	25.3	
FDA right to regulate tobacco							.52
Yes	462	67.7	137	69.5	325	67.0	
No	220	32.3	60	30.5	160	33.0	
Reasons that make it difficult to follow FDA and government tobacco control rules^d							
No access to educational materials	142	20.3	39	19.6	103	20.6	.76
Customers want singles/samples	106	15.2	32	16.1	74	14.8	.68
Do not know the rules	87	12.5	37	18.6	50	10.0	.002*
Do not understand the rules	47	6.7	22	11.0	25	5.0	.004*
Received pressure from tobacco distributors that come to store	27	3.9	10	5.0	17	3.4	.32
Tobacco companies encourage retailer not to follow the FDA rules	12	1.7	7	3.5	5	1.0	.04 ^{§§}
Receives too much information from different sources that are confusing	61	8.7	17	8.5	44	8.8	.91
Information is not offered in the language understood by retailer	54	7.7	20	10.1	34	6.8	.19
Other	18	2.6	8	4.0	10	2.0	.13
None of the above	328	47.0	84	42.2	244	48.9	.11
These sources of information could help retailers follow FDA and government tobacco control rules^d							
Educational materials from FDA	344	49.3	97	48.7	247	49.5	.86
Trainings/webinars	210	30.0	61	30.7	149	29.9	.84
FDA enforcement of the rules	142	20.3	41	20.6	101	20.2	.91
Learning more about what happens if I do not follow the rules	191	27.3	59	29.7	132	26.5	.39
Checklists or posters with the rules by the checkout counter	307	44.0	92	46.2	215	43.1	.45

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Covariate	Total (N = 700) ^d		Stores in African- American neighborhoods (N = 200) ^d		Stores in non-African- American neighborhoods (N = 500) ^d		Probability
	N	Row %	N	Row %	N	Row %	
Other	18	2.6	3	1.5	15	3.0	.43 ^b
None of the above	78	11.1	13	6.5	65	13.0	.014 [*]
Preferred language of information explaining FDA tobacco rules							
English	382	54.7	117	58.8	265	53.4	
Spanish	127	18.1	40	20.1	87	17.5	
Korean	66	9.4	19	9.6	47	9.5	
Armenian	9	1.3	1	0.5	8	1.6	
Arabic	8	1.1	5	2.5	3	0.6	
Russian	1	0.1	0	0.0	1	0.2	
Other	38	5.4	13	6.5	25	5.0	
Refuse to answer	64	9.2	4	2.0	60	12.1	

* p .05

Note.

^d: May not sum to column total due to missing values.

^b: Indicates a Fishers exact p-value.