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Perceptions of Colorectal Cancer Among Three Ethnic Subgroups of US Blacks: A Qualitative Study

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Abstract

Colorectal cancer (CRC) is currently associated with one of the highest burdens of morbidity and mortality among American men and women. Racial/ethnic disparities are well documented and the subject of intense research and intervention. Our understanding of disparities related to awareness and perceptions about causes, risk, factors, and screening for CRC among subgroups of blacks in the United States is limited. This may be in part because grouping US-born blacks and foreign-born blacks as one homogeneous group obscures possible within-group differences. This study aimed to explore the cultural perceptions of CRC among 3 ethnic subgroups of blacks: African Americans (US born), foreign-born blacks from English-speaking Caribbean countries, and Haitian-born blacks. The study was informed by a community-based participatory research approach, using a cross-sectional mixed qualitative and quantitative methods design. A total of 62 individuals from the 3 ethnic subgroups participated in semistructured, in-depth qualitative and structured quantitative interviews. Qualitative findings revealed no stark differences among the 3 ethnic subgroups in their overall perceptions of cancer as well as their attitudes related to barriers, motivation, and resources for CRC screening. However, there were subtle differences in perceptions of curability, preventive practices, and preferred sources of information among the three ethnic subgroups of US blacks. The study has important implications for the design of educational materials and targeted interventions for diverse groups of US blacks.

Keywords

colorectal; cancer; screening; health disparities; African Americans; immigrants; research

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INTRODUCTION

Colorectal cancer (CRC) is the second leading cause of cancer deaths among adult American men and women combined, with an estimated 51 370 deaths and 142 570 new cases¹ in 2010. Within black populations, an estimated 7120 deaths and 16 520 new cases² occurred in 2009. Trends over previous decades indicate that US blacks have at least a 20% higher incidence, 45% higher mortality, and a lower 5-year survival rate compared to whites.^{2,3} The disparity in survival is due partly to later stage at diagnosis and access to (and receipt of) high-quality treatment⁴ or physician counseling regarding CRC screening for blacks when compared to whites.³

Colorectal cancer is highly preventable if colon polyps are detected and removed before they become cancerous. Similarly, CRC is curable if found at early stages when treatment is most effective. Thus, current CRC screening guidelines are aimed at early detection (early CRC) or prevention, through the detection and removal of precancerous polyps. Given the high rates of CRC in US blacks and the recent influx of immigrant blacks from the Caribbean and Africa, issues related to access to care within the US black population point to the continual need for further research in this area. Of specific interest is whether the influx of adult foreign-born blacks from these and other regions of the world is likely to improve or exacerbate the already startling black-white cancer health disparities. Lessons learned from Hispanic^{5,6} and Asian^{7,8} immigrant communities, together with general health⁹ and breast cancer^{10–14} among blacks, suggest that disaggregation of US blacks may reveal potential disparities in colorectal cancer.^{15–19} Thus, research that appreciates cultural diversity of the black population may facilitate efforts to reduce cancer health disparities.

Studies disaggregating the US population based on the region of birth have found that foreign-born persons have better general health outcomes than their US-born counterparts, but their health status begins to mirror that of their US-born counterparts with increasing length of residence in the United States.^{9,20–2} The research in this area has been informed by experiences with the disaggregation of US Hispanics, specifically comparing US-born and Mexican-born Mexicans.^{5–6, 23–25} A similar body of work exists among Asians and Pacific Islanders,^{7,8} but studies are sparse among US blacks and colon cancer. Emerging research suggests that specific subgroups of blacks remain at risk, and health promotion efforts should focus on the unique needs for these groups in particular.^{9, 10,26} This paper reports qualitative findings related to awareness and perceptions about causes, risk factors, and screening for CRC among 3 ethnic subgroups of US blacks (native US born [ie, African American]; English-speaking Caribbean-born [ie, from English-speaking Caribbean countries, eg, Jamaica, Trinidad and Tobago, Grenada]; and Haitian-born individuals) residing in Hillsborough County, Florida.

METHODS

Research Questions

The study addressed the following research questions:

- What are the perceptions of CRC among African Americans, English-speaking Caribbean-born blacks, and Haitian-born blacks?
- Are there differences in general attitudes, awareness, and perceptions about causes, risk factors, and screening for CRC among these 3 subgroups that may impact intervention design?

Design and Setting

This study was conceptualized, designed, and implemented within the context of a larger ongoing community-based participatory research (CBPR) project, the Tampa Bay Community Cancer Network (TBCCN). TBCCN's goals are aimed at reducing cancer disparities among medically underserved populations.^{27,28} Thus, key tenets of CBPR^{29, 30} were employed to ensure community participation in this research. This methodological approach fosters an environment that is conducive to collaborative relationships with community members and academic researchers. Because the community level is the primary location of health prevention and health intervention programs, CBPR is an important design approach for improving community or population health outcomes. The TBCCN steering committee and TBCCN community partners, including the Haitian American Alliance, cultural advisors, and a team of academic-based researchers, collaborated to define the need for the project, scope, and community benefit. This team also designed recruitment strategies and study materials, interpreted findings, and planned the next study. Cultural advisors were key community leaders representing the 3 ethnic subgroups of interest and with longstanding ties to these communities.

A cross-sectional design using sequential mixed qualitative and quantitative research methods was employed with a purposive sampling strategy to identify and recruit participants in the 3 ethnic subgroups. Eligible consenting individuals participated in a semistructured, in-depth qualitative interview followed by a battery of structured quantitative survey items that have been reported else-where.³¹ The questions were read out loud. The sample size was based on estimates of the number needed for qualitative saturation of common themes while seeking to have sufficient numbers by subgroup and gender.^{32, 33} The project was reviewed and approved by the University of South Florida institutional review board, and each participant provided written informed consent before initiation of any study activities.

Participant Inclusion/Exclusion

We recruited men and women aged 50 years or older who self-identified as non-Hispanic black or African American; had no personal diagnosis of any previous cancer; resided in Hillsborough County in medically underserved areas; and self-reported having ancestry from the United States (African American), English-speaking Caribbean, or Haiti; and stated ability to read and understand English. Foreign-born immigrants must have lived in the United States at least 2 years. The goal was to recruit at least 60 participants (20 from each ethnic subgroup).

Recruitment/Data Collection

Purposive samples from the 3 ethnic subgroups were recruited through TBCCN partners and cultural advisors and a variety of community locations, including churches, barbershops, civic/community social service centers, health fairs, ethnic restaurants and grocery stores, health events, and clinics serving medically underserved populations. Our recruitment approach included: (1) ethnically customized flyers distributed at community locations or events, (2) referral by community partners or cultural advisors, and (3) snowball sampling (ie, participants nominated/referred other potentially eligible individuals).

The semistructured interview guide was developed by the research team and based on the study research questions and the literature. The interview guide was designed to capture data that could identify cultural themes (beliefs and attitudes about CRC, barriers and motivating factors/facilitators of CRC screening, and preferred information sources and communication channels) and inform a theoretical framework for design of a future intervention.

Eligible, consenting individuals were interviewed in-person by a trained research assistant of similar ancestry at a location selected by the participant (eg, home, local library). The research assistant read aloud the interview questions and each interview was audiotaped. If 2 participants living in the same household were eligible (eg, husband and wife), each member was interviewed at the same time in a separate room (by another trained interviewer of African ancestry). At the end of the interview, participants received \$30.

Data Analysis

Verbatim transcripts were created for each interview. Data were analyzed using a combination of content analysis and the constant comparison method.^{34,35} A priori and emergent codes were used to develop the study codebook. The a priori codes were derived from the study research questions, and emergent codes were added to the code book as data analysis progressed. Four investigators within the study team, including the lead author, formed 2 paired teams for transcript coding. Each transcript was individually coded by a paired team of investigators, and the coding results were compared within the team to ensure reliability (dependability). ATLAS.ti (version 5.2; ATLAS.ti GmbH, Hamburg, Germany) was used to manage and analyze the text produced during the interviews. The analyzed data and emergent themes were discussed with the research team, cultural advisors, and community partners to ensure culturally appropriate interpretation of the results.

RESULTS

Demographic Data of Participants

Data from 62 respondents were analyzed representing 22 African American, 20 English-speaking Caribbean-born, and 20 Haitian-born respondents (Table). Overall, the subgroups were similar on sociodemographic characteristics except for age, having children under the age of 18 years, and family history of cancer. Respondents in the English-speaking Caribbean subgroup were older than the other 2 subgroups ($p = .007$). A higher proportion of Haitians (55%) reported having children under age 18 compared to 13.6% and 5%, respectively, for the African American and English-speaking Caribbean subgroups ($p = .$

001). On the other hand, a higher proportion (77.3%) of the African American subgroup reported a positive family history of cancer compared to 45% for the English-speaking Caribbean and 35% for the Haitian subgroups ($p < .02$).

General Attitudes About Cancer

Overall, there were few differences across the ethnic subgroups or by gender regarding attitudes about cancer in general. Results summarizing the most frequent responses by ethnic subgroup are provided in Box 1, with related participant quotes summarized in Box 2 to illustrate common key themes and typical views held by respondents. Where no subgroup differences were found, results are presented in aggregate (combining all subgroups).

When asked “When you think about cancer, what are the first 3 things that came to your mind?”, “most of the respondents from all 3 communities reported that death or lack of cure comes to mind. The African American and English-speaking Caribbean subgroups reported the memory of pain and suffering of family members (who had cancer) as another prominent thought. Other things that came to mind about cancer included: the need to detect cancer early to reduce the risk of mortality, extrinsic causes of cancer, types of cancer, symptoms, and denial (“not me, I can’t have cancer”).

Regardless of whether or not people from their ethnic subgroup use certain products to stay healthy or prevent cancer, home remedies (eg, herbs, teas, spices, fruit, vegetables, natural foods/grains) were suggested by respondents from all 3 groups. However, the nature and dynamics around the use of home remedies differed by-place of origin. Foreign-born respondents named specific exotic items that were not mentioned by African Americans. For example, specific herbs and teas such as sienna leaves, cerrasee, bush tea, and asoecee were mentioned. In addition, more English-speaking Caribbeans and Haitians reported use of colon-cleansing or body-cleansing products or practices such as laxatives (aloe vera, castor oil), tea, and fasting as other means of staying healthy or preventing cancer. For the Haitian subgroup, *cleansing* referred more to systemic body cleansing with teas to clean the blood. Use of vitamins was mentioned by all groups as a potential protection against cancer. There was sporadic mention of a healthy diet, sun protection, fish oil/omega-3, protein supplements, and exercise as preventive health practices across all subgroups. A few individuals in all groups felt that cancer could not be prevented.

Barriers, Motivation, and Resources for Cancer Screening

All participants expressed some knowledge of cancer screening resources or facilities to obtain cancer screening. Family or primary care physicians were the most frequently mentioned source, while hospitals, clinics, and public health departments were also mentioned as sources of care. Health fairs were mentioned only by the foreign-born subgroups.

When asked if someone can tell if he or she has cancer, more than two-thirds of all respondents said no, while the rest said “I don’t know.” However, among those who said no virtually all respondents added that symptoms, self examination, or screening tests can help tell if someone has cancer. There were no notable differences across subgroups. Participants

from all groups stressed that specific symptoms such as aches, pains, or not feeling well can indicate that someone has cancer. Overall, across all groups, the concept of asymptomatic screening was not widely identified.

With regards to type of resources that would facilitate screening, most of the participants listed financial resources (health insurance), awareness of places to obtain screening tests, information about when to be screened, and referral for tests or discussions by doctor as the main types of assistance needed. While the responses were common to all 3 groups, foreign-born populations mentioned doctor referrals more often. Additional resources needed included transportation and reminders to seek screening.

Cure for Cancer

When asked whether cancer is treatable or curable, the vast majority of participants believed that, if detected early, cancer is treatable. For the African American and English-speaking Caribbean subgroups, the majority of participants said cancer is treatable if detected early. In contrast, participants in the Haitian subgroup were less likely to believe cancer is treatable or curable, with a majority of them (mostly males) saying “I don’t know.” Box 2 summarizes quotes representing emerging key themes on participants’ attitudes and practices regarding CRC and CRC screening.

Causes and Risks of Colorectal Cancer

Participants were asked about causes of CRC, factors that can increase someone’s risk of developing CRC as well as the kind of people that are more likely to develop CRC. Across all subgroups, there were no major differences noted. More specifically, participants from all 3 subgroups cited unhealthy diet/red meat consumption, constipation/poor bowel habits, and indigestible food (meaning the presence of chemicals in food or processed/canned food) as the perceived causes of CRC. About one-third of all respondents believed that poor eating habits (eg, eating red meat, fatty foods, a diet low in fiber or lacking fruits or vegetables, and eating fast foods) can increase the risk for CRC. On the other hand, about a third of all participants indicated they did not really know what causes CRC or increases risk. Several respondents across the subgroups suggested other causes, including smoking/tobacco use, alcohol, artificial sweeteners, genetics (heredity/genes/family history), environmental pollutants, polyps, lack of exercise, and lack of regular medical checkups. Most of the respondents believed that everyone (any age or any race) or racial/ethnic minorities (particularly African Americans) were at risk, and people with poor lifestyles, deficient diets, who use drugs, who smoke, or who are stressed are more likely to develop CRC.

Perceptions of Colorectal Cancer Screening

When participants were asked how they or others would feel about using CRC screening, the majority of the English-speaking Caribbean respondents felt that most people they know would embrace or be eager to get screened. This acceptance of screening was not as prevalent in the other ethnic subgroups (Table). About one-third of respondents (across all subgroups) indicated that fear of discomfort of screening tests, and fear of knowing the results (getting positive results) were possible barriers to CRC screening. Other suggestions of general barriers included costs associated with tests, lack of health insurance, concerns

over personal privacy, the overwhelming or cumbersome preparations for tests, not having a primary care provider, competing time demands, lack of symptoms, lack of awareness of need to be tested, or typical procrastination or hesitation about medical testing. Contrary to their Haitian- counterparts, some African Americans and English-speaking Caribbean participants indicated there were no barriers at all to screening—they just don't get screened.

Participants were also asked if there were any factors that motivated them or others to consider CRC screening. Changes in health status or symptoms were the leading motivating factors mentioned. About one-third of participants specifically indicated the appearance of symptoms would motivate most people they know to be screened. Symptoms mentioned in this regard included pain, blood in stool, or problems with bowel movement. A few respondents indicated that older age could be a motivating factor for screening. A recommendation for screening by health care provider was also mentioned by a few respondents in all groups as a facilitator for screening among the general public.

Although the participants expressed some potential barriers to screening, the majority agreed that screening provides the benefit of early detection, which can save lives. Peace of mind (from knowing results) was another perceived benefit of screening reported by a minority of participants.

Preferred Sources of Information and Communication Channels

There were similarities and differences in terms of how the 3 groups learned about cancer. The majority of participants in all 3 ethnic subgroups indicated they learned about cancer through word of mouth from friends and family members. Also, respondents from all 3 ethnic subgroups said that public media outlets, including television, radio, newspaper, Internet, and magazines were important sources of information about cancer. However, a notable minority of Caribbean participants suggested that they also learned about cancer through school, health training, seminars, or health fairs.

Finally, when asked how they wanted to receive future cancer education information, the majority of participants indicated a preference for group sessions, as well as one-on-one sessions in the community. Respondents also indicated a preference for receiving cancer education information in the form of brochures, DVD, and media, including radio, television, and the Internet.

The majority of the African Americans did not make any recommendations in terms of what researchers should know about cancer and their ethnic group. However, all 3 groups emphasized that researchers should be keenly aware of the unique cultural context for each subethnicity when conducting research or providing cancer care. For example, the English-speaking Caribbean and Haitian subgroups suggested that researchers study the cultural beliefs of the Caribbean populations as well as find culturally competent ways to communicate and educate them. They also suggested that researchers organize outreach activities at locations that are accessible to most potential participants. They additionally advised researchers to consider, health insurance and other financial support to address the needs of the uninsured with regards to screening and research. Finally, participants stressed the importance of creating trust during the outreach process.

DISCUSSION

The purpose for this pilot study was to explore and understand the perceptions of CRC in a multiethnic black population, including African American, English-speaking Caribbean, and Haitian blacks, living in the United States. Numerous similarities and few distinct differences were found across the ethnic subgroups. Participants were asked about causes of CRC, factors that can increase someone's risk of developing CRC as well as the kind of people that are more likely to develop CRC. Across all subgroups, there were no differences noted. More specifically, participants from all 3 subgroups cited unhealthy diet/red meat, constipation/poor bowel habits, and indigestible food (meaning the presence of chemicals in food or processed/canned food) as the perceived causes of CRC. However, more respondents in the Haitian subgroup held the belief that the food preservation process, particularly canned goods, was a major contributor. Similarly, the English-speaking Caribbean and Haitian-born subgroups were more likely to report colon or body cleansing as a method of preventing colon cancer.

It has been reported that the underutilization of preventive health services among immigrant communities may be related to traditional health beliefs and practices that may act as barriers to access and utilization of health services.^{15–19} This study found more similarities than differences in perceptions of cancer across the 3 subgroups. Cancer was viewed as “certain death” and “suffering” across all 3 groups. Respondents in all 3 groups also expressed a belief that cancer may be treated if found early. However, fear of finding cancer was an important barrier across all groups. Despite expressing clear benefits from screening—early detection and peace of mind—many respondents cited the fear of receiving bad news, positive results, or cancer diagnosis as a barrier that precludes participation in screening. These beliefs about cancer equating to death, pain, suffering, and fear translate into educational opportunities and challenges for CRC screening and early detection in the communities studied. These health beliefs are consistent with findings from other studies^{15–19} and can be addressed with educational interventions targeting these commonly held views.

Another important commonly held belief is the importance of symptoms as a driving motivation for seeking screening for cancer or CRC particularly. This belief was prevalent in all communities and presents another important target for educational intervention. Educational messages should directly address the importance of asymptomatic screening rather than symptom driven testing. These findings, showing a reliance on the appearance of symptoms or changes in health status, go against the conventional public health paradigm of asymptomatic early detection. To find precancerous polyps or CRC in its early stages (when it is easier to treat), it is important for individuals to understand the relevance of routine screening guidelines based on age, family history, or other risk factors. This message about age- or risk-appropriate asymptomatic screening should be communicated and highlighted in an easy-to-understand fashion irrespective of the medium of communication, language, or community targeted. A study by Gany et al found similar beliefs about breast cancer.¹⁹

Furthermore, structural barriers such as lack of health insurance, lack of a primary care provider, and lack of health care provider recommendation may interact with this belief

about symptoms to produce an insurmountable barrier to early detection. In developing educational interventions that address these critical barriers, use of testimonials by community members may help provide credible role modeling of the intended behavior. Use of low-literacy educational materials that show modeling of asymptomatic screening behaviors may also help overcome these barriers as reported for other behaviors.^{36–38}

In this study, participants from all 3 subgroups commented that awareness of the need to be checked is a motivating factor for CRC screening and that a doctor's recommendation would motivate them to be screened. Numerous studies have found that physician recommendation is a powerful motivator to screening behavior.^{3, 39,40} Unfortunately, blacks/African Americans are less likely to receive physician counseling regarding CRC screening than their white counterparts.³ In a population-based study on CRC screening attitudes and behavior, only 50% of black men and women reported ever receiving a recommendation for fecal occult blood test from their physician.³⁹ The importance of a doctor's recommendation was noted in a small sample of Haitian-born participants who said they had not been screened for CRC because it had not been recommended by a doctor. Conversely, those who completed CRC screenings reported that they had done so because of their doctor's recommendation.⁴¹ Haitian immigrants have also been found to follow CRC screening recommendations provided by their physician, even if they still possessed some misconceptions regarding the disease and its development.⁴² There is also evidence that primary care providers serving the Haitian immigrant community are not consistently following practice guidelines to recommend screening, for CRC.⁴³ Our own research findings showed a pronounced lack of doctor recommendation among the Haitian subgroup but the readiness to follow provider recommendation was also evident.³¹ Perhaps an intervention that includes communication methods for initiating discussion with health care providers is needed for all groups. These results represent both an opportunity and challenge with regards to implementation of cancer screening and early detection interventions targeted at these groups.

Consistent with previous literature, this study found that barriers related to CRC screening include cancer fatalism, fear of finding a problem, concerns about pain and discomfort from tests, and concerns over costs of tests.^{3,19,39,40,44,45} Common perceptions included fear and denial that something might be wrong (if one looks and feels okay, they must be okay), and the general belief that a cancer diagnosis equates to certain death. In this study population, the Haitian subgroup pointed to financial and health insurance barriers to CRC screening, while the African American and Caribbean subgroups placed less emphasis on these factors. Gany et al¹⁹ assert that institutional barriers related to immigrants' socio-economic status, language barriers, and cultural beliefs may contribute to the differences in cancer screening and care utilization among minority immigrants compared with those born in the United States.

All 3 groups pointed to word of mouth from someone they know as a source for learning about cancer. This is an important finding because, although accurate information may be passed along, it is possible that incorrect information and stereotypes may be perpetuated. However, this information may be useful for developing culturally appropriate literature that can be shared with family members and friends. This finding may also support the value of

lay health advisor programs among ethnic subgroups. The need to use multiple channels or mediums of communication in each of the communities is also apparent in our findings. Participants typically reported using a variety of cancer education and information sources that ranged from word of mouth within families to public media such as radio and television, to health care provider-driven communications in community and clinic settings. These communication channels should be further enhanced with appropriate tailoring to each targeted community for language and cultural appropriateness.

The Haitian and Caribbean participants in this study suggested that researchers become aware of their cultural beliefs and communication styles in order to develop effective education messages. These 2 groups also stated that it is important for researchers to have outreach activities in the communities they are trying to serve. Lessons learned from Hispanic^{5,6} and Asian⁷ immigrant communities, and with general health⁹ and breast cancer^{11–14} among blacks, suggest disaggregation of US blacks may reveal potential CRC screening disparities concealed by “lumping” foreign-born with native US-born blacks as 1 homogenous group. The current study supports the need to collect information about nativity or place of origin and length of residence in the United States when conducting research with immigrant communities. Finally, participants stressed the importance of creating trust during the outreach process—an important tenet for CBPR and outreach.^{27,28}

The extent and impact of heterogeneity and diversity within the US black population are still largely unrecognized and unaccounted for in most cancer control research, public health initiatives, or national priorities to reduce health disparities. Our pilot study is one of few studies to compare perceptions and awareness of cancer and CRC among subgroups of blacks living in the United States. These results provide evidence for the need to explore black ethnic subgroup differences in a larger population. The findings may have implications for improving CRC awareness and education in multiethnic black populations and provide another perspective for reducing the CRC disparity among US blacks. With caution (small sample sizes and limited geographic sampling), the findings from the current study also suggest that common interventions could be used while accounting for country of birth and language differences.

This study was limited by the use of English-only measures. Lack of translated Haitian Creole measures precluded participation of monolingual individuals who may have greater barriers to CRC screening. Thus, the ability to understand the unique barriers facing non-English-speaking Haitians may be limited. However, efforts to translate and pilot existing instruments are underway setting the stage for a larger study. Also, future larger-scale, multicenter studies could help elucidate whether our findings can be generalized in broad terms (nationally).

CONCLUSIONS

This pilot study provides some insights into the importance of understanding the extent of heterogeneity (or lack thereof) among the US black population. While limited by small sample size and small geographic sampling frame, the findings corroborate other studies and showed some cultural, language, and health insurance (structural) barriers. The impact of

these findings in the design of future research and interventions studies is not definitive from this pilot study. Rather, accumulating evidence from studies examining ethnic subgroup differences will facilitate answers to whether interventions should be culturally targeted for ethnic subgroups to aggressively address both commonly held and unique cultural and structural barriers. Nevertheless, our current results and other published literature^{19,31,42,43} provide support for common interventions with tailored messages where distinct cultural differences exist. In addition, studies should collect information on nativity and language preferences among subgroups of blacks to facilitate further investigation of the differential perceptions of cancer and assess whether interventions capture the uniqueness of ethnic subgroups.

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Box 1**Key Themes Reflecting Participants' Attitudes About Cancer, Perceived Barriers, Benefits and Motivation for Colorectal Cancer Screening^a**

Content Area	African American	Caribbean	Haitian
Perception of cancer	<ul style="list-style-type: none"> Death, no cure (fatalism) Family members who had cancer/pain and suffering Getting treatment/cure 	<ul style="list-style-type: none"> Death, no cure (fatalism) Family members who had cancer/pain and suffering Getting treatment/cure 	<ul style="list-style-type: none"> Death, no cure (fatalism) Getting treatment/cure Family members who had cancer/pain and suffering
Cancer prevention practices	<ul style="list-style-type: none"> Home remedies (herbs, teas, spices, and natural foods) Cleansing with laxatives and fasting 	<ul style="list-style-type: none"> Home remedies (herbs/spices: ginger, cayenne pepper, sienna leaves; teas: lemon tea, bush tea; and natural foods/grains) Cleansing of the body with laxatives (eg, aloe vera, castor oil) 	<ul style="list-style-type: none"> Home remedies (herbs, teas, spices, and natural foods/fruit/vegetables) Cleansing with tea; good to clean the blood, the system
Causes of colon cancer	<ul style="list-style-type: none"> Unhealthy diet, red meat Chemicals in food and preservatives in processed/canned foods Constipation/poor bowel habits; lack of cleansing (bowel or body). 	<ul style="list-style-type: none"> Unhealthy diet, red meat, no veggies, fiber Constipation, indigestible food/poor bowel habits (as cause and symptom); lack of cleansing (bowel or body) Chemicals in food 	<ul style="list-style-type: none"> Unhealthy diet, red meat, no veggies Preservatives in processed/canned foods, fast foods, fatty foods Constipation/poor bowel habits (as cause and symptom); lack of cleansing (bowel or body)
Symptoms as a "cue" to tell if someone has cancer	<ul style="list-style-type: none"> Blood in stool, aches, pains, and not feeling right 	<ul style="list-style-type: none"> Blood in stool, aches, pains, and not feeling right 	<ul style="list-style-type: none"> Blood in stool, aches, pains, and not feeling right
Perceived screening norms and barriers to CRC screening	<ul style="list-style-type: none"> Discomfort of tests Fear of positive results Fear of procedures/discomfort/pain 	<ul style="list-style-type: none"> Most people were eager to take screening tests Discomfort of tests Fear of positive results 	<ul style="list-style-type: none"> Lack of health insurance/cost Discomfort of tests Fear of fear of positive results

Content Area	African American	Caribbean	Haitian
		<ul style="list-style-type: none"> Lack of health insurance/cost 	
Perceived benefits from CRC screening	<ul style="list-style-type: none"> Early detection saves lives Knowing results/peace of mind ("don't have cancer") 	<ul style="list-style-type: none"> Early detection saves lives Knowing results/peace of mind ("don't have cancer") 	<ul style="list-style-type: none"> Early detection saves lives Knowing results/peace of mind ("don't have cancer")
Perceived/preferred information sources about cancer	<ul style="list-style-type: none"> Media: watching TV, newspaper, Internet, magazines Word of mouth/ someone with cancer One on one (pamphlets/ literature) 	<ul style="list-style-type: none"> Media: watching TV, radio, newspaper Word of mouth, friends and family, or know someone with cancer Health care professional presentations to groups or community sessions 	<ul style="list-style-type: none"> Word of mouth, friends and family, or know someone with cancer Media: watching TV, radio, newspaper Health care professional presentations to groups or community sessions
Preferred channels/method of communication	<ul style="list-style-type: none"> One-on-one sessions using DVD/brochure Group sessions using DVD/ brochure 	<ul style="list-style-type: none"> One-on-one sessions using DVD/brochure Group sessions using DVD/ brochure 	<ul style="list-style-type: none"> One-on-one sessions using DVD/brochure Group sessions using DVD/ brochure
Things researchers should know about cancer and ethnicity	<ul style="list-style-type: none"> African Americans avoid doctors; don't seek for checkups Need for education, awareness, and communication/ take the fear away about cancer Cultural barriers about general health and prevention-outreach services 	<ul style="list-style-type: none"> Caribbean cultural beliefs, competence, and communication Need for education, awareness, and prevention Outreach to find the Caribbean people Locations accessible to people 	<ul style="list-style-type: none"> Haitian cultural beliefs, competence, and communication Need for education, awareness, and prevention Outreach to find the Haitian people —locations accessible to people Health insurance/ financial need
^a All respondents were asked every question. Respondents were probed at least once for additional answers.			

Box 2**Key Themes and Supporting Quotes of Participants' Perceptions About Causes and Risks of Colorectal Cancer, Cancer Screening, Preferred Sources of Information and Communication Channels, by Subethnicity**

Content Area	African American	Caribbean	Haitian
Perception of cancer	"You think of being terminal because with cancer, there is no cure yet. I think about death and pain, or either long time suffering." (female)	"Cancer is debilitating; it's grief stricken to a lot of people and it's the ultimate death." (female) "In thinking about cancer, it's one of those things that you don't want to hear about because you fear...you fear it because of the outcome, you know... you always know someone who was diagnosed with cancer and the outcome was not good and so that fear is always there." (female)	"When I hear about cancer, the first thing I think is death." (male)
Prevention practices	"For myself, as I said, I try to eat as much fruits and vegetables as possible. I try and study up on the kind of food to eat, what are all the preservatives and the additives they put in the food. I try and stay away from them." (male)	"Oh, I take ginger; I take different spices." (male)	"Actually, I'm looking at what I'm eating; I eat a lot of vegetables; that's number 1." (male) "I eat a lot of fruits and veggies and I kind of stay away from salt because of the blood pressure but I use...that's why I use so much garlic and parsley, onions." (female)
Symptom as a "cue" to tell if someone has cancer	"Severe pain. You still have to go and be screened and make sure that's what you got because you can get dry cough and severe pain and headaches and stuff from any kind of sickness." (female)	"Take, for instance, I'm 60; suppose I start heavy bleeding, you know, which is unusual, the first thing that might come to mind: 'oh my God, maybe I have cancer,' you know. It would be scary; I would go to doctor to find the truth, but it would be at the back of my mind based on the symptoms." (female)	"If you have a stomach ache...or you have a pain in your inside, like in your belly and you can get checked because you never know." (female)
Causes of colon cancer	"Yeah, and, you know, and colon cancer, from what I understand, I'm not sure but it's from eating the wrong foods and not cleansing your body and, you know, being constipated and, you know, so...and that's where I think a lot of illnesses come from,	"I feel like inactive people; people that do not exercise; people that eat heavily starch, meat, don't eat enough vegetables and fruit to really give them good fiber to break down the food so they can have a good, smooth bowel movement. I think people like that are	"The first cause of colon cancer is constipation." (female)

Content Area	African American	Caribbean	Haitian
	not just colon cancer.” (female)	very good candidate for colon and the other one, prostate cancer.” (female)	
Perceived screening norms and barriers?	<p>“Well, I can tell you how I felt. I felt totally violated.” (male)</p> <p>“They don’t get checked; you have to go to your doctor and get checked. A lot of African American men and white men, mostly African American, don’t go to doctors; even if they go, they don’t want that kind of examination.” (female)</p>	<p>“Well, because of the changes in society, I think a lot of Caribbean people now are eager to get tested for colon cancer, not only colon cancer but prostate which affects the black community more, you know, and the Caribbean is more predominantly African descendant.” (male)</p> <p>“Because it’s so uncomfortable; it’s like procedure; you have to be prepared for it...you have to be put under and be anesthetized before it can be done; a lot of people, they look at that as a big surgery when it’s really just a simple procedure.” (female)</p> <p>“Some people do feel uncomfortable doing the test.” (female)</p> <p>“Like myself, you know; I’ve had a colon cancer test about 4 or 5 years ago and, I mean, I was scared of the result. Yeah, I was scared to go back and find out the results but, fortunately, they came out ok.” (male).</p>	<p>“Yeah, if you don’t have a primary doctor; you don’t have insurance, you know; that’s how a lot of people have trouble to do it. Yeah, insurance is the most important thing people don’t go to hospital because, like I said, the beginning, I tell you most people, they don’t want to go to hospital because they don’t want the hospital charge them so they don’t have money so that [inaudible, unclear] the bill is the thing; the Haitian people, they scare about it.” (male)</p>
Perceived benefits	<p>“If you get checked for it, they can catch it; it’s curable; colon cancer’s curable; it’s practical. I mean, look at Katie Curie’s husband; he died very young of colon cancer. Yeah, see, colon cancer is correctable; if you know it’s there; they can take it out or do things to correct it; that’s the benefits of having the colon checked.” (female)</p>	<p>“Early prevention or early intervention or whatever, early discovery; it saves a life; it is a lifesaving tool but it’s very invasive. Well, I think the benefit there is...if you do have colon cancer and it’s found in its early stage...it can be treated, therefore, you have a better chance of survival vs later detection that can, you know, cause problems elsewhere in your body...” (female)</p>	<p>“I have to know early because the first prevention is to do the test so if I have the cancer, I think it is too late to... prevent it.” (female)</p> <p>“The benefit is if you have it as early; if you know you have it as early as possible, you can do something about it to save your life.” (female)</p>
Perceived/preferred information sources about cancer	<p>“I think a brochure would probably be the best thing for them because a lot of people might not have a DVD.” (female)</p>	<p>“Sometimes they go to the doctor office and they see little pamphlets and different things, pick it up and read.” (male)</p>	
Preferred channels/method of communication	<p>“Well, I would say that a group session with pamphlets, information, education material, it</p>	<p>“I’ll say a brochure is good because everybody might not have a DVD, you</p>	<p>“Oh, I like DVD because I can look at it all the time.” (female)</p>

Content Area	African American	Caribbean	Haitian
	would be best to have group sessions and something that they could see; most people are visual.” (male)	know; brochure would be good; DVD for people who want DVD; that would be good. Probably a brochure and maybe a one-on-one intervention.” (female)	
Things researchers should know about cancer and ethnicity, Haitians, African-Americans	“One of the things I think researchers should know is the first thing-you need to do is take the fear away from us.” (female)	“There’s one aspect about Caribbean people...they are private; they will keep a lot of information to themselves; they have to know you before they will divulge a lot of information to you; trust plays a great role.” (male)	“Haitian people, they don’t like to go to hospitals to check very often, they don’t like to go. If they don’t feel sick, they’re not going to hospital to check up; some of them do it every year; some of them do it other times but most of them, they don’t do it.” (male)

Table**Sociodemographic Characteristics of Study Participants by Ethnic Subgroup**

	Ethnic Groups			p Value
	African American (n = 22)	English Caribbean (n = 20)	Haitian (n = 20)	
Age, y (mean [SD])	58.9 (6.4)	63.4 (8.6)	56.1 (6.9)	.007
Median (min to max)	57.5 (50–73)	62 (52–76)	53.5 (50–73)	.007
Years of residence in the United States				
Mean (SD)	NA	28.1 (10.8)	20.1 (11.1)	.044
Median (min to max)	NA	28.0 (7–46)	22.5 (4–39)	.044
	n (%)	n (%)	n(%)	
Gender, female	11 (50)	10 (50)	11 (55)	.951
Employed or self-employed	7 (32)	10 (50)	9 (45)	.523
Married or living as married	6 (27)	12(60)	11 (55)	.077
3 adults living in household	3 (14)	1 (5)	6(30)	.103
Children <18 y living in household	3 (14)	1 (5)	11 (55)	.001
High school graduate or less	11 (50)	6 (30)	12 (60)	.169
Household income \$25000	14 (64)	8 (40)	13 (65)	.235
No health insurance coverage	8 (36)	5 (25)	8 (40)	.630
Positive family history of cancer	17 (77)	9 (45)	7 (35)	.017

Abbreviation: NA, not applicable.