

# CANCER-RELATED KNOWLEDGE, ATTITUDES AND BEHAVIORS WITHIN THE LATINO FAITH COMMUNITY IN SOUTH LOS ANGELES

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**Objectives:** The goal of this study was to establish relationships with Latino churches in South Los Angeles and to collect data from parishioners regarding their access to care, cancer risk factors, and cancer-related knowledge, attitudes and screening.

**Methods:** In 2014, we approached five Latino churches. All allowed us to describe the study and to consent potential respondents at a designated time during the church service.

**Results:** 398 Latino respondents (75% female) completed the survey in English (15%) or Spanish (85%). Most respondents were born in Mexico (63%). Only 56% had health insurance and 51% had a regular doctor. Based on self-reported height and weight, 33% were overweight and 51% were obese. However, only 42% of obese respondents had been told by their doctor that they were obese. Although it is well-established that obesity is a major cancer risk factor, respondents lacked knowledge about the important role of nutrition and exercise in cancer prevention. Among women, adherence to national screening guidelines was 88% for cervical cancer, 72% for breast cancer and 58% for colorectal cancer. However, they were quite willing to undergo cancer screening if recommended by a physician and reported few barriers to colorectal cancer screening.

**Conclusions:** Our data suggest a need to focus on both primary and secondary cancer prevention by promoting healthy lifestyles to curb the obesity epidemic and by promoting colorectal cancer screening. These data will inform future interventions to promote wellness in South Los Angeles in collaboration with the Latino faith community. *Ethn Dis.* 2019;29(2):239-246; doi:10.18865/ed.29.2.239

## BACKGROUND

South Los Angeles is a 100-square-mile area where more than one million residents live in about 25 different zip codes. In 1970, about 80% of the population in South Los Angeles was African American, but during the last 50 years demographics have radically shifted. South Los Angeles is now 68% Latino, 27% African American and 52% of residents are immigrants.<sup>1,2</sup> Despite this dramatic population shift, much of the research conducted in South Los Angeles has focused on the African American population.<sup>3-7</sup>

Residents in South Los Angeles experience the largest health disparities in Los Angeles County. For example, South Los Angeles has the highest rate

of adults who report difficulty accessing medical care (32%) and 30% report their health to be fair or poor. Thirty four percent of residents are obese and cancer mortality rates are among the highest in the county for breast, cervical and colorectal cancer. Overall, 33% of households in South Los Angeles live below the federal poverty level compared with 18% in Los Angeles County.<sup>1</sup>

Many studies with Latino and other predominantly immigrant populations have partnered with faith institutions to raise awareness of health issues and to provide services to un- or underinsured community members.<sup>8-11</sup> Faith institutions can be an important venue to gain access to these populations and to promote health behaviors among community members who have barriers to accessing medical care, such as lack of insurance, being undocumented, language barriers, and lack of time due to long work hours. A recent review concluded that health promotion activities in faith institutions can increase screening rates among Latinas. However, the study's authors also recommend conducting more randomized studies to further document the effectiveness of faith-based interventions.<sup>12,13</sup>

The goal of our study was for an academic research center to establish relationships with Latino churches

**Keywords:** Community Survey; Latino Faith-Based Sample; South Los Angeles; Cancer Knowledge; Attitudes and Behaviors

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in South Los Angeles and to conduct a needs assessment to inform our future cancer prevention and control efforts in this area. Specifically, we collected data from Latino parishioners regarding their access to care, cancer risk factors, cancer-related knowledge and attitudes and cancer screening.

## METHODS

We used a community partnered-participatory research approach to develop our study aims and survey design.<sup>14</sup> In 2014, we reached out to five Latino churches located in South Los Angeles. All agreed to participate. Two of the five churches were Catholic parishes with approximately 900 to 1000 registered families of which 95% were Latino. The other three were of Christian denomination and each had approximately 75 to 100 Latino members. At each church, the pastor identified a coordinator who was familiar with the church facility and activities to assist with the scheduling of the survey. Each church coordinator received a \$100 cash stipend.

On the day of data collection, investigators described the study and consented potential respondents at a designated time during the church service, which took approximately 10–15 minutes. After being asked about their primary language, participants completed a self-administered anonymous survey in English or Spanish. It took an average of 45 to 50 minutes to complete the entire survey and each participant received a \$10 cash stipend. Study personnel offered help in completing the survey in both languages. The study protocol was approved by the Institu-

tional Review Board of Charles R. Drew University of Medicine and Science.

### Assessment Instrument

The 10-page questionnaire (130 questions) assessed individual factors that influence health behaviors that are included in several theoretical frameworks such as the Health Belief Model<sup>15</sup> and the Health Behavior Framework.<sup>16</sup> To reduce respondent burden and to facilitate self-administration of the survey, many of these factors were assessed with single items using simple response formats (yes/no or three point Likert scales such as very likely, somewhat likely, not likely). Many of the items were adapted from prior surveys.<sup>17,18</sup> An English language draft questionnaire was translated into Spanish and back-translated into English by different bi-lingual individuals.

We assessed immutable factors such as demographic characteristics and access to health care. In addition, we assessed factors that can potentially be modified through interventions, such as knowledge of cancer screening guidelines, cancer risk factors and cancer screening related attitudes, barriers and facilitators. Most behavioral theories agree that knowledge is necessary for health behavior change to occur, as it can influence other attitudes such as perceived susceptibility and belief in the efficacy of early detection. These beliefs can influence intentions which can translate into health behavior, but only if there are no substantial barriers or if barriers can be overcome.<sup>16</sup> Screening-related questions focused on colorectal cancer because screening rates for colorectal cancer are lower than for breast and cervical cancer among Latinos.<sup>19</sup> We

assessed receipt of stool blood test, sigmoidoscopy and colonoscopy (ever and when last for each test). Preceding the questions about receipt of sigmoidoscopy and colonoscopy, we provided a short description of both tests and how they are different from each other.

In addition to individual factors, the Health Behavior Framework also acknowledges broader factors that can influence health behavior, such as health care settings, health care providers and social norms.<sup>16</sup> We included a question on patient-provider communication about colorectal cancer screening, since a physician's recommendation can have a strong influence on receipt of a screening test.<sup>18,20</sup> We also assessed cancer risk factors such as body mass index (BMI) based on self-reported height and weight, frequency of exercise, smoking history<sup>21</sup> and participants' preferences for receiving information on cancer prevention and screening. Many of the survey items are provided verbatim in the tables.

### Statistical Analysis

Data analysis was conducted with SPSS, version 22. Descriptive statistics are provided in the tables for respondent characteristics and responses. BMI was calculated based on self-reported height and weight. Since high BMI was the most common risk factor, we provided selected health perceptions and risk factors across three BMI categories: normal weight (BMI <25 kg/m<sup>2</sup>), overweight (BMI 25–29.9 kg/m<sup>2</sup>) and obese (BMI ≥30 kg/m<sup>2</sup>). Analyses on cancer screening and related knowledge and attitudes were restricted to age groups for which these screening tests are recommended by the US Preventive

Services Task Force,<sup>22</sup> typically adults aged 50-75 years, with the exception of cervical cancer screening, which includes women aged 18 to 65 years with no hysterectomy (N=257). Because only 16 of the 98 males who completed the survey were between aged 50 and 75 years, we report cancer screening related estimates solely for women. When comparing self-reported histories of colonoscopy and sigmoidoscopy, 19 out of 72 women (26%) reported that they had both procedures within the last 5 years (N=15), 5-10 years ago (N=3), or more than 10 years ago (N=1). Possibly, these respondents did not read or understand the paragraph that described the two different tests. Therefore, and similar to other studies,<sup>23,24</sup> we report history of colonoscopy *or* sigmoidoscopy combined within the past 10 years.

## RESULTS

### Study Participant Characteristics

Three hundred ninety eight parishioners from 5 churches completed the survey in 2014. As shown in Table 1, 75% of the study population was female, almost half had less than a high school education, 84% were foreign-born, and Spanish was the primary language for 85% of the sample. While only 56% of the sample had health insurance and 51% had a regular source of health care, 71% of adults had a primary care doctor who speaks a language they can understand. However, 21% had difficulty accessing medical care in the past 12 months. With respect to health risk factors, 51% of the study group was obese (54% of women and 42% of men) and 33% overweight

(31% of women and 40% of men) and only 16% of the adults exercised more than three times a week. Only 4% were current smokers (2% of women and 10% of men). Males were significantly more likely than females to work full-time, while females were more likely to be homemakers ( $P<.001$ ). In addition, males were significantly more likely to be smokers than females ( $P<.001$ ). There were no other statistically significant differences between males and females.

### Health Perceptions and Risk Factors by Body Mass Index Category

As shown in Table 2, health perceptions varied widely across BMI categories. Among respondents with normal BMI, only 17% rated their health as fair or poor, whereas 52% of obese respondents reported their health as fair or poor ( $P<.001$ ). Perceived susceptibility to cancer compared with the average man or woman of the same age was very similar across BMI categories: 39% to 47% of respondents rated their risk as lower, 42% to 47% as the same and 10% to 13% as higher. As one might expect, more overweight and obese respondents reported a diagnosis of hypertension and diabetes than those with normal body weight. However, only 42% of obese respondents had been told by their doctor that they were obese. In addition, only 24%-30% of respondents reported that they had ever discussed their personal risk for any type of cancer with their doctor.

### Knowledge of Lifestyle Cancer Risk Factors

As shown in Table 3, knowledge about cancer risk and protective factors varied widely. Most respondents were

aware that chemicals in the workplace may be cancer risk factors and that a diet rich in fruits and vegetables and regular exercise are protective factors. However, only about one third knew that regular alcohol intake and a diet high in animal fat are cancer risk factors. For most knowledge questions, a large proportion (28% to 56%) answered "don't know", indicating a general lack of knowledge on this topic.

### Cancer Screening among Latino Women

Table 4 shows adherence to national cancer screening guidelines: 88% of women aged 18-65 years had a Pap test within the past three years; 72% of women aged 50-75 years had a mammogram in the past two years; 58% of women aged 50-75 years were adherent to colorectal cancer screening guidelines. Forty-three percent of women aged 50 to 75 years had a sigmoidoscopy or colonoscopy within the past 10 years and 22% had a stool blood test within the past 12 months.

Knowledge of colorectal cancer screening guidelines for stool blood test, sigmoidoscopy and colonoscopy was generally low. Large proportions of women aged 50 to 75 years answered for each screening test that it should be conducted once a year (24%-28%), only when something is wrong (10%-15%, data not shown), or that they did not know how often the test should be done (35%-43%, data not shown). Only 8% of women knew that sigmoidoscopy should be done every 5 years and only 7% knew about or colonoscopy screening every 10 years. Only 26% to 32% of women age eligible for colorectal cancer screening stated that their health care provider

**Table 1: Characteristics of study respondents, N=398, % (n)**

	Total	Male, n=98	Female, n=300
Age group (NS)			
18-39	47 (189)	47 (46)	48 (143)
40-64	49 (196)	51 (50)	49 (146)
≥65	3 (13)	2 (2)	4 (11)
Highest level of education (NS)			
Less than high school	48 (191)	42 (41)	50 (150)
Completed high school	28 (112)	33 (32)	27 (80)
Completed some college, trade school, or associate degree	17 (68)	16 (16)	17 (52)
Completed college or post-graduate degree	7 (26)	9 (9)	6 (17)
Total household income (NS)			
<\$10,000	27 (106)	27 (25)	27 (81)
\$10,000-\$24,000	39 (154)	39 (32)	41 (122)
\$25,000-\$39,000	21 (83)	21 (26)	19 (57)
\$40,000-\$54,000	7 (31)	7 (6)	8 (25)
>\$55,000	6 (22)	6 (7)	5 (15)
Place of birth (NS)			
Mexico	63 (249)	46 (45)	68 (204)
US	16 (62)	20 (20)	14 (42)
El Salvador	12 (46)	19 (19)	9 (27)
Guatemala	7 (29)	11 (11)	6 (18)
Other	2 (12)	4 (3)	3 (9)
Survey language (same as primary language) (NS)			
English	15 (61)	18 (18)	14 (43)
Spanish	85 (337)	82 (80)	86 (257)
Employment status – multiple responses (P< .001)			
Working full-time	38 (152)	63 (62)	30 (90)
Working part-time	18 (72)	20 (20)	17 (52)
Homemaker	32 (129)	1 (1)	43 (128)
Unemployed	8 (30)	8 (8)	7 (22)
Retired or disabled	6 (11)	4 (4)	2 (7)
Full-time student	3 (9)	3 (3)	2 (6)
Marital status (NS)			
Single/never married	17 (67)	24 (23)	15 (44)
Married or living with partner	73 (291)	74 (72)	73 (219)
Separated/divorced	6 (25)	2 (2)	8 (23)
Widowed	4 (15)	1 (1)	5 (14)
Health care access (NS)			
Has health insurance	56 (224)	52 (51)	58 (173)
Has a regular source of health care	51 (203)	44 (43)	53 (160)
Had difficulty accessing medical care in the past 12 months	21 (82)	20 (20)	21 (62)
Has a primary care doctor who speaks a language they can understand	71 (283)	67 (66)	72 (217)
Body mass index (NS)			
Normal weight, BMI <25.0 kg/m <sup>2</sup>	16 (64)	18 (17)	16 (47)
Overweight, BMI 25.0 – 29.9 kg/m <sup>2</sup>	33 (129)	40 (39)	31 (90)
Obese, BMI ≥30.0 kg/m <sup>2</sup>	51 (199)	42 (41)	54 (158)
Exercise (NS)			
Exercises daily or more than 3 times a week	16 (65)	15 (15)	17 (50)
Exercises 1-3 times a week	41 (162)	45 (44)	40 (120)
Does not exercise regularly	43 (169)	40 (39)	43 (130)
Smoking (P < .001)			
Never smoked	85 (338)	62 (61)	92 (277)
Ever smoked > 100 cigarettes or cigars in their life	15 (60)	38 (37)	8 (23)
Current smoker	4 (16)	10 (10)	2 (6)

NS, not significant

**Table 2: Health perceptions and risk factors by body mass index category (BMI), N=398, %**

	Normal weight	Overweight	Obese	P
	BMI <25.0, n=64	BMI 25.0-29.9, n=129	BMI ≥30, n=199	
In general, how would you rate your health?				
Excellent/very good	36	22	12	
Good	47	43	36	<.001
Fair/poor	17	35	52	
Compared with the average man/woman your age, how would you rate your risk of getting cancer? (Perceived susceptibility to cancer)				
Lower	47	39	44	
Same	42	48	47	NS
Higher	11	13	10	
How often do you exercise?				
Daily or > 3 times a week	18	20	14	
1-3 times a week	42	44	38	NS
Do not exercise regularly	39	36	48	
Has a doctor ever told you that you have the following (Yes):				
Hypertension	2	16	17	<.001
Diabetes	5	11	14	<.01
Obesity	6	14	42	<.0001
Have you ever discussed your personal risk for any type of cancer with your doctor?				
Yes	30	28	24	
No	70	72	76	NS

NS, not significant.

had recommended a colorectal cancer screening test. However, most women (57% to 59%) stated that if a doctor asked them to do a screening test, they would be very likely or somewhat likely to do it. Reasons for not having had a stool blood test in the last 1-2 years included doctor did not recommend the test (35%) and lack of knowledge that the test was needed (33%), followed by “never thought about it” (28%), “don’t have a doctor” (21%) and too expensive or no insurance (18%, data not shown).

As shown in Table 4, attitudes regarding colonoscopy, such as perceived efficacy of colonoscopy were generally quite favorable and specific barriers to colonoscopy (eg, concern about pain, being afraid of the procedure) were expressed by 6% to 29% of respondents. For each barrier, a substantial proportion of women (40%-51%) answered “don’t know.” A bivariate analysis found that the majority of “don’t know” answers

for each barrier question (61% to 76%) were provided by women who never had a colonoscopy (data not shown).

### Preferences for Obtaining Cancer information

Most respondents stated that it would be very helpful (84%) or somewhat helpful (11%) to hear a talk about cancer prevention and screening at their church or at their senior or community center; and about 80% would like to receive information in Spanish.

Sixty-five percent preferred small group meetings vs larger seminars (33%). While 85% stated that they would like to get cancer information from a health professional (nurse or doctor), 46% also would like to get this information from a trained peer. While 45% of women and 47% of men stated that they would be most comfortable discussing colorectal cancer screening with someone of their own gender, 43% of women and 46% of men had no preferences. (data not shown)

**Table 3: Knowledge of cancer risk and protective factors, N=398, %**

Statement	True	False	Don't know
Chemicals in the workplace may increase the risk of developing many types of cancer	67	5	28
A diet rich in fruits and vegetables greatly reduces risk of developing cancer	60	11	29
Regular exercise reduces risk for many types of cancer	52	9	39
Too much drinking of alcohol regularly increases the risk for several types of cancer	37	9	54
A diet high in animal fat increases the risk for several types of cancer	36	7	56

**Table 4: Cancer screening among Latino women, N=72<sup>a</sup>, %**

	N	%	
Adherence to national cancer screening guidelines for			
Cervical cancer (Pap smear in past 3 years) <sup>b</sup>	226	88	
Breast cancer (mammogram in past 2 years) <sup>a</sup>	52	72	
Colorectal cancer (had at least one test according to the guidelines) <sup>a</sup>	42	58	
Had stool blood test within the past 12 months <sup>a</sup>	16	22	
Had colonoscopy or sigmoidoscopy within the past 10 years <sup>a</sup>	31	43	
Knowledge of colorectal cancer screening guidelines (correct) <sup>a</sup>			
Colorectal cancer – stool blood test every year	17	24	
Colorectal cancer – sigmoidoscopy every five years	6	8	
Colorectal cancer – colonoscopy every ten years	5	7	
Colorectal cancer screening tests recommended by health care provider <sup>a</sup>			
Stool blood test within the past 2 years	23	32	
Doctor ever recommended colonoscopy	19	26	
If you doctor asks you, how likely are you to ...	Very likely	Somewhat likely	Not likely
Do a take home stool blood test?	57	25	18
Have a colonoscopy <sup>c</sup>	59	28	13
Attitudes & facilitators regarding colonoscopy	Agree	Disagree	Don't know
A colonoscopy can detect cancer in its early stages (perceived efficacy of colonoscopy)	65	3	32
The benefits of colonoscopy are greater than the inconvenience	61	3	36
My insurance covers a screening colonoscopy	24	14	62
Barriers regarding colonoscopy			
I do not want an object inserted in my rectum	26	31	43
I don't want this test because I am afraid of the procedure	26	33	40
I don't want this test because there is nothing wrong with me	19	37	43
I don't want this test because it is dirty	10	42	49
My husband/wife/partner does not want me to have this test	6	43	51
How embarrassed would you be when getting a colonoscopy?	Very	Somewhat	Not
How concerned are you that the colonoscopy may be painful?	24	49	27
	29	38	33

a. Women in the study group who were age-eligible for breast and colorectal cancer screening (aged 50 to 75 years).  
 b. Women in the study group who were aged 18-65 years, no hysterectomy, N=257.  
 c. N=64, 8 missing.

## DISCUSSION

In partnership with Latino faith-based centers, we obtained previously unavailable local data on the rapidly growing Latino population that will inform our future community-engaged cancer prevention and control research in South Los Angeles.

### Lack of Awareness that Obesity Is a Major Cancer Risk Factor

The high level of obesity in our study population is consistent with national trends of obesity among Hispanics of Mexican origin. For example, based on data collected from 2011 to

2014 by the National Health and Nutrition Examination Survey, 50% of females and 43% of males are obese.<sup>25</sup> Obesity is a major contributor to cancer risk and mortality and has emerged as a central and growing contributor to cancer and other chronic disease disparities because of its disproportionately high rates in communities of color. In 2016, the International Agency for Research on Cancer (IARC) found that being overweight or obese increases the risk of incidence of at least 13 types of cancers, including cancers of the colon, breast, endometrium, kidney, esophagus, liver, stomach, gall bladder, pancreas, thyroid, ovaries, meningioma

and skin. Together, these 13 cancers account for 42% of all new cancer diagnoses worldwide.<sup>26,27</sup> Based on a position statement of the American Society of Clinical Oncology, “obesity is a major under-recognized contributor to the nation’s cancer toll and is quickly overtaking tobacco as the leading preventable cause of cancer.” Overweight and obesity are implicated in 15%-20% of total cancer-related mortality.<sup>28</sup>

Our data suggest that Latinos in South Los Angeles are not aware that obesity contributes to their cancer risk. Obese and overweight respondents have a similar perceived susceptibility to cancer as those with normal

body weight and many are unaware of cancer risk factors related to lifestyle factors (diet, alcohol, exercise). Most overweight and obese individuals have neither discussed their body weight nor their risk for cancer with a doctor. This is a missed opportunity to address obesity, a very prevalent risk factor for cancer and other chronic diseases in this and other communities.

### Attitudes and Behaviors Regarding Cancer Screening

The breast cancer screening rate in our Latino study population in South Los Angeles is identical to the rate reported by Latinos in the 2015 National Health Interview Survey, and the cervical and colorectal cancer screening rates in our group exceed the rates in the national sample<sup>29</sup> by about 10 percentage points. However, screening for colorectal cancer is well under the target of 80%, as recommended in 2018 by the National Colorectal Cancer Roundtable initiative<sup>30</sup> and below the Healthy People 2020 target for CRC screening of 70.5%.<sup>31</sup> While only 7% of Hispanics aged 50 to 75 years who participated in the 2015 National Health Interview Survey reported receipt of a stool blood test in the last 12 months,<sup>32</sup> 22% of women in our study reported receipt of this test. Since the stool blood test is inexpensive and less invasive than colonoscopy, it may be particularly important for CRC screening among un- and underinsured populations.<sup>33</sup>

While there was a general lack of awareness of cancer screening guidelines, respondents expressed relatively few barriers to obtaining CRC screening and appeared to be extremely willing to undergo testing if recommended by a physician. Based on these findings

and the literature,<sup>34,35</sup> physician recommendation for screening, stool blood test outreach and patient education and navigation through both health care professionals and trained peer navigators are promising interventions to increase CRC screening in South Los Angeles. This approach is consistent with the stated preferences of this community on how to receive health information.

### Limitations

By partnering with five churches, we recruited a convenience sample that may not be representative of all Latinos residing in South Los Angeles. However, we were able to reach many predominantly Spanish-speaking Latinos, predominantly immigrants with varying levels of education, who are often reluctant to participate in surveys.<sup>36</sup> We only assessed a limited number of health behaviors, mainly related to cancer prevention and control, which is the focus of our research team. Results are based on self-report. Therefore, data may suffer from social desirability bias and respondents may not correctly remember the dates of their last screening tests. Our study group included only a small number of males between 50 and 75 years of age. Future surveys should attempt to recruit a sufficient number of males in this age group to allow analysis of cancer screening behavior.

### CONCLUSIONS

Although it is well-established that obesity is a major contributor to cancer risk and mortality, this community lacks knowledge about the important role of nutrition and exercise in cancer prevention. Colorectal cancer screen-

ing is underutilized, but many Latino residents in South Los Angeles are quite willing to undergo cancer screening if recommended by a physician and they have relatively few barriers to colorectal cancer screening. Our data suggest a need to focus on both primary and secondary cancer prevention by promoting healthy lifestyles to curb the obesity epidemic and by promoting colorectal cancer screening. We are currently conducting an organizational readiness assessment with Latino churches, which will provide the perspectives of church leaders regarding their interest and capacity to partner with us in cancer prevention and control efforts and the resources they need. Together, these data will inform future interventions to promote wellness in South Los Angeles in collaboration with the Latino faith community.

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### CONFLICT OF INTEREST

No conflicts of interest to report.

### AUTHOR CONTRIBUTIONS

Research concept and design: Lucas-Wright, Bazargan; Acquisition of data: Lucas-Wright, Duran; Data analysis and interpretation: Lucas-Wright, Bazargan, Vargas, Maxwell; Manuscript draft: Lucas-Wright, Duran, Vargas, Maxwell; Statistical expertise: Bazargan, Maxwell; Administrative: Lucas-Wright, Duran, Vargas; Supervision: Bazargan

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