Communicatively Constructing Health and Healing: Cultural and Behavioral Determinants of Prostate Cancer Screening Among Ghanaian Men in the United States

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Prostate cancer disproportionately affects men of African descent, yet they rarely undergo screening despite the increased risk. Some factors that influence screening are common among men of African descent and others vary based on culture- and country-specific influences. Ghana has a high prevalence of prostate cancer, and recent U.S. immigrants encounter substantial challenges in accessing health care. Therefore, we investigated the cultural, behavioral, and communicative factors influencing prostate cancer screening among Ghanaian men aged 40–69 living in the United States. Using the health belief and PEN-3 model as frameworks, we conducted 15 interviews and thematically analyzed them to identify perceptions about prostate cancer and screening and the role culture plays in shaping these perceptions. Themes included the following: health care is only for the sick; orthodox medicine cannot be trusted; illness is private and socially contagious; external forces cause and cure illness; and masculinity hurts and helps screening intention. Our findings highlight that communicatively constructed notions of health and healing affect health perceptions and practices. This study emphasizes the need for interventions that address unique cultural understandings of health.

Keywords: prostate cancer, *preventive health behavior*, *culture*, *Ghana*, *qualitative interviews*

Prostate cancer has a high prevalence, morbidity, and mortality worldwide. Although all men can get prostate cancer, men of African lineage are disproportionately affected. Men of African origin living in the United States have the highest incidence of prostate cancer (McGinley, Tay, & Moul, 2015). In addition, immigrants to the United States encounter unique and significant challenges in adapting to the healthcare system (Lebrun, 2012). Despite the increased risk, men of African descent, including immigrant men, tend not to engage in prostate cancer screening. Thus, they enter the healthcare system with advanced-stage diseases and experience poor health outcomes (Ben-Shlomo et al., 2008). Although there is some controversy about the benefits of prostate cancer screening (Carter et al., 2013), overall, it has been shown to reduce morbidity and mortality through early diagnosis and treatment (Andriole et al., 2009). Screening

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behaviors and cultural, educational, and economic factors play a role in the health disparity between men of African origin and other men (McGinley et al., 2015). Thus, it is important to understand how communicatively constructed understandings of prostate cancer and its screening affect screening behavior, particularly among immigrant men of African descent living in the United States.

Communicatively constructed notions of health and healing refer to the ways in which health beliefs, practices, and perceptions are shaped through interpersonal and cultural communication (Airhihenbuwa, 1995; Anarfi et al., 2016). These constructions are influenced by cultural norms, societal expectations, and personal interactions, which together form a shared understanding of health and illness within a community (Else-Quest, LoConte, Shiller, & Hyde, 2009; Goffman, 1963). Previous studies have informed our understanding of the factors affecting prostate cancer screening among men of African descent. For example, studies in sub-Saharan Africa identified masculinity concerns as a barrier to screening (Kolade, 2017; Olapade-Olaopa, Obamuyide, & Yisa, 2008). Although some factors are common across different groups of men of African descent (e.g., low knowledge as a barrier), other factors associated with screening behavior differ by culture and country (e.g., notions of masculinity and stigma). Thus, it is essential to understand the unique communicative, cultural, and behavioral factors that affect prostate cancer screening in specific populations of African descent. Because of the high prostate cancer prevalence, low screening rates, and growing population of Ghanaian U.S. immigrants, it is important to identify the factors that influence this population's screening behaviors.

In Ghana, prostate cancer is the second most common cancer reported in men, and screening is uncommon (Arthur, Yeboah, Adu-Frimpong, Sedudzi, & Boateng, 2006). Despite the high prevalence of prostate cancer, there is a paucity of research on factors affecting prostate cancer screening among Ghanaian men (Yeboah-Asiamah & Mawufenya, 2021). When immigrating to the United States, prostate cancer screening remains low among Ghanaian men (Malika, Roberts, Alemi, Casiano, & Montgomery, 2021). The Ghanaian immigrant population has been steadily growing, with approximately 235,000 immigrants living in the United States (Migration Policy Institute, 2015). The complexity of the U.S. healthcare system coupled with its insurance-based access to care, presents a challenging landscape for immigrants (Bhopal, 2014). There is insufficient research to understand how communicatively constructed understandings of prostate cancer and screening affect health behavior among Ghanaian men who immigrate to the United States. Therefore, using the health belief model (HBM) and the PEN-3 model as theoretical guides, this study explores perceptions of prostate cancer and screening and how culture influences those perceptions. Understanding these factors will enable healthcare, public health, and communication professionals to develop culturally appropriate messages that increase informed decision-making among Ghanaian immigrants in the United States.

Prostate Cancer

Prostate cancer is the growth of abnormal cells in prostate tissues. The prostate gland, located between the bladder and penis, produces and stores seminal fluid. Initially, prostate cancer is asymptomatic, making screening essential for early detection and treatment (CDC, 2022). The American Cancer Society (2021) recommends that all men screen regularly for prostate cancer starting at age 50, and at-risk men (including men of African descent) begin screening at age 40–45 years. There are three options for prostate

cancer screening. The prostate-specific antigen (PSA) test measures the levels of PSA in the blood and compares it with an age-based chart of acceptable levels. The digital rectal examination (DRE) involves a physical examination of the rectum to detect abnormalities in the prostate. A biopsy involves taking a sample of prostate gland tissue for histological examination (Carter et al., 2013).

Prostate cancer screening involves some controversy. Some researchers believe that screening may lead to overdiagnosis and unnecessary treatment, which could lead to treatment complications, psychological and physical harm, and even death (Carter et al., 2013). Despite concerns about screening, several studies have found that screening reduces the mortality rate associated with prostate cancer (e.g., Andriole et al., 2009).

Perceptions of Prostate Cancer and Screening

Health behavior theories, such as the HBM (Rosenstock, Strecher, & Becker, 1988), help us understand how perceptions of prostate cancer and screening affect behavior. The HBM uses six perceptions to predict health behavior: perceived severity, perceived susceptibility, benefits, barriers, self-efficacy, and cues to action. Perceived severity is an individual's appraisal of how serious a disease or condition is (Rosenstock et al., 1988). Perceived susceptibility is individuals' perception of their vulnerability to a disease. Perceived benefits are one's appraisal of the rewards of performing a health behavior, whereas perceived barriers are hindrances that prevent one from engaging in the behavior. Perceived self-efficacy refers to an individual's confidence in their ability to successfully perform a specific health behavior. Finally, cues to action are prompts or reminders that encourage an individual to engage in a particular health behavior. The HBM has been used in predicting a wide variety of health behaviors across global populations (e.g., Pitts, Stanley, & Kim, 2017; Shafer, Kaufhold, & Luo, 2018; Walker, Steinfort, & Keyler, 2015), including prostate cancer screening (Abuadas, Petro-Nustas, & Albikawi, 2015; Kalani et al., 2022).

A few studies provide insights into how Ghanaian men in the United States might perceive prostate cancer and screening. Studies on men in sub-Saharan Africa have shown that many participants believe that prostate cancer is a very serious disease, with some believing it is incurable (i.e., high severity; Nakandi et al., 2013). However, a study on Ghanaian male teachers found that most believed they were not prone to getting prostate cancer because they believed it was sexually transmitted (i.e., low susceptibility; Yeboah-Asiamah, Yirenya-Tawiah, Baafi, & Ackumey, 2017). Research in the sub-Saharan region supports concerns about masculinity as a barrier to screening (i.e., high barriers; Kolade, 2017; Olapade-Olaopa et al., 2008). Additional research is needed to determine whether these findings apply to Ghanaian men who have migrated to the United States and to identify how perceptions of prostate cancer and screening affect screening behavior. Therefore, this study asks the following research question:

RQ1: What are the perceptions of Ghanaian men living in the United States about the severity of prostate cancer, their susceptibility to it, benefits of and barriers to screening, their self-efficacy to engage in screening, and cues to action that might motivate screening?

Cultural Factors Affecting Screening Behavior

Culture profoundly influences health behaviors. In this study, we adopt Rieger's (2022) definition of culture as "common behaviors and understandings . . . that serve as a way for members within and outside of that group to communicate better. These behaviors and understandings are made up of commonly practiced processes, happenings, or activities" (p. 144).

The PEN-3 cultural model (Airhihenbuwa, 1995) provides a useful framework for understanding how culture can affect perceptions of health and healing, such as those in the HBM. The model is organized into three core domains: cultural identity, relationships and expectations, and cultural empowerment.

The cultural identity domain examines how identity markers, such as race, ethnicity, and multiple identities, influence decision making and health behaviors (Airhihenbuwa, 1999). This domain has three components: person, extended family, and neighborhood. *Person* focuses on individual identity aspects, such as cultural context and language. For immigrants, the clash between native cultural beliefs and those of the host country often forces individuals to navigate conflicting cultural expectations, affecting their approach to health practices. *Extended family* highlights the influence of gender, generation, and communication patterns within the family. In Ghana, health decision making is often shaped by family expectations and advice, with many individuals relying on elders or traditional healers rather than medical professionals (Purnell, 2020). *Neighborhood* relates to community influences, including media, economic status, and power structures. For instance, media portrayals of health issues and community discussions can shape perceptions and awareness, affecting individuals' willingness to seek medical advice or participate in preventive health practices (James et al., 2017).

The relationships and expectations domain of the PEN-3 model extends beyond individual perceptions to encompass broader cultural roles (Airhihenbuwa, 1995). This domain has three components: perceptions, enablers, and nurturers. *Perceptions* refer to beliefs about health issues within a community. For example, some cultures may view talking about health problems, especially those related to private body parts, as taboo, which can discourage them from seeking screening or medical advice (Daher, 2012). *Enablers* are the resources and support that either facilitate or hinder health behaviors. For instance, socioeconomic status can determine an individual's ability to afford screening, whereas language barriers may prevent effective communication between healthcare providers and patients (Hacker Anies, Folb, & Zallman, 2015). *Nurturers* encompass support systems and interpersonal relationships that influence health decisions. For example, if community leaders or peers endorse health screenings, individuals are more likely to follow suit. Conversely, if there is reliance on traditional medicine and skepticism toward modern medical practices, this can deter individuals from participating in preventive health measures (Jones, Storksdieck, & Rangel, 2018).

The cultural empowerment domain highlights how cultural factors can enhance health interventions, incorporating positive, existential, and negative elements (Airhihenbuwa, 1995). Positive elements include cultural strengths and resources, existential elements involve neutral but essential cultural practices, and negative elements are those that hinder health outcomes, such as stigmatization or mistrust of medical systems. Understanding how culture affects perceptions of health and healing enables us to

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develop interventions that encourage preventive behaviors and improve health outcomes. Therefore, this study poses the following research question:

RQ2: How do cultural identity, relationships and expectations, and cultural empowerment shape the prostate cancer perceptions and screening behaviors of Ghanaian men?

Ghanaian Migrant Context

Ghana has a population of 30.8 million and is home to a diverse array of ethnic groups, including the Akan, Mole-Dagbon, Ewe, and Ga-Dangme (Ghana Statistical Services [GSS], 2021). The country is predominantly Christian, with a significant Muslim minority and indigenous religious practices (GSS, 2021). Religious beliefs heavily influence health practices, with many Ghanaians believing in divine intervention and the power of prayer in healing (Anarfi et al., 2016). Ghana has an adult literacy rate of approximately 76.6% (UNESCO, 2018); however, disparities exist between urban and rural areas. The healthcare system is heavily centralized in major cities, leaving rural areas underserved (Drislane, Akpalu, & Wegdam, 2014).

Although Ghana is ethnically diverse, several common cultural elements may be relevant to prostate cancer screening. Ghanaian society often emphasizes collectivist values, where individual behavior is influenced by its impact on family and society (University of Massachusetts Medical School, 2020). Illness is often considered private and viewed in the context of one's relationship with God. As a result, some individuals might ignore health advice, relying instead on the belief that God controls health and healing (Azu, Richter, & Aniteye, 2018). Traditional medicine is frequently used, either alongside or in place of orthodox medicine. Traditional healing is often preferred, with hospital visits reserved for critical conditions (International Federation of Arts Councils and Culture Agencies, 2015; University of Massachusetts Medical School, 2020). This approach, which prioritizes treating illness over preventing it, may influence views on the necessity of prostate cancer screening (Yeboah-Asiamah et al., 2017). These cultural understandings of health and healing may influence screening behavior when Ghanaians migrate to the United States.

The Ghanaian immigrant population in the United States has been steadily growing, with approximately 235,000 immigrants as of 2015 (Migration Policy Institute, 2015). Ghanaian immigrant families typically include both nuclear and extended family members with strong cultural ties and support systems (Bakuri & Amoabeng, 2023). This population generally enjoys a moderate to high socioeconomic status, with many holding higher education degrees and working in skilled professions (Migration Policy Institute, 2015). The primary motivations for Ghanaian immigration include seeking economic opportunities, pursuing higher education, and family reunification. The U.S. healthcare system presents a challenging landscape for immigrants, who must adapt to new ways of accessing and engaging with healthcare services (Bhopal, 2014). Immigrants may face barriers such as a lack of familiarity with the U.S. healthcare system, differences in healthcare provider-patient communication styles, and the high cost of care without adequate insurance (Sommers, Gunja, Finegold, & Musco, 2015).

Method

Participants

Participants were 15 Ghanaian men living in the United States between the ages of 40 and 60 (M = 46.6, SD = 5.27) who spoke and understood basic English. Nearly all participants were Christian (n = 14, 93.3%), and one was Muslim (6.7%). The time that the participants had lived in the United States ranged from four to 15 years (M = 8.2, SD = 3.07). Fourteen of the participants were employed (93.3%), and one (6.7%) was searching for employment. Most participants held a master's degree (10 participants, 66.7%), some had a high school diploma (3 participants, 20%), and a few held doctorate degrees (2 participants, 13.3%).

Procedures

With institutional review board approval, the first author recruited participants via social media. The recruitment specified the study inclusion criteria: identifying as Ghanaian, identifying as male, speaking and understanding basic English, and being between 40 and 69 years old. Interested participants contacted the first author, who provided them with a link to the screening survey that verified their eligibility and allowed them to choose their pseudonyms. Before completing the screening survey, participants reviewed and agreed to an informed consent form.

The interviews were conducted by the first author via audio conferencing or phone, based on the participant's preference. Like the participants, the first author is a Ghanaian immigrant. Sharing a cultural, linguistic, and experiential background with the participants enhances the researcher's capacity to gain deeper insights and fosters trust (Smith, 2013).

The interviews followed a semi-structured protocol guided by the HBM. We first asked the participants about their understanding of prostate cancer and prostate cancer screening. Later questions focused on the components of the HBM (e.g., severity and susceptibility). For example, the question about barriers asked, "What makes it easier to get prostate cancer screening? What makes it harder?" The cues to action question asked, "Are there things or people in your life that remind you to get screened for prostate cancer?" One question, "Is there anything about Ghanaian culture that you think makes it easier or harder to participate in prostate cancer screening?" was designed to elicit responses aligned with the components of the PEN-3 model. Although this was the only question that explicitly asked how culture influenced the participants' perceptions, cultural influences emerged in responses to nearly all the interview questions. The interviews were transcribed and ranged from 30 to 45 minutes (M = 35.0 minutes). In the transcripts and in this article, participants are identified only by their pseudonyms.

Analysis

Data were analyzed iteratively (Tracy, 2020), first through immersion in the interviews. We reviewed the audio and transcribed the interviews multiple times to become deeply familiar with the data. Next, we carried out inductive primary-cycle coding, focusing on the participants' perceptions of prostate cancer, screening, and their motivations for engaging in or avoiding screening. The following codes were

generated in this phase: illness as contagion, privacy concerns, distrust in health care, external forces, and health care is for the sick. This inductive phase was followed by deductive secondary-cycle coding (Saldaña, 2021) guided by components of the HBM and PEN-3 model. Codes from this phase included severity, susceptibility, benefits, barriers, cues to action, self-efficacy, cultural identity, relationships and expectations, and cultural empowerment. Throughout this phase, we iteratively refined our codes. Iterative revision of the codes established themes within and outside of the guiding theoretical frameworks (Braun & Clarke, 2006). As a Ghanaian immigrant to the United States, the first author could identify nuanced meanings in the data and understand cultural references. The second author, a U.S. native, analyzed the data in parallel, providing confirmation of the themes from an outsider's perspective. The analysis involved a constant comparison approach (Glaser & Strauss, 1967), continuously comparing themes within and across transcripts. This method helped identify key similarities and differences in the participants' experiences and perceptions. By combining inductive and deductive approaches, we were able to gain a more nuanced and comprehensive understanding of the factors influencing prostate cancer screening among Ghanaian men (Bonner et al., 2021).

Finally, we conducted member checks by providing participants with a summary of our findings. Twelve participants (80%) responded, confirming that the findings resonated with their experiences and reflections. This feedback reinforced the validity of our results.

Findings

Our research questions are based on the perceptions of Ghanaian men living in the United States about prostate cancer and its screening and how culture affects those perceptions. The major findings are organized into themes around culture's effect on perceptions. Under each theme, we first discuss cultural understandings of health and healing and then discuss the effect of these understandings on perceptions of severity, susceptibility, benefits, barriers, self-efficacy, and cues to action.

Healthcare is Only for the Sick

Almost all participants indicated that health care is only to be sought when one is sick. Most participants were accustomed to seeking health care only in response to illness, reserving visits to healthcare providers for emergencies and severe health conditions. The concept of regular health checkups was unfamiliar to the majority. Jay explained, "It's only when I feel sick that I go to the hospital. Here, I'm always there, unlike in Ghana, where you go to the pharmacy to buy meds when you feel sick." This statement reflects a common practice among the men to self-medicate when ill, seeking professional health care only under critical conditions. The healthcare system in Ghana, where individuals often go directly to pharmacies for medications, acts as an enabler for self-medication and a barrier to preventive care.

The idea of preventive health care, such as screening, was outside of most participants' understanding of the role of health care. Thus, when men have no symptoms of prostate cancer, they avoid screening. Believing that health care is only for the sick is a substantial barrier to prostate cancer screening and prevents participants from seeing benefits to screening.

Orthodox Medicine Cannot Be Trusted

In addition to not understanding the role of preventive health care, the belief that health care is only for the sick contributes to mistrust of orthodox medicine. A subset of participants exhibited a lack of trust in conventional medicine, viewing certain healthcare practices as exploitative or financially motivated. Richard illustrated this skepticism by saying, "You might not have seen the dentist for a year in Africa, but here they will tell you to see the dentist [more often] . . . I see it as them controlling you and making money." This cultural disparity creates a significant barrier to preventive care.

Some participants believed that certain health interventions were experimental and could lead to unfavorable outcomes. Richard elaborated, "We just don't trust them, whether the examination they are doing is right or wrong . . . we believe that some of the medications and procedures are just trial and error. That could create another disease."

Because preventive health care is a substantial part of health care in the United States, people often seek and receive care when they have no visible symptoms of illness. As some participants indicated, this made them believe that health care in the United States is a scam, focused on making money by giving people tests and treatments that they do not need. These cultural beliefs and skepticism toward preventive measures highlight significant barriers to prostate cancer screening and other preventive health practices among Ghanaian immigrant men.

Illness is Private

As they described their perceptions of prostate cancer, it was clear that the participants believed illness was a private issue not to be discussed even with friends. John emphasized this by stating, "Our culture influences us to treat health issues as secrets, especially those related to a reproductive organ." Another participant, Enock, reinforced this: "These are things which would normally not be discussed. . . . If I didn't know you, I wouldn't even tell you I went for the screening." This cultural norm of keeping health issues private hampers open dialogue and awareness about prostate cancer among Ghanaian men. Within families and communities, health issues are often kept private, reinforcing the belief that discussing such matters, even with close ties, is inappropriate. Thus, participants do not receive cues to action from their family, friends, or community members encouraging them to screen for prostate cancer. This lack of dialogue also leads to low awareness of their susceptibility to prostate cancer and the benefits of screening. The privacy of health matters is likely a key cause of the low knowledge Ghanaian men have about prostate cancer and screening.

Misunderstandings Are Common

The study revealed that most participants had limited knowledge about prostate cancer. Surprisingly, some participants were unaware of the gender primarily affected by the disease. For instance, Rex thought that prostate cancer affected women because he perceived cancer as a predominantly female illness. He said, "I didn't even know the causes of prostate cancer until recently. I even thought it was a lady-related disease because we generally perceive that cancer is more related to women." Rex later learned from his physician that prostate cancer exclusively affects men.

Most participants had not undergone prostate cancer screening because of their lack of understanding of the disease and its potential severity. John explained, "Another barrier is people not knowing how serious or super serious prostate cancer is, a lack of education. If you're not aware of it, you will not be even challenged enough to go for the screening." Another participant, who had some knowledge about prostate cancer, felt that there was insufficient public conversation about the disease. He said, "There isn't so much talk about prostate cancer compared to other diseases, although it falls just behind lung cancer [in prevalence]. So, it's like there is no urgency to do a screening test for prostate cancer."

Some participants learned about prostate cancer only when they or their relatives were diagnosed, as highlighted by Ahmed, who mentioned his father's diagnosis. Family history often serves as a primary source of awareness about the disease. Acknowledging their limited knowledge, the participants emphasized the need for greater education on prostate cancer. John expressed the need for such campaigns to address common questions and correct misinformation, noting that a lack of open discussion leads to the spread of incorrect notions. Although cancer, in general, is associated with high perceived severity, low knowledge and awareness affected participants' perceptions of low susceptibility to prostate cancer and low benefits of screening. Cues to action primarily came from other family members' diagnosis of prostate cancer and not from media, healthcare organizations, or community dialogue.

Illness is Socially Contagious

Illness is perceived as socially contagious, with participants indicating a reluctance to associate with others who have cancer because of the fear of becoming sick themselves. This stigma emerged as a significant barrier in the men's narratives. They expressed concerns that the cultural stigma associated with cancer in Ghana could deter individuals from seeking prostate cancer screenings. Jack highlighted this issue, stating, "The stigmatization in our culture could be a barrier. People will say, 'Oh, don't visit that family; they all have cancer, somebody died of cancer . . .' similar to the stigma once associated with HIV." This comparison to HIV reflects the deadly nature of cancer and the fear of being tainted by association.

The men discussed the isolation they might face if diagnosed with prostate cancer. Joe explained, "Yes, we stigmatize people a lot. The moment I go [for prostate cancer screening], and my friends hear, they may isolate me . . . I don't want to lose that connection with people, that family-friend connection." The men clarified that this stigma arises from the misconception that a cancer diagnosis equates to a short life expectancy. This belief leads to a distinct societal perception of cancer patients, setting them apart from others. James expanded on this, saying, "Once people realize that you have cancer, they perceive you differently. People may not want to get close to you because they think that once you have cancer, you are going to die very soon." These insights reveal that the fear of being stigmatized and socially isolated is a substantial barrier to screening, further complicating efforts to promote early detection and treatment within this cultural context. The fear of being stigmatized keeps people from discussing their health conditions with others, limiting cues to action and leading to low knowledge of susceptibility to prostate cancer and a lack of awareness of the benefits of screening.

External Forces Cause and Cure Illness

Participants believed that external forces, particularly God/Allah, had the power to cause illness more than other factors. A significant number of participants also attributed illnesses to external, often supernatural, forces. There was a belief that diseases, particularly cancer, could be caused by malevolent forces or deities, which led to skepticism about the efficacy of preventive measures like screening. Ahmed illustrated this perspective: "Sometimes with Ghanaians or Africans, it is a superstition. Ghanaians believe things happen for a reason or like someone is behind it." This cultural attribution to external forces often results in reliance on spiritual or traditional explanations for health conditions, further discouraging preventive health practices.

External forces were also seen as being able to cure illness and protect people from becoming sick. Many participants believed they were protected by a supreme being, which gave them a sense of immunity from diseases and reduced their perceived need for health screenings. Richard expressed this sentiment, saying, "But I think some of us have made up our minds that we can't have it, Holy Ghost fire, by the blood of Jesus. I have that mentality; I'm not getting it. I won't get it." This belief in divine protection was a common theme that led to low perceptions of susceptibility to prostate cancer and low perceived benefits of screening.

There is a Strong Mind-Body Connection

Participants believed that their minds could strongly affect their health outcomes. High perceived severity of cancer induced avoidance in some participants. They believed cancer was deadly and thus were not motivated to know their status. Richard explained, "I see the whole cancer thing as severe and dangerous. I'm a person who believes knowledge leads to sorrow . . . sometimes I think, since I'm healthy, there's no need to find out if I have something."

Participants expressed reluctance to screen because of fear of receiving a diagnosis. Approximately half of the participants believed that the anxiety and fear associated with a diagnosis led to the reluctance of Ghanaian men to undergo screening. Richard explained, "The fear of knowing you have something is the problem . . . Ignorance, for many, feels safer than facing the truth." Other participants mentioned that the fear of being diagnosed could lead to mental distress. Jay expounded, "If I find out I might have it, it will affect my mental health. It's going to worry me. What you don't know doesn't kill you, so maybe that's why I haven't gone for screening." Jay, like most of the participants, shared the belief that the emotional distress linked to a prostate cancer diagnosis could be more detrimental than the disease itself. Consequently, they preferred to remain unaware of their prostate cancer status to extend their lifespan. The perspective that knowing one's status would negatively affect mental and physical health led the participants to have low perceived benefits of and high barriers to screening.

Masculinity Hurts and Helps Screening Intention

Nearly all participants expressed a dislike for at least one prostate cancer screening option, particularly the DRE, which was viewed as uncomfortable and an invasion of privacy. Moses, 45 years old, explained, "Our culture may make it harder, especially if you check specific parts that are pretty private. If

it is just blood, cool, but for the others, no. People respect their privacy, hence may not want that screening." Similarly, Ras, 42 years old, stated, "It's one thing I don't see myself doing at all; I would want to go for options other than DRE. I have discredited it; I don't feel comfortable with that."

Concerns about masculinity played a significant role in avoiding DRE. Participants expressed discomfort with the idea of insertions into their bodies and a strong aversion to the vulnerability associated with the procedure. Rex shared, "It's so uncomfortable to have somebody's finger down there. As men, we hardly get people inserting things into us, so it will feel uncomfortable being a man. I think the best way to go is the blood test." These insights highlight a significant cultural barrier to prostate cancer screening, emphasizing the need for culturally sensitive approaches that respect privacy and address concerns about masculinity. These notions of masculinity are similar to Western concepts that value strength and privacy (Buote, Cameron, Collins, & McGowan, 2020).

However, another perspective on masculinity among the participants increased the perception of prostate cancer severity and readiness to screen. Many believed that any disease affecting men's sexual health was critical and could even lead to suicide. Enock passionately explained, "What makes you a man is your virility; if you lose it or if you have any related diseases, then you are crushed. Some people will even want to take their lives. So, it's serious." Enock's personal encounter with prostate enlargement had left him apprehensive about prostate cancer and motivated him to advocate for screening.

Participants also believed that prostate cancer was dangerous because it affects fertility. The ability to have children is important in Ghanaian culture, and participants were more willing to consider screening if they thought it would help protect their fertility. Joe explained, "Prostate cancer is serious because it can affect childbirth, especially with my background as a Ghanaian; society values that essential aspect of life. If a health issue affects my ability to have a child, I should be concerned." These notions of masculinity differ from Western concepts, as they emphasize fertility and societal expectations, contrasting with the Western focus on personal responsibility and individual autonomy (Oetzel, 2009). Perceptions of masculinity both discourage and encourage screening behaviors by creating perceived barriers and benefits.

Accessibility and Affordability Affect Screening

Accessibility and affordability concerns emerged as significant barriers to prostate cancer screening. Participants mentioned a lack of awareness about screening locations and emphasized the importance of proximity to such facilities. Financial worries also played a critical role. Ahmed, the sole participant without health insurance, voiced his concerns: "I don't have insurance, so maybe it will come down to money like finances. So, because I do not have health insurance, I will not feel like going to the hospital to screen for prostate cancer." Even those with health insurance were concerned about noncoverage and additional bills. Jay summarized, "I have health insurance; if you are sick and you go to the hospital, they will take care of you, but if you go for a checkup or tests, you must be prepared to pay more." Richard added, "Even though you know you have Medicare and all that, you still think there will be bills. I know most of these things they claim are free are still not free." In contrast, participants with insurance that covered prostate cancer screening exhibited stronger efficacy beliefs. For example, Rex stated, "Luckily, I'm on the insurance that

can cover prostate cancer. . . . Yes, at this moment, I'm ready and able because when you're aging, you want to put yourself in a preventive mode."

Some participants preferred to undergo screenings in their home country, believing health care to be less expensive there. Ras emphasized, "I am hesitant to do many things here in the U.S. I would always want to go back home [to Ghana] and do it because it will be less expensive there." A few participants mentioned that as immigrants, they prioritize making a living over preventive health behaviors. Moses exclaimed, "I'm hustling to find something to eat; you're also going to tell me about prostate cancer?" Most participants perceived their health as secondary to survival. Some advocated for free prostate cancer screening programs to encourage men to screen, which would lower barriers.

Discussion

The purpose of this study was to assess (a) Ghanaian men's perceptions of prostate cancer and screening and (b) how culturally and communicatively constructed notions of health and healing affect these perceptions. Overall, participants had high perceived severity, low perceived susceptibility, high barriers, low benefits, and few cues to action. Because of the other perceptions, perceptions of self-efficacy appeared irrelevant to the participants. Several cultural themes affected these perceptions. The themes were as follows: health care is only for when you are sick, orthodox medicines cannot be trusted, illness is private, misunderstandings are common, illness is socially contagious, external forces cause and cure illness, there is a strong mind-body connection, masculinity hurts and helps screening intention, and accessibility and affordability affect screening.

Health behaviors and decisions are not made in isolation but are deeply embedded within cultural narratives and interpersonal communication. The belief that health care should only be sought when one is ill is deeply ingrained in Ghanaian culture and the healthcare system. This perception limits the understanding of the importance of preventive health care. The practice of self-medication and reliance on healthcare services only in emergencies contribute to delayed diagnoses and poorer health outcomes. The idea of preventive health care, such as screening, was outside of most participants' understanding of the role of health care. Thus, it is only natural that when men are not experiencing symptoms of prostate cancer, they avoid screening. Prostate cancer typically does not create symptoms until later stages, which may explain why men of African descent are more often diagnosed with later-stage cancer than other men (McGinley et al., 2015). Targeted education emphasizing the value of preventive care and early detection, especially for asymptomatic conditions like prostate cancer, might help shift perceptions. A campaign that acknowledges the cultural belief (e.g., you might think that health care is only for the sick, but it can also help keep you well) may be more effective than campaigns that just focus on the benefits of screening.

Because illnesses such as prostate cancer are not openly discussed in the Ghanaian migrant community, they are perceived to be unimportant. Agenda-setting theory (McCombs & Shaw, 1972) indicates that the most communicated about topics are believed to be the most important topics. Therefore, if, due to privacy concerns, Ghanaian men are not talking about prostate cancer and screening, they are likely to assume that prostate cancer and screening are unimportant. Through community outreach, media

campaigns, and communication by healthcare providers, it is possible to bring prostate cancer screening and other preventive healthcare measures onto the personal agenda of Ghanaian men.

The idea that health care is only for the sick contributes to mistrust of orthodox medicine. Because preventive health care is a substantial part of the U.S. system, people often seek and receive care when they have no symptoms of illness. Some participants believed that health care in the United States is focused on making money by giving people unnecessary tests and treatments. This perception acts as an enabler of non-screening behaviors. To address this, healthcare providers and communicators need to explain the goals and benefits of preventive health care. Building trust by addressing these concerns directly can help Ghanaian men understand and appreciate the importance of preventive screenings.

The cultural norm of treating illness as private hampers open dialogue and knowledge about prostate cancer. Health education efforts must respect cultural sensitivities while promoting open discussions about prostate health. Initiatives could include community workshops, support groups, and media campaigns encouraging men to share their health experiences and learn from each other in a culturally appropriate manner.

Stigma and fear of social isolation are powerful deterrents to prostate cancer screening among Ghanaian men. Stigma, defined as a devalued human attribute in society (Goffman, 1963), is not new to cancer. Cancer is often highly stigmatized due to its association with death, changes in body image, and feelings of blame and shame (Else-Quest et al., 2009). The belief that cancer is socially contagious and the associated stigma can prevent individuals from seeking necessary medical care. This stigma is comparable with early perceptions of HIV/AIDS and requires a similar approach to destigmatization. The response of Ghanaian men to cancer goes beyond Goffman's (1963) notion of stigma as a discrediting physical or personal characteristic, in that cancer is not only stigmatized but also somehow contagious. The social isolation and stigma resulting from viewing illness as socially contagious further silence discussion about prostate cancer and screening and increase misinformation, perceptions of low importance, and the desire for privacy. Stigma also reduces social support for people with prostate cancer. Health promotion strategies should focus on dispelling myths about cancer, reducing stigma, and providing support for those diagnosed. Stigma can be countered by spotlighting positive role models from the community who have participated in screening and treatment, thus normalizing the process. In addition, culturally relevant educational materials and advocacy by community leaders could initiate more open discussions about health issues.

Participants believed that external forces, particularly God/Allah, had the power to cause and cure illness. Belief in divine protection is common in Ghanaian culture (Anarfi et al., 2016). However, these beliefs reflect an external locus of control, diminishing the perceived role of personal health behaviors (Rotter, 1966). Health interventions must acknowledge these beliefs while providing evidence-based information that empowers individuals to take control of their health. Collaborating with religious and community leaders to integrate health messages into spiritual teachings could bridge this gap effectively. For healthcare providers, methods such as the reflective negotiation model (Fuller, 2003) can foster a collaborative space in which healthcare providers and patients can respectfully exchange differing cultural ideas about disease causes and cures.

Participants believed that their minds could strongly affect their health outcomes. They thought that knowing you have cancer can make you sicker than if you did not know. They also believed that if you believe you cannot get prostate cancer, you will not get it. Such beliefs, nurtured in families and communities, further discourage individuals from seeking preventive care. These beliefs decrease the likelihood of screening by raising barriers, lowering benefits, and decreasing perceptions of susceptibility. Avoiding learning about illness was also a way for men to maintain hope and manage their uncertainty, as described in uncertainty management theory (Brashers, 2001). Health campaigns should address these psychological barriers by providing accurate information about prostate cancer, its treatment, and the benefits of early detection. Counseling and support services can help alleviate anxiety and encourage proactive health behaviors.

Discomfort with certain screening methods, particularly DRE, and concerns about masculinity highlight the need for culturally sensitive screening options. Offering less invasive alternatives, such as the PSA test, may increase screening uptake. To address financial and accessibility barriers, partnerships with local health entities can lead to free or low-cost screening opportunities. Providing information about available screening locations, insurance coverage, and financial assistance programs can help mitigate accessibility and affordability barriers. Educating men about insurance options and coverage for screenings can further alleviate financial concerns. Advocacy for policy changes to make screenings more accessible and affordable is also necessary.

The influence of media messages, social networks, and healthcare providers on screening behaviors underscores the importance of clear and consistent health communication. Family, friends, and spouses serve as significant cultural cues to action for prostate cancer screening. Participants mentioned occasionally receiving encouragement and recommendations from these social networks, which are deeply rooted in cultural support systems. This highlights the importance of social influence in shaping health decisions within cultural contexts. Although healthcare providers are recognized as reminders for screening, their influence is more pronounced when individuals have specific prostate-related concerns. This cultural context suggests that proactive healthcare behaviors and responses to healthcare provider cues may vary based on cultural norms and beliefs about healthcare seeking.

The interplay of media messages, social networks, and healthcare provider interactions within cultural contexts significantly influences individuals' motivation and intention to undergo prostate cancer screening. Sources of information included family, community, and media, but we did not systematically investigate information sources other than as cues to action. Future studies should further identify information sources to illuminate the best channels for influencing prostate cancer screening. Efforts should focus on delivering culturally tailored messages through trusted channels and influencers within the community. Engaging family members and social networks in health promotion activities can further reinforce positive health behaviors. By understanding and addressing these culturally and communicatively constructed notions of health and healing, healthcare providers and communicators can better support Ghanaian men in making informed decisions about prostate cancer screening.

Additional Implications for Research and Practice

To enhance prostate cancer screening rates among Ghanaian men in the United States, healthcare providers and health campaigns are encouraged to adopt several culturally sensitive strategies. Research underscores the efficacy of such tailored interventions in modifying health behaviors within specific populations (Hall, Ruth, & Giri, 2011). Men who recognize greater benefits and fewer impediments to screening are more inclined to undergo prostate cancer screening. Therefore, healthcare initiatives should pinpoint and promote benefits pertinent to this demographic, such as assurance of health status and preservation of fertility while also tackling specific barriers they face, such as misconceptions about healthcare goals and motivations.

The study also identifies substantial barriers, such as perceived threats to masculinity, accessibility and financial issues, stigma, and fear of the unknown. Health campaigns should address masculinity barriers by validating concerns about vulnerability and reframing health maintenance as an act of strength and accountability to shift perceptions of the role of masculinity in prostate cancer screening.

The study also notes the high perceived severity of prostate cancer among participants, which paradoxically can deter screening because of fear. Health communicators should avoid fear appeals to avoid heightening maladaptive fear (Muthusamy, Levine, & Weber, 2009). Hope appeals might be a more constructive alternative, inspiring individuals to engage in health-preserving actions (Chadwick, 2017). Further exploration into the effects of various emotional appeals, such as humor or guilt, could enrich communication strategies around prostate cancer screening (Nabi, 2014).

Limitations

This study has its limitations. The study was a small, well-educated convenience sample of Ghanaian men living in the United States, and as such, our findings may not resonate with all members of the population. Although the study sample does represent the generally well-educated Ghanaian immigrant population, future studies should purposively sample a broad range of education and income levels to assess whether these findings hold. A qualitative approach was essential to eliciting narratives and rich descriptions of factors affecting screening decisions; however, given the importance of privacy around health issues, future research might consider anonymous, quantitative methods to enhance generalizability. Future studies can also compare the perceptions of Ghanaians at home and abroad to explore the nuances of how culture and communicatively constructed notions of health and healing affect perceptions of prostate cancer and screening.

Conclusion

Communicatively constructed notions of health and healing affect perceptions about prostate cancer and its screening. Specifically, the cultural notions that health care is only for when you are sick, orthodox medicines cannot be trusted, illness is private, misunderstandings are common, illness is socially contagious, external forces cause and cure illness, there is a strong mind-body connection, masculinity hurts and helps screening intention, and accessibility and affordability affect screening affect health perceptions.

Overall, the participants had high perceptions of severity and barriers to screening, low perceptions of susceptibility and benefits of screening, and few cues to action. In addition, some cultural enablers and nurturers discouraged screening. This combination of perceptions and cultural hindrances indicates that they are unlikely to screen. Healthcare providers and communicators need to address these perceptions in culturally sensitive ways that enable men to make informed decisions about prostate cancer screening. Future research should continue to explore these cultural influences and evaluate the effectiveness of targeted interventions in promoting prostate health.

References

- Abuadas, M. H., Petro-Nustas, W., & Albikawi, Z. F. (2015). Predictors of participation in prostate cancer screening among older men in Jordan. Asian Pacific Journal of Cancer Prevention, 16(13), 5377– 5383. doi:10.7314/apjcp.2015.16.13.5377
- Airhihenbuwa, C. O. (1995). *Health and culture: Beyond the Western paradigm*. Thousand Oaks, CA: Sage Publications.
- Airhihenbuwa, C. O. (1999). Of culture and multiverse: Renouncing "the universal truth" in health. *Journal* of Health Education, 30(5), 267–273. doi:10.1080/10556699.1999.10603409
- American Cancer Society. (2021). American Cancer Society recommendations for prostate cancer early detection. Retrieved from https://www.cancer.org/cancer/prostate-cancer/detection-diagnosis-staging/acs-recommendations.html
- Anarfi, J. K., Badasu, D. M., Yawson, A., Atobra, D., Abuosi, A. A., & Adzei, F. A. (2016). Religious affiliation and health-seeking behavior related to non-communicable diseases among children in Ghana. *International Journal of Healthcare*, 2(2). doi:10.5430/ijh.v2n2p57
- Andriole, G. L., Crawford, E. D., Grubb, R. L., Buys, S. S., Chia, D., Church, T. R., . . . Berg, C. D. (2009). Mortality results from a randomized prostate cancer screening trial. *New England Journal of Medicine*, 360(13), 1310–1319. doi:10.1056/nejmoa0810696
- Arthur, F., Yeboah, F., Adu-Frimpong, M., Sedudzi, E., & Boateng, K. (2006). Prostate cancer screening in Ghana–a clinical benefit? *Journal of Science and Technology (Ghana)*, 25(2), 1–7. doi:10.4314/just.v25i2.32940
- Azu, M. N., Richter, S., & Aniteye, P. (2018). Ghanaian men living with sexually transmitted infections: Knowledge and impact on treatment-seeking behavior—A qualitative study. *African Journal of Reproductive Health*, 22(3), 24–32. doi:10.29063/ajrh2018/v22i3.3
- Bakuri, A. Z., & Amoabeng, D. (2023). Doing kin work among Ghanaians home and abroad: A paradigm shift to ICT. *Family Relations*, 72(2), 585–600. https://doi.org/10.1111/fare.12838

- Ben-Shlomo, Y., Evans, S., Ibrahim, F., Patel, B., Anson, K., Chinegwundoh, F., . . . Persad, R. (2008).
 The risk of prostate cancer amongst Black men in the United Kingdom: The process cohort study.
 European Urology, *53*(1), 99–105. doi:10.1016/j.eururo.2007.02.047
- Bhopal, R. S. (2014). Migration, ethnicity, race, and health in multicultural societies (2nd ed.). Oxford, UK: Oxford University Press.
- Bonner, C., Tuckerman, J., Kaufman, J., Costa, D., Durrheim, D. N., Trevena, L., . . . Danchin, M. (2021).
 Comparing inductive and deductive methods to understand health service implementation
 problems: A case study of childhood vaccination barriers. Advance online publication.
 doi:10.21203/rs.3.rs-319818/v1
- Brashers, D. E. (2001). Communication and uncertainty management. *Journal of Communication*, *51*(3), 477–497. doi:10.1111/j.1460-2466.2001.tb02892.x
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. doi:10.1191/1478088706qp063oa
- Buote, R., Cameron, E., Collins, R., & McGowan, E. (2020). Understanding men's experiences with prostate cancer stigma: A qualitative study. *Oncology Nursing Forum*, 47(5), 577–585. doi:10.1188/20.onf.577-585
- Carter, H. B., Albertsen, P. C., Barry, M. J., Etzioni, R., Freedland, S. J., Greene, K. L., . . . Zietman, A. L. (2013). Early detection of prostate cancer: AUA guideline. *Journal of Urology*, *190*(2), 419–426. doi:10.1016/j.juro.2013.04.119
- Centers for Disease Control and Prevention. (2022, March 14). What is screening for prostate cancer? Retrieved from https://www.cdc.gov/prostate-cancer/screening/
- Chadwick, A. E. (2017). Hope and health and risk messaging. In Oxford Research Encyclopedia of Communication. doi:10.1093/acrefore/9780190228613.013.269
- Daher, M. (2012). Cultural beliefs and values in cancer patients. *Annals of Oncology*, 23(Suppl 3), 66–69. doi:10.1093/annonc/mds091
- Drislane, F. W., Akpalu, A., & Wegdam, H. H. (2014). The medical system in Ghana. *The Yale Journal of Biology and Medicine*, *87*(3), 321–326.
- Else-Quest, N. M., LoConte, N. K., Schiller, J. H., & Hyde, J. S. (2009). Perceived stigma, self-blame, and adjustment among lung, breast, and prostate cancer patients. *Psychology and Health*, 24(8), 949–964. doi:10.1080/08870440802074664

- Fuller, J. (2003). Intercultural health care as reflective negotiated practice. Western Journal of Nursing Research, 26(7), 781–797. doi:10.1177/0193945903256710
- Ghana Statistical Service. (2021). 2021 Population and housing census: Summary report of final results. Accra, Ghana: Ghana Statistical Service. Retrieved from https://census2021.statsghana.gov.gh/
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago, IL: Aldine.
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice-Hall.
- Hacker, K., Anies, M. E., Folb, B., & Zallman, L. (2015). Barriers to health care for undocumented immigrants: A literature review. *Risk Management and Healthcare Policy*, *8*, 175–180. doi:10.2147/rmhp.s70173
- Hall, M. J., Ruth, K., & Giri, V. N. (2011). Rates and predictors of colorectal cancer screening by race among motivated men participating in a prostate cancer risk assessment program. *Cancer*, 118(2), 478–484. doi:10.1002/cncr.26315
- International Federation of Arts Councils and Culture Agencies. (2015, April 8). Ghanaian culture and health care. Retrieved from https://ifacca.org/news/2015/04/08/ghanaian-culture-and-health-care/
- James, L. J., Wong, G., Craig, J. C., Hanson, C. S., Ju, A., Howard, K., . . . Tong, A. (2017). Men's perspectives of prostate cancer screening: A systematic review of qualitative studies. *PloS One*, 12(11), e0188258. doi:10.1371/journal.pone.0188258
- Jones, E. C., Storksdieck, M., & Rangel, M. L. (2018). How social networks may influence cancer patients' situated identity and illness-related behaviors. *Frontiers in Public Health*, 6, 240. doi:10.3389/fpubh.2018.00240
- Kalani, L., Aghababaeian, H., Nosratabadi, M., Masoudiyekta, L., Mirsamiyazdi, N., Rezaei-Bayatiyani, H.,
 & Musavi Ghahfarokhi, M. (2022). Prostate cancer screening behavior based on the health belief model in men aged over 40 years. *Trends in Medical Sciences, 2*(2). doi:10.5812/tms-119524
- Kolade, O. A. (2017). Knowledge and utilization of prostate cancer screening services among male civil servants in Iseyin local government area, Oyo State, Nigeria. *European Journal of Biology and Medical Science Research*, 5(3), 38–45. Retrieved from https://www.eajournals.org/wpcontent/uploads/Knowledge-and-Utilization-of-Prostate-Cancer-Screening-Services-among-Male-Civil-Servants-in-Iseyin-Local-Government-Area-Oyo-State-Nigeria.pdf

- Lebrun, L. A. (2012). Effects of length of stay and language proficiency on health care experiences among immigrants in Canada and the United States. *Social Science & Medicine*, *74*(7), 1062–1072. doi:10.1016/j.socscimed.2011.11.031
- Malika, N., Roberts, L., Alemi, Q., Casiano, C. A., & Montgomery, S. (2021). Ethnic differences among Black men in prostate cancer knowledge and screening: A mixed-methods study. *Journal of Racial and Ethnic Health Disparities*, 9(3), 874–885. doi:10.1007/s40615-021-01027-2
- McCombs, M. E., & Shaw, D. L. (1972). The agenda-setting function of mass media. *Public Opinion Quarterly*, 36(2), 176–187. doi:10.1086/267990
- McGinley, K. F., Tay, K. J., & Moul, J. W. (2015). Prostate cancer in men of African origin. *Nature Reviews* Urology, 13(2), 99–107. doi:10.1038/nrurol.2015.298
- Migration Policy Institute. (2015). *The Ghanaian diaspora in the United States*. Retrieved from https://www.migrationpolicy.org/sites/default/files/publications/RAD-Ghana.pdf
- Muthusamy, N., Levine, T. R., & Weber, R. (2009). Scaring the already scared: Some problems with HIV/AIDS fear appeals in Namibia. *Journal of Communication, 59*(2), 317–344. doi:10.1111/j.1460-2466.2009.01418.x
- Nabi, R. L. (2014). Emotional flow in persuasive health messages. *Health Communication*, 30(2), 114– 124. doi:10.1080/10410236.2014.974129
- Nakandi, H., Kirabo, M., Semugabo, C., Kittengo, A., Kitayimbwa, P., Kalungi, S., & Maena, J. (2013). Knowledge, attitudes, and practices of Ugandan men regarding prostate cancer. *African Journal of Urology*, 19(4), 165–170. doi:10.1016/j.afju.2013.08.001
- Oetzel, J. G. (2009). Intercultural communication: A layered approach. Boston, MA: Allyn & Bacon.
- Olapade-Olaopa, E. O., Obamuyide, H. A., & Yisa, G. T. (2008). Management of advanced prostate cancer in Africa. *The Canadian Journal of Urology*, *15*(1), 3890–3898.
- Pitts, M. J., Stanley, S. J., & Kim, S. (2017). College males' enduring and novel health beliefs about the HPV vaccine. *Health Communication*, *32*(8), 995–1003. doi:10.1080/10410236.2016.1196421
- Purnell, L. D. (2020). *Transcultural health care: A culturally competent approach* (5th ed.). Philadelphia, PA: F.A. Davis Company.
- Rieger, K. (2022). Intercultural communication: Providing a working definition of culture and reexamining intercultural components in technical writing textbooks. *Journal of Technical Writing and Communication, 52*(2), 135–165. doi:10.1177/0047281620981565

- Rosenstock, I., Strecher, V., & Becker, M. (1988). Social learning theory and the health belief model. *Health Education Quarterly, 15*, 175–183.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied, 80*(1), 1–28. doi:10.1037/h0092976
- Saldaña, J. (2021). *The coding manual for qualitative researchers* (4th ed.). Thousand Oaks, CA: Sage Publications.
- Shafer, A., Kaufhold, K., & Luo, Y. (2018). Applying the health belief model and an integrated behavioral model to promote breast tissue donation among Asian Americans. *Health Communication*, 33(7), 833–841. doi:10.1080/10410236.2017.1315678
- Smith, P. L. (2013). Decolonizing methodologies: Research and Indigenous Peoples (2nd ed.). London, UK: Zed Books.
- Sommers, B. D., Gunja, M. Z., Finegold, K., & Musco, T. (2015). Changes in self-reported insurance coverage, access to care, and health under the Affordable Care Act. JAMA, 314(4), 366. doi:10.1001/jama.2015.8421
- Tracy, S. J. (2020). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact*. Hoboken, NJ: John Wiley & Sons.
- United Nations Educational, Scientific and Cultural Organization. (2018). *Ghana: Education and literacy*. UNESCO Institute for Statistics. Retrieved from https://uis.unesco.org/en/country/gh?theme=education-and-literacy
- University of Massachusetts Medical School. (2020, February). *Resource guides: Cultural approaches to pediatric palliative care in central Massachusetts: Ghanaian*. Retrieved from https://libraryguides.umassmed.edu/diversity_guide/ghanaian
- Walker, K. K., Steinfort, E. L., & Keyler, M. J. (2015). Cues to action as motivators for children's brushing. *Health Communication, 30*(9), 911–921. doi:10.1080/10410236.2014.904030
- Yeboah-Asiamah Asare, B., & Mawufenya Ackumey, M. (2021). Awareness and knowledge about prostate cancer among male teachers in the Sunyani municipality, Ghana. *African Health Sciences*, 21(2), 655–662. doi:10.4314/ahs.v21i2.22
- Yeboah-Asiamah, B., Yirenya-Tawiah, D., Baafi, D., & Ackumey, M. (2017). Perceptions and knowledge about prostate cancer and attitudes towards prostate cancer screening among male teachers in the Sunyani municipality, Ghana. *African Journal of Urology*, 23(3), 184–191. doi:10.1016/j.afju.2016.12.003