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Psychosocial Determinants of Colorectal Cancer Screening Uptake among African-American men: Understanding the Role of Masculine Role Norms, Medical Mistrust, and Normative Support

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Declaration of Interest

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Abstract

Objectives.—Despite having the highest colorectal cancer (CRC) incidence and mortality across all major racial/ethnic groups, African-American men consistently have poor CRC screening rates. Gendered and racialized beliefs and norms have been associated with African-American men's lower medical assistance-seeking rates, but how these notions influence African-American men's CRC screening practices merits further investigation. The purpose of this study was to examine the influence of psychosocial determinants of men's health on CRC screening uptake among African-American men in three states.

Design.—Participants were recruited via [CuttingCRC.com](https://cuttingcancer.com) and through culturally-tailored flyers, newspaper ads, and snowball sampling, among other methods. From April 2019–August 2019, 11 focus groups were conducted with English-speaking Black/African-American men who (a) were between ages 45–75, (b) were born in the United States, (c) had a working telephone, and (d) lived in Minnesota, Ohio, or Utah. Multiple-cycle coding, Hatch's 9-step approach, and constant comparative data analysis was employed for de-identified transcript data.

Results.—Eighty-four African-American men met inclusion criteria and participated. Their mean age was 59.34 ± 7.43 . In regards to CRC screening status, Ohio had the most previously screened participants (85%), followed by Minnesota (84%) and Utah (76%). Two major CRC screening barriers (masculine role norms and medical mistrust)—both encompassed 3–5 subthemes, and one major facilitator (normative support from family members or social networks) emerged.

Conclusions.—Despite CRC screening's life-saving potential, African-American men have had the lowest 5-year relative survival for more than 40 years. When developing interventions and health promotion programs aiming to eliminate the racial disparity in CRC outcomes, addressing both masculine role norms and medical mistrust barriers to CRC screening completion among African-American men is warranted.

Keywords

colorectal neoplasms; health status disparities; men's health; men's health equity; mistrust in institutions; social determinants of health

Colorectal cancer (CRC) has been described as “the disease no one has to die from” because several screening exams exist that permit medical providers to detect and remove polyps early, when CRC may be more treatable and preventable (Pochapin 2004). The United States Preventive Services Taskforce (2016) recommends early detection screening for CRC starting at age 50 years via a range of options including stool-based screening tests (e.g., Fecal immunochemical test [FIT], FIT-DNA) every 1 or 3 years, and direct visualization screening test every 5-to-10 years (e.g., flexible sigmoidoscopy, colonoscopy).

Despite CRC screening's lifesaving potential, African-American men have had the highest incidence of CRC, the lowest 5-year relative survival, and the highest mortality rates from CRC across all major racial/ethnic groups for more than 40 years (American Cancer Society 2019; Siegel et al. 2019). Rates of CRC screening among African-American men are consistently below those of other U.S. populations and, according to some metrics, have recently trended downward rather than upward. In Utah, for example, CRC screening rates among African-American men have fallen significantly below the statewide average for more than 15 years. According to the Utah Department of Health's Office of Health Disparities (Utah Department of Health 2016), the rate of CRC screening starting at age 50 years among African-American adults is currently 53%, compared with the statewide rate of 72%. Moreover, CRC screening completion rates in other states remain dismal as African Americans in Minnesota and Ohio have CRC screening uptake rates of 67% and 63% juxtaposed to whites at 75% and 67%, respectfully (Centers for Disease Control and Prevention 2020).

Although CRC screening completion behavior among African-American men remains poorly understood (American Cancer Society 2019; Siegel et al. 2019), a number of psychosocial and economic factors have been identified that may help to explain racial and gender disparities in CRC screening. For example, socioeconomic factors such as living in underserved African-American communities and lack of knowledge about CRC and its preventive screening measures have been found to contribute to low rates of CRC screening among African-American men (Kwaan and Jones-Webb 2018; Rogers et al. 2017). The Institute of Medicine's *Unequal Treatment* (2003) report documented that African Americans and other racial and ethnic minorities often received lower-quality health care even when they had the same levels of health insurance coverage and income as their white counterparts (Nelson 2003). These challenges result in fewer medical visits and missed opportunities for medical providers to offer CRC screening-focused education to African-American men (Bonhomme and Essuon 2012; Rogers et al. 2017).

Some studies have found that African-American men have higher rates of skepticism that they will receive the same quality of care and accuracy of information as their white counterparts (Arnett et al. 2016; Hammond 2010; Hammonds and Reverby 2019; Rogers et al. 2018). Other research has shown that African-American men with higher levels of medical mistrust were significantly more likely to have lower quality of life and to delay routine checkups, blood pressure checks, and cholesterol screenings (Hammond et al, 2010; Kinlock et al. 2017). There remains a paucity of tools, however, to accurately capture the impact of the intersection of these factors on the CRC screening behavior of African-American men.

When considering other SDoH that contribute to CRC-related inequities among African-American men, racial discrimination, lower access to treatment, receipt of lower-quality care, and lack of timely diagnosis have also been found to be factors that contribute to low CRC screening uptake among African-American men (Bromley et al. 2015; Mitchell, Watkins, & Modlin Jr. 2013, Sineshaw et al. 2018). Decreased access to health care among African-American men compared with their white counterparts may be explained in part by their lower likelihood of having employment-based health insurance and higher likelihood

of having lower incomes (Beckels and Truman 2013). While numerous multifaceted factors help to explain poor CRC screening completion rates among African-American men, they fail to fully account for these patterns and the associated poor health outcomes.

Compared to women, men tend to generally engage in fewer health-promoting and more health-harming behaviors (Griffith and Thorpe 2016). Although women can embody masculine roles and behaviors—especially those related to self-reliance (Kaya et al. 2016; Smiler 2006), masculine norms are only epitomized by men and have been found to be a key factor associated with the health behavior of African-American men (Bromley et al. 2015; Levant and Richmond 2007; Hammond et al. 2010, Rogers et al. 2017). Masculine norms refer to shared cultural expectations and social prescriptions about male gender roles, cultural beliefs, and behaviors (Levant and Richmond 2007). Extant research suggests that African-American men highly endorse prescriptive masculine norms especially those encouraging unmitigated displays of mental and physical toughness (Levant and Richmond 2007; Hammond et al. 2010). Such norms further prescribe the fulfillment of additional socially appropriate roles for men and boys (e.g., being a provider and protector) that can interfere with the adoption of personal health-promoting behaviors (Griffith, Gunter, and Allen 2011). The rigid endorsement of the seven theoretically derived norms of stereotypic masculinity ideology validated by Levant and Richmond (2007)—i.e., self-reliance, emotional control, avoidance of femininity, fear, hatred of homosexuality, aggression, and achievement of status—may explain some aspects of resistance to seeking medical help, including CRC screening (Levant and Richmond 2007; Rogers et al. 2017; Thorpe, Wilson-Frederick, et al. 2013). African-American men who endorse these masculine norms may view obtaining early-detection screening for CRC as a display of weakness, and seeking CRC screening and other preventive care may be perceived to indicate a lack of competence, self-reliance, or control (Rogers et al. 2017). When investigating gendered barriers to CRC screening, one particularly important barrier among African-American men appears to stem from a negative perception of colonoscopies due to an association of the invasive anal procedure with “gay sex” (Bie and Brodersen 2018). In addition to the endorsement of both fear and embarrassment, colonoscopies have been widely documented as a perceived challenge to the heteronormative masculine norms of African-American men (Bromley et al. 2015; Rogers et al. 2017). Moreover, low engagement in CRC screening entwined with masculine norms may encourage self-reliance as a means of displaying idealized manhood, while reinforcing negative attitudes toward medical help-seeking (Bromley et al. 2015).

Further examination of the ways in which psychological and social determinants of health (SDoH)—“conditions in the environments where people are born, live, learn, work, play, worship, and age”—affect CRC screening behavior is critical for designing more-effective behavioral interventions and specifically for increasing CRC screening uptake in African-American men (Kwaan and Jones-Webb 2018; Hammond et al. 2010; Rogers et al. 2017; U.S. Department of Health and Human Services 2020). While gendered constructs such as masculinity are key factors that shape African-American men’s health, unanswered questions remain regarding how masculinity interacts with other factors such as age, race, ethnicity, and sexual orientation and how these may work in tandem to influence CRC screening completion (Griffith et al. 2019). Thus, the aim of this qualitative study was to

explore the psychosocial determinants of CRC screening uptake among African-American men aged 45 to 75 years living in Minnesota, Ohio, and Utah.

Data and Methods

Study Design and Eligibility Criteria

Focus groups (also known as “Chat & Chew” sessions) were led by the study principal investigator (PI; CRR) and 1 to 2 additional study team members who served as project assistants. Participants were men who (a) self-identified as Black/African American; (b) were aged between 45 and 75 years; (c) were born in the United States (U.S.); (d) spoke English; (e) had a working telephone; and (f) lived in Minnesota, Ohio, or Utah. The PI led the sessions using an 11-question, semi-structured focus group guide (Supplemental Table 1). As originally proposed by Rogers et al. (2019), the theoretically-grounded questions stemmed from a Masculinity Barriers to [Medical] Care Scale developed by the PI. Focus groups began with an icebreaker activity prior to the formal questions (*“In 60 seconds or less, please say your name and finish this sentence: The things I value most are...”*).

Recruitment, Data Collection, and Setting

Prior to data collection, the Institutional Review Board (IRB) at the University of Utah approved the study protocol (IRB #00113679). Beginning on World Cancer Day 2019 (February 4) and continuing through August 2019, African-American men in Minnesota, Ohio, and Utah were recruited by means of culturally tailored flyers, newspaper ads, and emails, as well as via various social media platforms. Initially, participants in Minnesota and Utah were encouraged to register for the study via CuttingCRC.com, a website that provided details about the study as well as a link to a registration form that accepted basic demographic data (for eligibility consideration) and time and date preferences for focus group participation. This approach, however, was less effective than anticipated. The research team then partnered with churches to recruit men and hold focus groups immediately following worship services. Additionally, in partnership with a community healthcare organization and a healthcare system, both located in the most diverse county of Minnesota, participants were recruited via direct mailers that included a signed recruitment letter written at a 5th-grade English reading level, and/or a culturally tailored study flyer.

In Ohio, culturally tailored flyers, social media, and snowball sampling were the primary means of publicity and recruitment for interested participants, who were encouraged to register by phone. Potential participants were often introduced to the study by neighborhood leaders and community-based organizations who enabled research team members to speak directly to their constituents by phone about forthcoming focus groups and related eligibility criteria. Participants received reminder phone calls 1 to 2 days before the date of the focus group for which they were registered.

After recruitment, informed consent to participate was obtained from all study participants at the beginning of each focus group session, and participants were informed that to ensure confidentiality their names would be removed from their publishable quotes. The aforementioned 11-question, semi-structured focus group guide was used to guide the

conversations regarding masculinity barriers to care and CRC screening uptake. Each session was audio recorded with two devices, professionally transcribed verbatim, and checked for accuracy by research staff prior to data analysis. The focus groups were held in public libraries ($n = 4$; 36%), church conference rooms and fellowship halls ($n=3$, 27%), barbershops ($n=2$; 18%), and a hotel conference room ($n=2$; 18%). Seating arrangements included seating participants around a large rectangular table, at several small tables arranged in a rectangle, or in a circle composed of barber chairs and other patron seats. The facilitator (study PI) sat with the participants and research assistant(s) took notes while sitting outside the focus group perimeter. At the conclusion of each focus group, the PI encouraged participants to complete a brief anonymous survey that requested demographic information (e.g., age, health insurance status).

Incentives

Compensation offered for participants' time included a free meal; a \$20 Target gift card; and the opportunity to enter a random prize-drawing for 2 state-specific tickets to a National Basketball Association game (e.g., Utah Jazz tickets for participants in Utah), a 55-inch television, or a \$100 gift card. For this optional drawing, participants were asked to submit their name and phone number at the conclusion of the focus group so that they could be contacted if they were selected; where 63 men expressed drawing interest.

Analysis Plan

The de-identified focus group transcript data were analyzed using a qualitative approach based on Hatch's 9-step inductive approach, with some variations (Hatch 2002). The 9 steps of this approach were: (1) identifying overarching themes; (2) reading the data and marking related themes; (3) reading the entries and recording the main ideas or overarching themes; (4) finding subthemes and relating them to the overarching themes; (5) re-reading the data and coding them to fit the identified themes; (6) describing the subthemes, supporting them with transcript data, and removing examples that did not align with the identified themes; (7) identifying relationships among the subthemes; (8) summarizing the subthemes as one-sentence generalizations; and (9) confirming that the generalizations were supported by data excerpts. One-sentence generalizations were not created for examples that did not align with the identified overarching themes. Instead, subthemes were developed from valuable counterpoint information. The results section highlights the identified themes, subthemes, and their relationships. The identified overarching themes were based on codes, as discussed below, and were confirmed to be supported by transcript data.

Data analysis took place from June to September 2019. Two research assistants analyzed the transcripts using multiple-cycle coding, Hatch's 9-step approach, and constant comparative data analysis methods (Boeije 2002; Hatch 2002). The research assistants and second author (TNR) held weekly meetings during the coding period to resolve conflicts and discuss emerging content and any necessary changes in coding logistics. A Google spreadsheet was used to organize the "text chunks" and their associated codes, along with any new themes identified. Two research assistants analyzed and compared each focus group transcript to determine common key words that defined similar themes. Data comparison across states permitted a comprehensive view of responses and confirmed shared barriers and enablers

among participants. Demographic information for the sample was summarized using SPSS Statistics Version 26 (IBM, Armonk, NY).

Results

Sample characteristics

Eighty-four African-American men (mean age 59.34 ± 7.43) met full inclusion criteria and participated in 1 of 11 focus groups that were conducted between April 2019 and August 2019 in Utah ($n=33$), Minnesota ($n=31$), and Ohio ($n=20$). Attendance at each session averaged 8 participants, and sessions lasted from 60 to 108 minutes with an average of 75 minutes. While this was not an inclusion criterion, most study participants (85% in Ohio, 84% in Minnesota, 76% in Utah) had been previously screened for CRC.

Most participants (83%) had one medical provider whom they always consulted, and 58% had visited a medical provider in the past year. A majority (60%) did not have a family history of CRC, 19% were unsure, and 6% had a family history of CRC. Most participants practiced Christianity, and 79% attended religious activities regularly. Participants learned about the study via a church (60%), a barbershop (13%), email (8%), or other methods, including direct mailings and word of mouth (13%). All participants in Ohio, 94% of those in Minnesota, and 88% of those in UT declared they had health insurance (see Table 1).

Themes

The study's interview guide (Supplemental Table 1) aimed at possibly uncovering the following CRC screening-related themes: *Need for Control & Self-Reliance*, *Minimizing Health Problems & Resignation*, *Medical Mistrust*, *Privacy*, *Emotional Control*, *Black Masculinity*, and *Barriers & Enablers*. Yet, the themes that emerged overall were barriers and facilitators of African-American men's decisions to complete CRC screening. The two primary barriers to CRC screening uptake that emerged from the analyses – masculine role norms and medical mistrust – each included several subthemes. Normative support provided by family members or social networks emerged as the single most consistent facilitator of African-American men's decisions to complete CRC screening. We will describe each of these in turn and include select illustrative quotes to highlight and reinforce key points.

Masculine Role Norms—The most common theme to emerge from all focus groups was masculine role norms. This theme cut across a number of gendered barriers to CRC screening completion: heterosexual self-presentation, self-reliance, provider role fulfillment, paternal health socialization, and restrictive emotionality.

Heterosexual self-presentation.: This heteronormative masculine subtheme focused on the avoidance of being perceived as “gay” presented itself in several participants' responses on the topic of obtaining colonoscopies. One Utah participant stated: “*My older brother wouldn't go for a colonoscopy because he associated that with being gay... And he was as serious about that as anything in the world.*” Two Minnesota participants reasoned that lack of participation in CRC screening was due to the procedure being “*equated to being gay*”; “*I think [for] a lot of men, it's a stigma because it's going up your rectum... They equate*

that [colonoscopy] with other things to not being masculine.” Further, another participant in Minnesota expressed his aversion to the invasive procedure by stating, *“How am I going to let someone run up in my butt with a camera?”* Conversely, a participant in Utah proposed that having a medical provider offer reassurance that obtaining a colonoscopy “doesn’t change your sexual orientation” could positively influence African-American men to receive colonoscopies.

Moreover, the intrusive nature of a colonoscopy created stigmatization that deterred participants from obtaining early-detection screening for CRC. One participant in Minnesota explained: *“It’s a procedure [i.e., colonoscopy] ... [where] I think ... stigma is because of the body part that they’re examining, so that’s... why I think it’s ... difficult for some people.”* Another Minnesota participant suggested that some men may confuse a prostate exam with a colonoscopy: *“Cause that is true. A lot of people think that’s the same thing [prostate exam and colonoscopy] and it’s not.”* Indeed, a participant from Ohio stated: *“But the first time [for a colonoscopy], the first time I had it, the doctor...he took his finger and put them in my behind. I said, Wait a minute’. That was the prostate. And I told the doctor, I said, ‘I won’t be back.’”*

Self-reliance: Doubts about the care provided by and the expertise of medical providers led many participants to seek medical advice through alternative sources. Often driven by masculine values of independence, perceived invulnerability, and medical mistrust, participants declared that instead of visiting the doctor, they often *“relied on old school remedies from [their] grandmother[s] and grandfather[s]”* (Utah participant). These remedies ranged from sweating sickness out to consuming ginger tea, lemon juice, or lemon with honey. As an Utah participant stated, *“We’d go over to Big Mama’s house or Grandma’s house and get the cure because the doctors didn’t see us.”*

The men also claimed that Google and WebMD could provide enough, if not more, information for self-care than a medical provider. As one participant stated:

‘You can Google almost anything, and it will give you some reasoning or some understanding of what it is you’re experiencing.’

(Utah participant)

Furthermore, participants stated that norms such as invulnerability and self-reliance prevented timely and clear communication of health issues to their doctor or family members.

‘We’ve been raised to be the strong, masculine men and not care, let alone understand, what is going on with our bodies.’

(Utah participant)

Participants also noted that they typically delayed seeking care until their health issues worsened. One Minnesota participant stated: *“...[the health issue] just didn’t seem pressing. There are more pressing things. Right? And I didn’t feel bad.”* Another declared:

'...unless it's something that warrants immediate attention, we may not do anything about it. Not because we shouldn't, just because we prioritize something else that we believe we as men are responsible for doing.'

(Ohio participant)

Provider role fulfillment.: In response to the question of what it means to be a real man, participants stated that being the head of household was critical. A participant in Minnesota stated: *"...be the head of household, being a man, taking care of business. That's what a man do."* Another Minnesota participant noted: *"A real man, he gets up and he holds down a job. He provides... If you don't work, you don't eat."* Similarly, participants emphasized the importance of accepting the responsibility of being the head of household, and they noted that setting standards also rated highly in the definition of a real man. One participant from Utah, describing the importance of the provider role among African-American men, stated:

"... what it means to be a real man is, is when you learn how to walk with integrity, you know? When you are doing the right thing even when nobody is watching. Um, when you are being an example not only to your children but to other people who see you."

Further illustrating this concept, a man in Utah stated *"...that [the] masculine role is to provide, protect, and be the umbrella..."* The substantial burden of the provider role was evident in this statement by a participant in Minnesota: *"... The brothers, the men, they were providers...and I think about that a lot."* The theme of supporting the family by being the main provider was consistently discussed in all focus groups, and was prioritized over health (see subthemes *self-reliance* and *paternal health socialization*).

Paternal health socialization.: Participants frequently attributed their health care-seeking behaviors to absent father figures and/or to the limited paternal health socialization they had received. They expressed an underlying perception that they were ill equipped to handle health matters due to having experienced minimal parental or fatherly modeling in this regard. A participant in Ohio stated: *"I think we didn't see our fathers or males before us go to the doctor. That mentorship or whatever. We watched them work until they as 50 and dropped dead, basically."* In Utah, a participant specified: *"The only man a lot of us had growing up in my era was our mother or our grandmother or who was raising us at the time."* Primarily raised by mothers and grandmothers, many participants attributed their independence to the lack of direction that they believed they would have received if their fathers had been involved in their upbringing. Further exemplifying this notion, a man in Utah stated *"... you want to know who I am, know who I take after? My mother."*

Restrictive emotionality.: When participants were asked when they were willing to express emotions, some resisted the question. One Ohio participant stated: *"that [question] ain't fair. That ain't no health question."* Later, the same participant expressed his reason for his resistance: *"Yeah, 'cause I mean, I have a hard time with emotion. I don't want you to see my weakness."* Most participants' responses reflected the value they place on limiting displays of vulnerability, with phrases such as *"do not complain"* and *"show no emotions."* For example, a Minnesota participant stated: *"...As black men, we don't express*

[emotions].” A few participants felt that the appropriateness of expressing emotion depended on the situation or environment. One poignantly stated:

“Is it safe to express my emotions at work? Is it okay to express my emotions at church? Sitting here with people that I like and know and trust, I can do that. Um, it changes, you know? It’s like culture. It changes with every group you’re in.”

(Utah participant)

Even among participants who were willing to explore and share their emotions, most felt that doing so was uncommon among African-American men. One explained:

“I never saw my dad express emotions so I never expressed emotions... you don’t want to show weakness ‘cause the people above you will use that against you.”

(Utah participant)

Some participants connected the use of healthcare to their emotional restraint.

“My arm hurt, but I can make it.’ That’s the macho in you. There ain’t no crying around here.”

(Ohio participant)

Medical Mistrust—Medical mistrust as a persistent deterrent to seeking CRC screening and medical care emerged as a major theme. Medical mistrust often brought issues of race—both historical and current—to the forefront. Nearly every focus group question generated responses that related to mistrust. One Minnesota participant stated: *“I don’t trust them ‘old white boys’ – I think about Tuskegee and all the other things. A lot of times, I really don’t think [white doctors] care whether I live or not.”* While another participant in Utah stated: *“That trust issue is a big issue.”* Yet, while mistrust was paramount in several focus groups, most participants had rapport with a medical provider. Even when they had some rapport with a provider, however, some participants viewed the provider’s gender as a limitation to care seeking and colonoscopy completion.

“Nowadays, it’s women doctors and stuff, you know, like, you know, especially for [procedures] like that [CRC screening], I prefer it to be a man – a man, a black [male] doctor.”

(Minnesota participant)

Note that while this participant specifically talked about gender, he also made a point to mention his preference for race concordance as well.

Some regarded healthcare as *“an adversarial rather than cooperative venture”* (Utah participant), while others did not let mistrust obstruct their access to medical care. Despite this inconsistency, participants never dismissed mistrust as unjustified, unwarranted, or unnecessary. Moreover, participants expressed two medical distrust-driven subthemes: historical malpractice and poor patient-provider relationship.

Historical malpractice.: Participants cited the Tuskegee syphilis experiments along with names of local hospitals to demonstrate historical disregard for African Americans’ health.

“You heard about the Tuskegee thing... there’s some stereotypes and folklore in the black community that prevents people from openly going to doctors on a regular basis when they’re sick. They’d rather just go do over-the-counter stuff to handle it.”

(Ohio participant)

As one OH participant recalled about a local hospital, “*when black men went in, they wouldn’t go out.*” Conversely, highlighting how historical malpractice–related barriers to care may diminish with age, one participant in Utah said: “*When you’re dealing with the life and death, when you’re in your 60s, you’re not thinking about being a guinea pig... You want to be healed.*”

Participants described exhibiting caution in the presence of medical providers. One Minnesota participant explained his method for obtaining the right medical provider: “*Um, but what I do is I screen them, right. I ask them a simple question and look into their eye, ‘cause as black men, you know, we kinda – we kinda can tell just like that ... if he’s gonna be a [racist or if] he gonna be cool.*” Participants in each state were able to point to specific local medical malpractice cases.

Poor patient-provider relationship.: Many participants shared experiences with medical providers that fostered their aversion to seeking care. For example, one Utah participant stated: “*...it was like [the physician] could care less.*” Explicitly, two men stated the following:

“*A lot of time the doctors are white doctors... I really don’t, you know, trust a lot of them anyway ‘cause I know how they feel about us and I know the way the system is... I feel like they don’t give a damn about me.*”

(Minnesota participant)

“*It’s very important that you get a physician you really like who takes his time and really cares for you instead of just going into that office and it’s all about the money and stuff.*”

(Utah participant)

Some participants felt discouraged by medical providers who they felt displayed a lack of concern for their patients’ welfare. These men shared narratives involving a misdiagnosis or complications from surgery that they felt would not have occurred if the physicians had been equitably invested in African-American patients.

“I got a fear of the white doctors because like I say, what they call that, the digital [rectum exam]? They just try to jam their finger, bam, like that, act like they’re trying to hurt you.”

(Ohio participant)

Normative Support—One factor facilitated CRC-related care among African-American men: normative support. Participants stated they were more likely to visit a medical provider when encouraged to do so by church leaders, friends, or family members. One participant

in Ohio noted: *“Talk to your family and friends, see what they know, if they have any experience with it and if so, what steps, what things they’ve done and what do they recommend, what do they suggest.”* A participant in Utah said: *“Encouragement from family members and confidants ... I had somebody encouraging me who I trusted.”* Relationships with women were especially powerful in motivating participants to obtain a colonoscopy.

“My wife has kind of – thank God she’s been there forcing me to start taking a look at my health and things...”

(Utah participant)

Discussion

We qualitatively investigated the psychosocial determinants of CRC screening completion among African-American men aged 45 to 75 years living in Minnesota, Ohio, and Utah. A distinctive aspect of our study design was the recruitment of participants in 3 states located in 2 of the 4 U.S. Census Bureau regions—as originally proposed (Rogers et al. 2019). We identified two key barriers to and one key facilitator of CRC screening completion, namely masculine role norms and medical mistrust (barriers) and normative support of family and friends (facilitator). Because the barriers to CRC screening that we identified included one that is explicitly gendered (masculine role norms) and one that is implicitly racialized (medical mistrust), we – as others have done before us – found that it was critical to use an intersectional approach to understand African-American men’s health behaviors. An intersectional approach facilitates researchers’ ability to examine the ways that societal structures (e.g., racism, gender) and other SDoH (e.g., economic status, immigration status, national origin, sexual or gender orientation or identity) combine to shape the lives and health of men who are at the nexus of these factors (Griffith, Gunter, and Ober-Allen 2011; Hammond 2010).

Our results are congruent with prior research regarding African-American men’s experiences in seeking health care and extends those findings into the setting of CRC screening in some novel ways. Consistent with previous work (Bromley et al. 2015; Levant and Richmond 2007; Powell Hammond, Matthews, and Corbie-Smith 2010; Rogers et al. 2017), we found that masculine role norms influence the health behavior of African-American men in the context of CRC screening. Our study adds to a body of work demonstrating that the tendency of African-American men to endorse masculine norms hinders the promotion or adoption of positive health behaviors (Griffith, Gunter, and Ober-Allen 2011).

Health behaviors and notions of masculinity and manhood among African-American men have been viewed through relational lenses wherein they define themselves as much by who they aspire to be as by who they aspire to clearly show they are not (Vandello, Bosson, and Lawler 2019). In this context, African-American men, who primarily present themselves as heterosexual, tend to define themselves not simply as men, but by consistently demonstrating that they are not women or gay men. Hence, as observed in our study, heterosexual self-presentation remains a key aspect of how African-American men actively seek to publicly show not only who and what they are but also to ensure – even in the

context of a private space (e.g., a medical care visit)—that they are not viewed as members of the lesbian, gay, bisexual, transgender, and queer/questioning community (Vandello and Bosson 2013). Emphasizing how sexual orientation may influence the decision to receive CRC screening, a cross-sectional telephone survey of 923 African-American men (aged 50 years and over without a history of CRC), in which respondents who identified as gay/bisexual had approximately 67% greater odds of ever receiving CRC screening compared with respondents who identified as heterosexual (Heslin et al. 2008).

Structural forces such as segregation and discrimination have further shaped the ways in which African-American men define themselves in relation to hegemonic masculine norms. This has led to poor indicators of health in this population, including in the uptake of early detection screening for CRC (Griffith et al. 2015). Understanding how these structural forces and normative support operate in concert with behavioral and psychosocial factors across the life course will be paramount to advancing our understanding of ways to improve CRC screening completion rates for African-American men. Additional research should utilize these findings to develop multifaceted interventions for African-American men, specifically, as recommended by Rogers and colleagues (2020) to increase CRC screening uptake, which can immensely improve the CRC survival rate for African-American men (Thorpe and Halkitis 2016).

Our results are also consistent with other studies that have cited medical mistrust as a prominent barrier to the acceptance of preventive health screening among African-American men (Rogers et al. 2018; Thorpe, Bowie, et al. 2013). Beginning with racially divided care stemming from slavery, segregation, and mass incarceration, African-American men have experienced a historical legacy of poor health and trauma (Hammonds and Reverby 2019). Exacerbating these inequities, medical mistrust – defined as distrust of health care professionals, of the medical system, and of health care interventions – is associated with African American men’s identification with the clinical research abuses experienced by nearly 400 African-American men in the unethical Tuskegee Study of Untreated Syphilis, which concluded nearly 48 years ago (Alsan and Wanamaker 2018; Kinlock et al. 2017). New evidence suggests that contemporary African-American men’s identification with the victims of the Tuskegee Study has led to lower health care utilization, population-wide declines in health outcomes, and higher mortality (Alsan, Wanamaker, and Hardeman 2020). Our findings confirmed that the generally low utilization of health care services by African-American men—including CRC screening—is significantly influenced by profound medical distrust and negative experiences in seeking and receiving health care (Griffith, Allen and Gunter 2010; Kwaan and Jones-Webb 2018; Hammond et al. 2010).

Of note, a few participants stated they “don’t trust the box,” referring to Cologuard®, a noninvasive at-home, stool-DNA screening test that is available for adults aged 45 years and over who are at average risk for CRC. Compared with the FIT, which tests occult (hidden) stool blood, Cologuard® has demonstrated more false-positive results yet detected significantly more CRC (Katsoula et al. 2017). Both tests, however, have been shown to have a sensitivity of more than 90% for the detection of CRC. In the past, the FIT has not been widely used or recommended by providers, and whether it would be more acceptable to African-American men than Cologuard® is unknown. Thus, consideration should be given

to future studies that evaluate both the acceptability of the FIT to African-American men and its potential for overcoming medical mistrust barriers in this population. Participant education concerning the high accuracy of the FIT for detecting advanced CRC would be a crucial element of these studies (Imperiale et al. 2019; Kim et al. 2016).

We agree with Hardeman (2016) and colleagues that further interventional research investigating the influence of anti-racism curricula on developing medical providers' knowledge base is warranted to make progress on the pathway to health equity. Moreover, the ability of medical providers to address medical mistrust and structural racism in the health care setting must be embraced as a daily responsibility across the nation to increase both CRC and other preventive screenings among African-American men and to potentially reduce the lingering destructive effects of the Tuskegee Study on preventive health-seeking behavior and screening in this population.

Lastly, the key facilitator that we identified – normative support of family and friends – highlights the significant roles that social networks continue to play in African-American men's motivation to engage in healthy behavior (Allen, Griffith, and Gaines 2012) as well as in their health care decision-making processes, especially concerning colonoscopies. Participants were grateful for *recommendations*, *advice*, and even *nagging* from loved ones that pushed them to seek needed medical attention. This concurs with a growing body of research suggesting that well-applied social pressure can increase utilization of unpopular medical practices with strong health benefits. Other researchers have suggested that wives, friends, community members, and church leaders can be effective enablers of screening completion among African-American men (Holt et al. 2018). Women, specifically, have been found to be more receptive to medical procedures such as early-detection screening for CRC and likely to effectively encourage their male partners to participate (Griffith, Gunter, and Ober-Allen 2011). Similarly, congregational intervention programs have demonstrated that church-based health promotion techniques are “often effective in modifying health behaviors.” (Ellison and Hummer 2010, 332) These family and community support systems play both informational and inspirational roles in improving CRC-specific health outcomes among African-American men and should be included in future culturally tailored interventions that aim to eliminate CRC inequities.

Several study limitations are worthy of note. First, the research team had originally planned to cluster participants by age and CRC screening status, hypothesizing that participants might be more relaxed in focus groups with other African-American men of similar age who either had or had not completed early-detection screening for CRC. Instead, it proved most effective to hold the focus groups at one central time for all eligible men regardless of age or screening status, and the lack of clustering did not influence participants' comfort level. Secondly, our sample is not necessarily representative of the views of all African-American men aged 45 to 75 years in the United States, given that most study participants had health insurance, had a regular medical provider, and had undergone CRC screening. Third, this study was not designed to explore differences among the 3 sites, participants' responses in all 3 states were similar except medical mistrust was slightly more prevalent in Ohio. Future research should explore geographic differences in determinants of CRC screening among African-American men, while also analyzing demographic differences among study samples

for associations. Nevertheless, our findings are analogous to those of prior qualitative inquiries on this topic.

Next, the sensitivity around some of the topics discussed may have prevented some participants from disclosing their viewpoints in a group setting. To alleviate this constraint, all focus group sessions were situated in various “safe” social settings, included a free meal, and chairs were set up in a manner intended to assure the equality of all participants. Moreover, participants appeared to share their thoughts freely and the moderator often had to control the conversational flow as the men quickly built camaraderie and simply enjoyed themselves. Lastly, with 11 focus groups ranging in size, group dynamics could have been a limiting factor; however, the experienced African-American male moderator (CRR) ensured that the discussion remained productive and that all participants had ample opportunity to voice their viewpoints.

In conclusion, for decades, research has offered considerable support for characterizing as a public-health emergency the unequal encumbrance of disease morbidity and mortality—including from CRC—carried by African-American men. It is clear from this study that masculine role norms and medical mistrust are multifaceted yet significant factors that merit further study. These distinctive psychosocial determinants must be considered in the development of behavioral interventions aimed at improving CRC screening completion rates among African-American man specifically and, ultimately, their life expectancy.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1.

Participants' Demographic Characteristics

	State				Total
	Minnesota	Ohio	Utah		
Race as Self-Identify	31	20	33	84	100.0%
Age (Years)					
African American/Black	1	3	3	7	8.3%
45–49	13	7	13	33	39.3%
50–59	11	8	14	33	39.3%
60–69	6	2	3	11	13.1%
70–75	10	4	10	24	28.6%
Marital Status					
Single	0	1	2	3	3.6%
Unmarried in a relationship	17	11	16	44	52.4%
Married	3	3	5	11	13.1%
Divorced	1	1	0	2	2.4%
Separated	2	1	1	4	4.8%
Partial High School	4	1	0	5	6.0%
GED or equivalent	4	3	6	13	15.5%
High School diploma	7	3	4	14	16.7%
Partial College (at least 1 year)	3	1	5	9	10.7%
Two-year College/Associate	5	7	7	19	22.6%
Bachelor	6	4	8	18	21.4%
Master's/ Advanced Degree	0	0	2	2	2.4%
Not Reported	12	7	11	30	35.7%
No	4	1	4	9	10.7%
Yes, Part Time	14	11	17	42	50.0%
Yes, Full Time	1	1	1	3	3.6%
Not Reported	4	5	5	14	16.7%
< \$15,000	2	2	2	6	7.1%
\$15,000 – \$24,999	5	0	3	8	9.5%
\$25,000 – \$34,999	5	1	6	12	14.3%
\$35,000 – \$49,999					
Do you currently work?					
Household income per year					

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	State				Total			
	Minnesota	Ohio	Utah					
Muslim	1	3.2%	1	5.0%	0	0.0%	2	2.4%
Atheist	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Other	3	9.7%	3	15.0%	1	3.0%	7	8.3%
Not Reported	4	12.9%	0	0.0%	0	0.0%	4	4.8%
Never	0	0.0%	1	5.0%	1	3.0%	2	2.4%
Occasionally	5	16.1%	2	10.0%	3	9.1%	10	11.9%
Regularly	21	67.7%	17	85.0%	28	84.8%	66	78.6%
Not Reported	5	16.1%	0	0.0%	1	3.0%	6	7.1%

How often do you attend religious activities?