



The role of knowledge, language, and insurance in endorsement of cancer screening in women of African origin

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ABSTRACT

Background. African women have lower use of cancer screening services compared to women born in the United States yet empirical data are limited about their cancer screening attitudes.

Objective. To examine factors that are associated with higher endorsement of screening.

Method. We conducted a cross-sectional study of 200 women of African origin recruited via community-based outreach activities in Washington, DC. Endorsement of screening was assessed via self-report. The primary independent variables were cancer knowledge and English-language proficiency. Information was also collected about access, cancer-related beliefs, and prior breast screening behaviors.

Results. Most participants (60%) were ≥ 40 years of age, 54% were married, and 77% were insured. Participants more likely to endorse breast cancer screening were insured (vs. uninsured) (odds ratio = 3.37; 95% confidence interval: 1.24, 9.17) and married (odds ratio = 3.23; 95% confidence interval: 1.14, 9.10) controlling for other factors. The likelihood of endorsing screening was higher among participants with English as a primary language (odds ratio = 3.83; 95% confidence interval: 1.24, 11.87) and those with greater breast cancer knowledge (odds ratio = 1.04; 95% confidence interval: 1.01, 1.08, per 1 point increase).

Conclusions. Average cancer knowledge in the sample was low as were non-conventional causes of cancer. Study results highlight the importance of improving cancer knowledge and reducing barriers related to language and insurance. Future studies are needed to consider nuances among diverse women of African origin.

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Introduction

African immigrants are among the fastest-growing immigrant populations in the US (US Census Bureau, 2010) but cancer research has been scarce in this population (Venters and Gany, 2011). Breast cancer is the leading cause of cancer death in this group (American Cancer Society, 2014). African immigrants and African Americans are similar in the prevalence of certain risk and protective factors (Borrell et al., 2006). However, African immigrants tend to be underrepresented in studies (Borrell et al., 2006; Creque et al., 2010; Morrison et al., 2012; Perkins et al., 2010; Tsui et al., 2007) and/or lumped together with other populations (Goel et al., 2003; Seeff and McKenna, 2003; Zhao, 2010). Thus, few studies report information specific to this group. The scarce research with African immigrants has shown cancer-related disparities across the cancer control continuum (Creque et al., 2010; Goel et al., 2003; Morrison et al., 2012; Seeff and McKenna, 2003; Tsui et al., 2007; Zhao, 2010). For instance, like African American women, West

African women are more likely than Whites to be diagnosed at later stages, with larger tumor sizes, and with triple negative breast cancer (Jemal and Fedewa, 2012; Stark et al., 2010). Moreover, African immigrants have lower screening rates compared to Non-Hispanic Whites (Morrison et al., 2012) and other immigrant groups (Samuel et al., 2009; Tsui et al., 2007). Some barriers to screening include access factors (e.g. health insurance), pragmatic constraints (e.g. language difficulties), limited knowledge and awareness, and other psychosocial aspects (e.g. stigma, attributing cancer to fate) (Abdullahi et al., 2009; Al-Amoudi et al., 2013; Carroll et al., 2007; Ehiwe et al., 2013; Harcourt et al., 2014; Morrison et al., 2012, 2013; Ndukwe et al., 2013; Odedina et al., 2009; Samuel et al., 2009; Sheppard et al., 2010; Wallace et al., 2013).

A few small qualitative studies have highlighted the need for a better understanding of cancer attitudes in African-born women (Al-Amoudi et al., 2013; Carroll et al., 2007; Ndukwe et al., 2013; Sheppard et al., 2010). To date, only small pilots (e.g., Piwowarczyk et al., 2013; Samuel et al., 2009) and/or qualitative reports that focus on African immigrant women have been published (Al-Amoudi et al., 2013; Carroll et al., 2007; Ndukwe et al., 2013; Sheppard et al., 2010). With the exception of the study by Harcourt et al. (2014), most quantitative studies

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have been based on chart reviews (Morrison et al., 2012, 2013) or survey data (Tsui et al., 2007) that did not include self-reported psychosocial variables. Furthermore, to our knowledge, none of the prior quantitative studies focused on breast cancer knowledge or screening attitudes among African immigrant women; only one intervention has been published to improve breast cancer screening in this population (Piwowarczyk et al., 2013). Thus, there is a need for increased research specifically centered on African immigrants in order to inform intervention approaches. The present report is part of a larger community and academic joint effort to systematically address the cancer control needs of women of African origin in the Washington, DC metro area. The aims of this study were to examine the factors associated with endorsement of cancer screening practices in order to provide community-based organizations with suggestions for intervention strategies and service provision, and to identify areas for more in-depth study.

Methods

Organization background: community–academic partnership

The community–academic research partnership is between the African Women's Cancer Awareness Association (AWCAA) and the Lombardi Comprehensive Cancer Center (LCCC). AWCAA was founded in 2004 to meet the cancer-related needs of African immigrants in Washington, DC, Virginia, and Maryland. AWCAA provides culturally and linguistically appropriate services including public education and survivorship care. Thus far, AWCAA has conducted outreach to over 10,000 men and 15,000 women in the US and abroad and provided intensive cancer navigation to 100 women each year in the DC metro area. The LCCC is one of 41 National Cancer Institute-designated comprehensive cancer centers in the US. Since 2006, members of Team Cura Communitati (<http://www.curacommunitati.org/#!team-cura-communitati/zoom/c14e3/i151q5>) have provided evaluation and technical assistance to AWCAA to enhance the organization's research capacity (e.g. developing systems for data collection, enhancing the staffs' skills in data entry and analysis, and developing breast cancer materials to distribute to women of African origin) (Nwabuku et al., 2013).

Setting and sample

Data collection sites in the DC metro area were selected based on on-going relationships with AWCAA. Trained bicultural and bilingual (Amharic and English) community health workers recruited and interviewed eligible women in the DC metro area. Women who self-identified as being of African origin (e.g. born in any African country, second-generation immigrants) were eligible. Community health workers approached potentially eligible participants at the identified sites and targeted specific events: health fairs, meetings at cultural events, and places of worship. Community workers confirmed eligibility, read the survey and instructions aloud, obtained verbal consent, and then distributed the self-administered questionnaire that took approximately 20 min to fill in. Women also had an option to complete the questionnaire in Amharic.

Measures

Survey measures were derived from existing validated tools and from feedback received in prior focus groups with the targeted community.

Outcome

After a description of breast cancer screening, participants were asked to select the statement that most reflected their attitudes about screening which included endorsement of screening/early detection

(“I believe in screening and early detection for breast cancer”) and other options (e.g., “I do not want to find out if I have breast cancer because it is associated with death”) (yes vs. no). For purposes of analysis the non-endorsement attitudes were collapsed.

Predictors

Socio-demographic information included age range, marital status, and primary language. *Length of time in the US* was used as a proxy for acculturation. To assess *English proficiency*, items from the 12-item Short Acculturation Scale for Hispanics (SASH) (Marin et al., 1987) were used to capture primary language (English vs. others), and English speaking, reading, writing, and understanding proficiency. To assess *Access factors*, insurance coverage was assessed with three questions: current health care coverage (yes vs. no), period of time uncovered within the last year (yes vs. no), and length of time without insurance coverage, ranging from the past 6 months to never covered. These were adapted from the Health Information National Trends Survey (Rutten et al., 2007). We used a question modified from the National Health Information Survey to capture unmet healthcare needs (“Was there a time in the past 12 months when you needed medical care, but could not get it?”) followed by ten potential reasons (e.g. cost) (Rutten et al., 2007). To obtain data on *Sources of Health Information*, adapted from the Health Information National Trends Survey (Rutten et al., 2007), participants were asked to check all the sources that they often use from a list of eight sources (e.g. radio, TV). To assess *Cancer Knowledge*, participants checked all the causes that they related to developing cancer from a list of seven potential reasons (e.g. diet). To assess *breast cancer knowledge* we used one item from the National Health Interview Survey (NHIS) (National Center for Health Statistics, 2005) that included ten potential breast cancer causes (e.g. older age). We created a score with the number of correct answers. *Breast screening* included whether women ever had a mammogram (yes vs. no) and whether women ever had a clinical breast exam (CBE) (yes vs. no). Family history of breast cancer was also collected.

Statistical analysis

Sample characteristics are described using descriptive statistics. Chi-square tests and t-tests were used for bivariate comparisons of screening endorsement across demographic, cancer knowledge levels, attitudes, and access factors. A multivariable logistic regression model was used to evaluate associations between covariates and endorsement of cancer screening. Factors significant ($p < .05$) in the bivariate analysis were entered into three multivariable models using a forward step-wise method. Models were evaluated using the C-statistic and the Hosmer and Lemeshow goodness-of-fit tests. We also explored factors associated with screening endorsement among women younger than 40 and women who were 40 or older in a subgroup analysis. A multivariable logistic regression model with the same factors included for the whole sample was applied to the subgroup analysis.

Results

The study sample ($n = 200$) was mostly West African women (e.g. Nigeria 37%, Sierra Leone 22%). Over half were 40 years old and older (58%) and married (50.5%). Fifty-six percent of women had lived in the US for more than 10 years and 50.5% reported English as their primary language. A considerable proportion of respondents reported unmet healthcare needs (15.5%) that was mainly attributed to the cost of healthcare (56%). The most common sources of health information were providers (56.5%), TV (34%), and the Internet (34%) (Table 1).

Regarding potential causes of breast cancer, genetics was the most common attributed cause (69%), followed by smoking (43%), diet (40%), environmental factors (29%), and obesity (27%). Eight (4%) participants in this sample reported non-conventional breast cancer causes (e.g. witchcraft, curse) (Fig. 1). The mean cancer knowledge score was

Table 1
Characteristics of study participants, N = 200.

	N	%
Socio-demographics		
Marital status		
Married	101	50.5
Single	59	29.5
Divorced/separated/widowed	28	14.0
Missing	12	6.0
Age		
≥40	116	58.0
<40	78	39.0
Missing	6	3.0
Insurance		
Yes	151	75.5
No	45	22.5
Missing	4	2.0
Primary language		
English	101	50.5
Other	91	45.5
Missing	8	4.0
Residing in the US		
> 10 years	112	56.0
≤10 years	75	37.5
Missing	13	6.5
Region		
Central Africa	15	6.9
East Africa	9	4.2
West Africa	144	74.0
Other	15	14.8
Missing	17	7.9
Access to healthcare		
Unmet need for medical care		
Yes	31	15.5
No	164	82.0
Missing	5	2.5
Information source		
Radio		
Yes	29	14.5
No	167	83.5
Missing	4	2.0
TV		
Yes	68	34.0
No	129	64.5
Missing	3	1.5
Newspaper		
Yes	37	18.5
No	160	80.0
Missing	3	1.5
Internet		
Yes	68	34.0
No	129	64.5
Missing	3	1.5
Magazine		
Yes	51	25.5
No	146	73.0
Missing	3	1.5
Health fair		
Yes	42	21.0
No	155	77.5
Missing	3	1.5
Care provider		
Yes	113	56.5
No	84	42.0
Missing	3	1.5
Family history of cancer		
Yes	31	15.5
No	143	71.5
Don't know	14	7.0
Missing	12	6.0
Beliefs about BC Screening		
Endorsement of screening		
Yes	162	81.0
No	33	16.5
Missing	5	2.5
Don't want to find out/cancer associated with death		
Yes	11	5.5
No	184	92.0

Table 1 (continued)

	N	%
Missing	5	2.5
No need to worry for BC/family with cancer		
Yes	4	2.0
No	191	95.5
Missing	5	2.5
Not at risk of BC because I am healthy		
Yes	3	1.5
No	192	96.0
Missing	5	2.5
Uncomfortable with breast self-exam b/c it is sexual		
Yes	4	2.0
No	191	95.5
Missing	5	2.5
No worry about BC b/c I am too young		
Yes	4	2.0
No	191	95.5
Missing	5	2.5
Other (e.g. test painful)		
Yes	5	2.5
No	190	95.0
Missing	5	2.5

under 60% (58.8% ± 20.3%) on score ranging from 0 to 100. A substantial proportion of women (45%) had knowledge scores that were 50% or less. Among women 40 and over, most (88%) reported having at least one mammogram and one clinical breast exam (84%).

Endorsement of breast cancer screening

Most (81%) participants endorsed breast cancer screening (see Table 1). Bivariate analysis revealed that endorsement was more prevalent among women who were 40 and older (p = .023), married (p = .011), insured (p < .001), and who had resided in the US more than 10 years (p = .002). Speaking English as primary language (p = .003) and its proficiency (p < .001) were also associated with screening endorsement. Differences were noted by region of origin with women from Eastern Africa (n = 9) having lower endorsement of screening (p < .01; data not shown). Endorsement of screening was more common among women with greater breast cancer knowledge (p < .001) and those who had a mammogram (p < .001) (Table 2).

In the multivariable analysis several factors were associated with women's screening endorsement after adjusting for demographic, knowledge, and acculturation/language factors (Table 3). Endorsement of breast cancer screening was more likely among women whose primary language was English compared to those who spoke a non-English language (OR = 3.83; 95% CI: 1.24 to 11.87). Married women had odds of endorsing screening that were 3.23 times as high compared to unmarried participants controlling for other factors (OR = 3.23; 95% CI: 1.14 to 9.10). Women with health insurance were more likely to endorse screening compared to uninsured women (OR = 3.37 95% CI: 1.24 to 9.17). The likelihood of endorsement of screening was also higher for women with greater breast cancer knowledge compared to those with lower knowledge (OR = 1.04; 95% CI: 1.01 to 1.07, per one point increase). Age and length of residence in the US were not significantly associated with screening attitude after controlling for other factors.

Among the subset of women who were 40 and over the likelihood of endorsement of screening was lower for those whose primary language was not English (OR = 0.09, 95% CI: 0.01, 0.88). Among women younger than 40, those who had insurance were more likely to endorse screening (OR = 7.34, 95% CI: 1.47, 36.58).

Discussion

This cross-sectional study expands current research about attitudes of African women in the US by providing empirical data to fill research

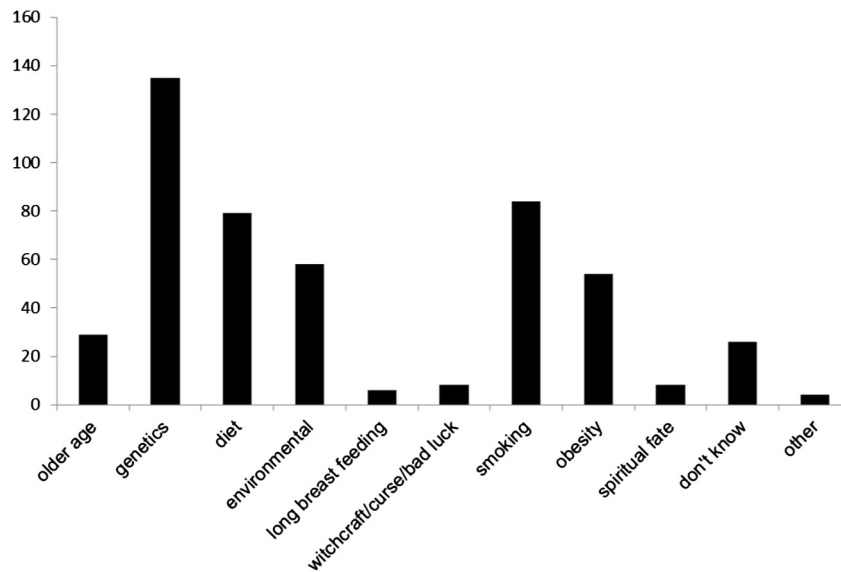


Fig. 1. Frequencies of attributed causes of breast cancer.

gaps in quantitative data about psychosocial factors. It is an important early step to begin addressing interventions for this growing ethnic group. Because of the dearth of studies about this growing subgroup,

Table 2
Correlates of endorsement of breast cancer screening.

	Endorse breast cancer screening				p-Value
	Yes		No		
	N	%	N	%	
<i>Age group</i>					
≥40	102	88.7	13	11.3	.023
<40	58	76.3	18	23.7	
<i>Marital status</i>					
Married/living as married	90	90.9	9	9.1	.011
Single	43	72.9	16	27.1	
Divorced/sep./wid.	23	82.1	5	17.9	
<i>Insurance</i>					
Yes	135	90.6	14	9.4	<.001
No	27	60.0	18	40.0	
<i>Primary language</i>					
English	91	91.0	9	9.0	.003
Other	68	74.7	23	25.3	
<i>Years residing in the US</i>					
> 10 years	101	90.2	11	9.8	.002
≤ 10 years	54	73.0	20	27.0	
<i>Unmet need for medical care</i>					
Yes	23	74.2	8	25.8	.128
No	139	85.3	24	14.7	
<i>Ever had a mammogram (age ≥ 40)</i>					
Yes	89	95.7	4	4.3	<.001
No	5	38.5	8	61.5	
<i>Clinical breast exam (age ≥ 40)</i>					
Yes	67	93.1	5	6.9	.063
No	3	60.0	2	40.0	
<i>Cancer knowledge score, (0–100), all ages (M, SD)</i>	55.1 (28.0)		38.1 (26.9)		.002
<i>Cancer knowledge, age ≥ 40 (M, SD); 0–100</i>	57 (29.1)		44.0 (26.4)		.127
<i>Breast cancer knowledge, (0–100), all ages (M, SD)</i>	62.6 (17.7)		47.3 (18.4)		<.001
<i>Breast cancer knowledge, age ≥ 40 (M, SD); 0–100</i>	64.9 (17.8)		53.1 (21.8)		.030

Note: Values are given as number and percent for categorical variables and as mean and standard deviation for continuous variables. Statistics are calculated based on non-missing cases.

it was noteworthy that several barriers/facilitators common to other groups (e.g., insurance, language, marital status) were relevant in this population (e.g. Andreeva and Pokhrel, 2013; Hubbell et al., 1997; Hsia et al., 2000; Kawar, 2013; Schueler et al., 2008). We found that overall endorsement of cancer screening was high (81%). In turn, endorsement of negative screening attitudes was low (e.g., “I do not want to find out if I have breast cancer”). The latter is significant because such factors have been suggested as relevant to immigrant groups (e.g. Sussner et al., 2009). Understanding women’s endorsement of cancer screening may be important in creating social norms that convey the perception that screening is normative and approved by network members, which may eventually enhance acceptance of screening behaviors (Allen et al., 1999, 2007).

Cancer screening rates (whether participants ever had a mammogram) in this cohort (88%) were higher than other African immigrant studies’ findings, which ranged from 15% to 61% (Harcourt et al., 2014; Morrison et al., 2012; Samuel et al., 2009). Country of origin and data collection methods (i.e. self-report vs. medical records) may contribute to this difference. Additionally, we did not have data on mammography adherence which may likely be lower than having ever received a mammogram.

Salient factors associated with higher endorsement of cancer screening were: greater knowledge about breast cancer, English as a primary language, marital status, and insurance. Endorsement of breast cancer screening in turn was associated with having had a mammogram. Thus, even in a group of African women who were largely insured and had moderate to high English-proficiency, these factors were relevant to women’s attitudes. This suggests that such factors may be even more pronounced in populations with less insurance and English proficiency. Study findings underscore 1) the importance of increasing breast cancer knowledge in this subgroup, 2) the potential role of key socio-demographic factors in informing intervention targets, and 3) the need for larger studies to understand the relevance of psychosocial factors across and within various subgroups of African women.

The fact that breast cancer knowledge was associated with higher endorsement of breast cancer screening is promising, as knowledge constitutes a mutable factor that can be targeted in interventions. For example, Piwowarczyk et al. (2013) piloted a linguistically targeted DVD intervention regarding cancer screening information. The intervention, conducted with a community-based organization, proved to be successful in increasing screening knowledge and intentions to undertake screening. Thus, culturally targeted interventions developed

Table 3
Adjusted odds ratios of screening attitudes (N = 200).

Variable	Model 1 Demographic OR; 95% CI	Model 2 Acculturation/language OR; 95% CI	Model 3 Cancer knowledge OR; 95% CI
Age, <40 (vs. ≥40)	0.70 (.28, 1.76)	.84 (.27, 1.88)	1.02 (.36, 2.89)
Marital status, married (vs. single)	3.12 (1.19, 8.19)	3.04 (1.11, 8.26)	3.23 (1.14, 9.10)
Insurance, yes (vs. no)	6.32 (2.53, 15.77)	4.10 (1.55, 12.43)	3.37 (1.24, 9.17)
Primary language, English (vs. other)		4.28 (1.43, 12.79)	3.83 (1.24, 11.87)
Years in the US, >10 years (vs. ≤10)		1.89 (.67, 5.33)	1.71 (.58, 5.00)
Knowledge ^a (per 1 point increase)			1.04 (1.01, 1.07)
H.L Goodness of fit C-statistic & 95% CI	p = .231 .75 (.63, .86)	p = .223 .80 (.71, .90)	p = .166 .84 (.74, .93)

^a Breast cancer knowledge score.

through community-based participatory research are warranted to meet the needs of this population.

Speaking English as a primary language impacted women's endorsement of cancer screening, as limited English proficiency may be a barrier to seeking health services. Thus, our quantitative findings are in concert with qualitative data from focus groups in African immigrant women that identified language as a potential barrier to receipt of screening (Ndukwe et al., 2013; Abdullahi et al., 2009); though most participants spoke English, having English as a primary language was significantly associated with increased endorsement of cancer screening. The use of medical interpreters has been related to higher use of preventive services in Somali immigrants (Morrison et al., 2012). Additionally, culturally and linguistically tailored patient navigation has shown to increase mammography rates in refugee women (Al-Amoudi et al., 2013; Percac-Lima et al., 2013). This finding points to the need of developing interventions to improve doctor–patient communication, using bilingual navigators, and developing information materials in different African languages. A third of participants reported using the TV/Internet to seek health information and approximately a quarter cited magazines, so disseminating screening information through these channels may be effective.

Several studies have examined breast cancer screening behaviors and cancer prevention attitudes in non-US born groups, and much of this work has focused on Asian populations (Sadler et al., 2001a, 2001b) and more recently Latino immigrants (Gorin and Heck, 2005). In general, studies have identified several factors that impact breast cancer screening attitudes and uptake including access (e.g. health insurance), cultural beliefs, clinical factors (e.g. family history), immigration aspects (e.g. acculturation), and fatalism (Al-Amoudi et al., 2013; Espinosa de Los Monteros and Gallo, 2011; Gorin and Heck, 2005; Hubbell et al., 1996; Ndukwe et al., 2013; Wallace et al., 2013). Although fatalism was not examined in this study, interventions targeting fatalism and other factors that influence screening attitudes are potential areas of study in the future to increase screening behaviors.

Our study also supports findings of previous cancer screening research in that in our sample marital status and insurance were associated with endorsement of cancer screening. Living with a life partner, a proxy of social support, may be a source of support for receipt of cancer care. In our sample, African-born married/living as married women were more likely to endorse breast cancer screening after controlling for other socio-demographic factors. Being married has been related with use of breast cancer screening and screening adherence in other immigrant populations (Hubbell et al., 1997) and previous research suggests that having social support from significant others can enhance the use of cancer preventive services (Gorin and Heck, 2005; Kang and Bloom, 1993; Manne et al., 2012). Although there is limited research on social support networks among African immigrants in the US, a study with Cape Verde health workers suggests that the African immigrants they serve face feelings of loss and isolation in the US (De Jesus, 2009). Thus, interventions that facilitate the engagement of African immigrants with supportive social networks may have a positive impact on screening behaviors.

Although 75% of participants had insurance, those without were less likely to endorse breast cancer screening. Insurance and cost were the most frequently reported barriers for women with unmet healthcare needs. Previous research with immigrants has shown that insurance is an important predictor of healthcare utilization (Cruz et al., 2010) including cancer screening (Escheverria and Corrasquillo, 2006; Sheppard et al., 2010). Harcourt et al. (2014) found that those who had trouble paying health insurance premiums were less likely to have a pap smear done. Thus, insurance remains an important aspect of access to healthcare and is a factor in shaping the screening beliefs of African immigrants. However, a study by Lagerlund et al. (2002) found that in a country with universal health insurance (Sweden), non-attendance to invitations of low-cost mammography screenings (~12 US dollars) was significantly higher in African-born than Swedish-born women, suggesting that insurance alone may not remove barriers to care.

Several beliefs that have been suggested to be relevant in this group in qualitative studies (e.g., attributing breast cancer to a curse) (Abdullahi et al., 2009; Ndukwe et al., 2013; Sheppard et al., 2010) were not prevalent in this sample. This difference may rely on the characteristics of our sample (highly insured and longer residence) and on the differences between qualitative and quantitative methodology. Nonetheless, our finding that some of the expected “cultural factors” were not relevant in this sample shows the difficulty of making generalizations about this broad population.

Some caveats of the study include the recruitment of a highly insured convenience sample with a high percentage of established immigrants and high screening rates. The small sample size prevented us from stratifying the sample in different regions or countries. Since Africa is a culturally/linguistically diverse continent, future studies should provide a more nuanced account of screening beliefs and practices across regions/countries. Results from this study may not generalize to all African immigrant groups in the US or to uninsured women or to those new US arrivals. The survey did not capture some measures like fatalism, education, income, or other dimensions of acculturation that could be related to screening attitudes. The use of self-reported measures may have led to an overreporting of screening beliefs and behaviors due to social desirability bias (Rauscher et al., 2008). Additionally, the use of a single-item outcome hindered the possibility of assessing internal consistency. Despite these limitations, this study has several strengths including the use of a community-based survey designed and delivered in partnership with a community-based organization and informed by previous focus groups with African immigrant women (Sheppard et al., 2010). Other strengths include the recruitment of an underrepresented sample of African women from diverse nationalities, the inclusion of items from validated studies, and the assessment of psychosocial factors (breast cancer knowledge and screening attitudes) not previously described in this population. This is the first survey of African women in the DC metro area and one of the few studies focusing on the cancer control attitudes and needs in women of African origin (Hurtado-de-Mendoza et al., 2014). Two of such studies, though much larger than ours, were based on medical

chart reviews and did not include information about knowledge, attitudes, or beliefs (Morrison et al., 2012; Samuel et al., 2009). Taken together, our study expands current knowledge about psychosocial factors (not captured in prior studies). Future studies with larger samples are warranted to confirm the findings from our subgroup analysis, as they could further inform how to target interventions to different subgroups within the African origin community. Since the study was conducted in partnership with a community-based organization, results from these data will be used to inform a larger study and to help community organizations.

Although African immigrant women are among the fastest growing racial/ethnic groups in the US, cancer control research for this population lags behind many other immigrant groups. While they face similar tumor profiles to US-born Blacks (e.g., rate of triple negative cancers, poor prognosis) (Jemal and Fedewa, 2012), the factors that impact their attitudes about screening are distinct. The finding that screening endorsement was associated with knowledge, insurance, and English as a primary language will be used to inform interventions with community-based partners and to identify research priorities to address the needs of this important growing population.

Conflict of interest statement

The authors declare that there are no conflicts of interest.

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