ORIGINAL ARTICLE

Health-seeking practices and prostate cancer screening decisions among black men in the United States, Nigeria, and Cameroon

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ABSTRACT

Health-seeking practices are important for prostate cancer (CaP) screening and control. There is evidence of differences in the health practices of Black men (BM) worldwide; however, the comparison between BM's health-seeking practices in the United States and those in Africa has not been fully elucidated. This study evaluates health-seeking practices and willingness to screen for CaP among BM in Nigeria, Cameroon, and their relatives in the United States. Transatlantic Consortium (CaPTC) familial cohort study phase 1 data of 500 community-dwelling black men in Nigeria, Cameroon, and the United States aged 35 and 70 years were used. A validated CaPTC familial cohort study questionnaire was used to collect data on the respondents' health-seeking practices, screening decisions, and healthcare insurance coverage. The associations between health-seeking practices and the willingness to screen for CaP were evaluated. The majority (83.8%) reported not having a medical consultation in the last 12 months, and the country of residence did not improve physician visits ($p= 0.378$). Healthcare insurance coverage was more available to the United States participants (68.4%), compared to 42.9% in Nigeria, and 16.7% in Cameroon. Overall willingness to undertake digital rectal examination and prostate-specific antigen screening was significantly associated with the country of residence with p-values of 0.02, <0.01, and <0.01, respectively. United States participants showed more willingness to undergo screening. Healthcare coverage was also associated with overall willingness to undergo screening ($p=0.033$). The study showed that country of residence was not associated with physician consultation but was significantly associated with willingness for CaP screening and healthcare insurance coverage. This study highlights the need to expand health insurance coverage, particularly in developing countries such as Nigeria and Cameroon, to enhance the willingness and decision to screen for CaP. This, in turn, will help reduce the late presentation of CaP cases, a critical measure for alleviating the overall burden of the disease.

Key words:
health-seeking practices; prostrate cancer; screening; routine check-up; health insurance

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INTRODUCTION

Cancer has been identified as the leading cause of death globally, accounting for nearly 10 million deaths in 2020, or nearly 1 in 6 deaths.[1] Prostate cancer (CaP) is the second highest cause of cancer mortality in men,[2] with more Black men (BM) than men of other races dying from low-grade CaP 12 years after diagnosis (2.2% versus 1.4%).[3-4] The reasons for this high mortality have been documented in the literature,[5] ranging from poor medical infrastructure, inadequate personnel skills, late presentation, and inadequate health access.[6]

CaP is a growing public health challenge affecting men globally.[7] Ferlay et al.[8] reported that CaP is the most commonly diagnosed cancer for men in Africa, with an age-standardized incidence rate of 23.2 per 100,000 persons in 2012. It was projected that by 2030, there would be a more than 85% increase in cancer incidence in Sub-Saharan Africa,[9] especially with the increasing population and ageing. Despite the high incidence of CaP, Kaninjing and others[10] also supported other earlier studies[11-12] who opined that cancer cases in Africa are underreported, i.e., the burden of the diseases might be greater than the figures reported. This underreporting could be due to inadequate documentation and non-presentation for healthcare, which is deeply rooted in the health-seeking practices of BM. [10- 13]

Poor health-seeking behaviour premised on lack of knowledge is the bane of CaP burden among BM.[6] Good personal health-seeking practices, presentation for routine check-ups and access to healthcare are important for CaP screening, early detection, and control.[14] There is evidence that the country of residence could impact the health-seeking behaviours of BM.[15-17] However, the comparison between BM's access to healthcare and health-seeking practices in the United States and those in Africa has not been fully elucidated. In addition, the increase in diagnoses of metastasized cancer at the late stages is especially a great concern in Africa, reducing the chance of survival. BM is less likely to have early presentation because of inadequate CaP screening and resources.[18] Earlier studies[19-20] have suggested that early presentation for cancer treatment improves CaP prognosis. However, BM still has the highest prevalence of late-stage CaP.[19-21] It is prevalent in low and middle-income countries, where poor access to health care and screening facilities often results in late presentation for cancer treatment. BM are more likely to visit the healthcare provider for CaP at a later stage because very few participate in CaP screening; inadequate information about accessing treatment opportunities, such as clinical trials and special government funds for patients with CaP, has been noted.[21-22]

However, studies have shown that the disparities observed in visiting hospitals and physicians among BM could be associated with the country of residence.[22-23] There is, therefore, a need to explore disparities in health-seeking practices among BM and the impact on the decision to screen for CaP. This study evaluates health-seeking behaviour and willingness to screen for CaP among black men in Nigeria, Cameroon, and the United States. This study is important to establish the challenges and barriers influencing CaP screening among black men, and the results will inform governments, policymakers, the BM community and researchers on the need for early detection and control of CaP to contribute sustainably to the reduction of the global burden of CaP.

METHODS

This study was a cross-sectional study involving West African Black men

residing in Nigeria, Cameroon and the United States. The CaPTC familial cohort study phase 1 included data from 500 community-dwelling black men aged between 35 and 70 years collected from ten (10) Prostate Cancer Transatlantic Consortium (CaPTC) sites in Nigeria, one in Cameroon and their family members in the United States. The criteria for selecting participants in the United States was having relatives in Nigeria or Cameroon. A validated CaPTC familial cohort study questionnaire was used to collect data on the participant's country of residence, health-seeking practices, and screening decisions. The procedure for data collection has been previously published.[24] The association between health-seeking practices and the decision to screen for CaP was assessed. Information on the participants' country of residence , health-seeking practices, and screening decisions were evaluated. Participants' visits to physicians in the last 12 months, routine health checkups, and willingness to undergo screening for prostate-specific antigen (PSA) and digital rectal examination (DRE) in the past few years were assessed. The answer options were "<12 months ago," "1 to <2years," "2 to <3 years," "3 to <5 years," and "5 years and above." The answer options for questions on health insurance and a visit to the physician/ hospital for a check-up in the last 12 months were "yes," "no," "not sure," and "refused." Participants were asked about how easy it was to make screening decisions. The answer options were "very difficult," "difficult," "very easy," "easy," "neutral," and "don't know." Data were analyzed for descriptive and inferential statistics using SPSS version 22. The association between health-seeking practices variables and the ease of deciding to screen were determined. Data were presented as frequency counts and percentages. Associations between categorical variables were determined using chi-square, and the significant level for all variables was set at p-values < 0.05.

The study was approved by the ethics and review board of the State Specialist Hospital, Sokenu, Abeokuta, Ogun State. The study details were explained to all eligible participants, and written informed consent was obtained before their recruitment into the study.

RESULTS

Table 1 shows that most participants were from Nigeria (84.4%), 6% from Cameroon and 7.6% from the United States. Only 43% had healthcare coverage, 75.6% had never undergone PSA screening, and 87.8% had no DRE examination. Difficulty in deciding to undergo screening was reported by 11.6% of participants, 36.8% reported that the screening decision was easy, and 18.6% found the decision to screen very easy.

Table 1. Some health-seeking practices and decisions to screen

		N	%
Location	Nigeria	422	84.4
	Cameroon	30	6.0
	United States	38	7.6
	None response	10	2.0
Healthcare coverage	No	274	54.8
	Yes	215	43.0
	Don't know	4	.8
	Refused	3	.6
	Non-response	4	.8

		N	%
PSA	Never	378	75.6
	<12 months ago	70	14.0
	1year<2years	18	3.6
	2 years<3 years	9	1.8
	3 years<5 years	2	.4
	5 and above	6	1.2
	<12 months ago	483	96.6
	Non Response	17	3.4
DRE	Never	439	87.8
	<12 months ago	34	6.8
	1year<2years	8	1.6
	2 years<3 years	4	.8
	3 years<5 years	6	1.2
	5 and above	9	1.8
Decision to screen	Difficult	58	11.6
	Easy	184	36.8
	Neutral	137	27.4
	Very Difficult	9	1.8
	Very easy	93	18.6
	Non response	19	3.8

Table 2 shows the association between health-seeking practices and the ease of decision to screen. PSA (p=0.009), DRE (p=0.001), country of residence (p=0.002), and routine check (p<0.001) were significantly associated with the ease of decision to screen. However, health care coverage (p=0.330) and yearly physical examinations (p=0.307) were not significantly associated with the ease of decision to screen.

Table 2. Association between health-seeking practices and the ease of decision to screen

Variables	p-values
PSA	0.009
DRE	0.000
Country	0.002
Healthcare coverage	0.330
Physician visits in the last 12 months	0.131
Routine health check	0.000
Yearly physical exam	0.307

Figure 1a shows the respondents' decision to screen categorized by their country of residence. More participants from the United States (31.6%) reported that the decision to screen was much easier than Nigeria (16.8%) and Cameroon (20.0%). Also, 10.9%, 13.3%, and 18.4% of the participants reported that screening decisions were very difficult, while 37.4%, 40%, and 31.6% of the respondents reported that making screening decisions were easy in Nigeria, Cameroon and the United States, respectively. The responses across the three countries were statistically significant (p= 0.002).

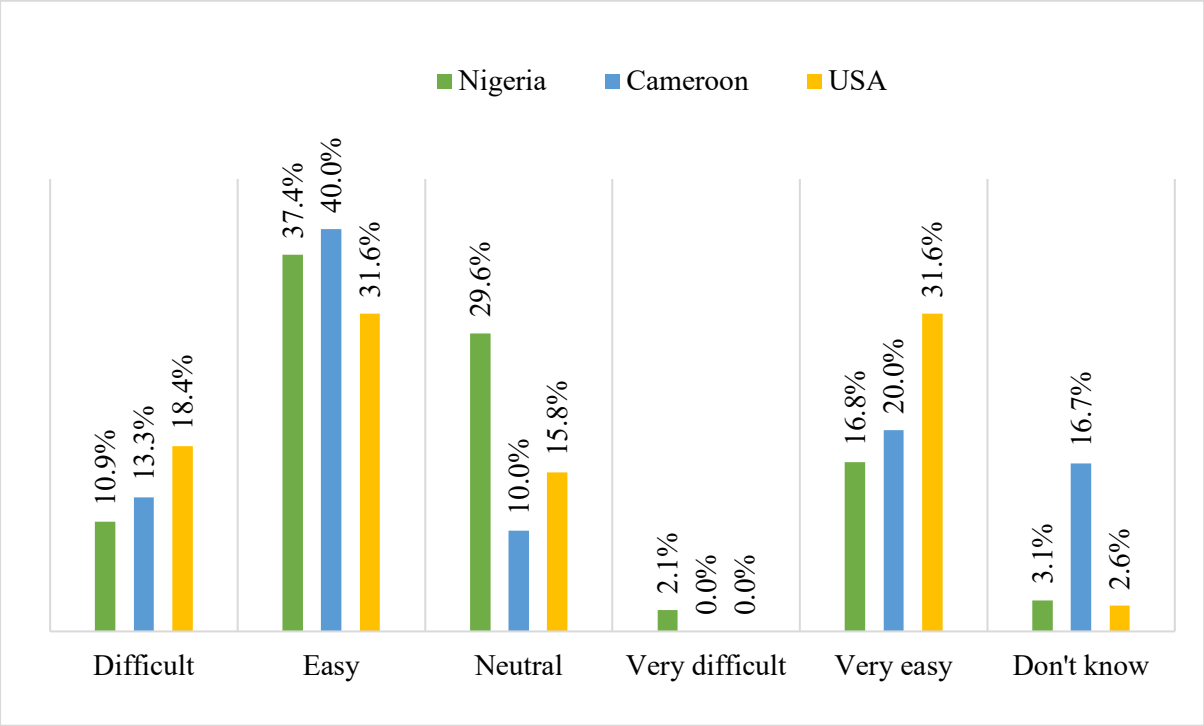

Figure 1a. Decision to screen stratified by country

Insurance coverage for healthcare varied as shown in Figure 1b; 68.4% of participants from the United States had health insurance coverage, and only 42.9% and 16.7% of participants in Nigeria and Cameroon, respectively, had health insurance coverage. The country of residence was significantly associated with healthcare coverage with p <0.001.

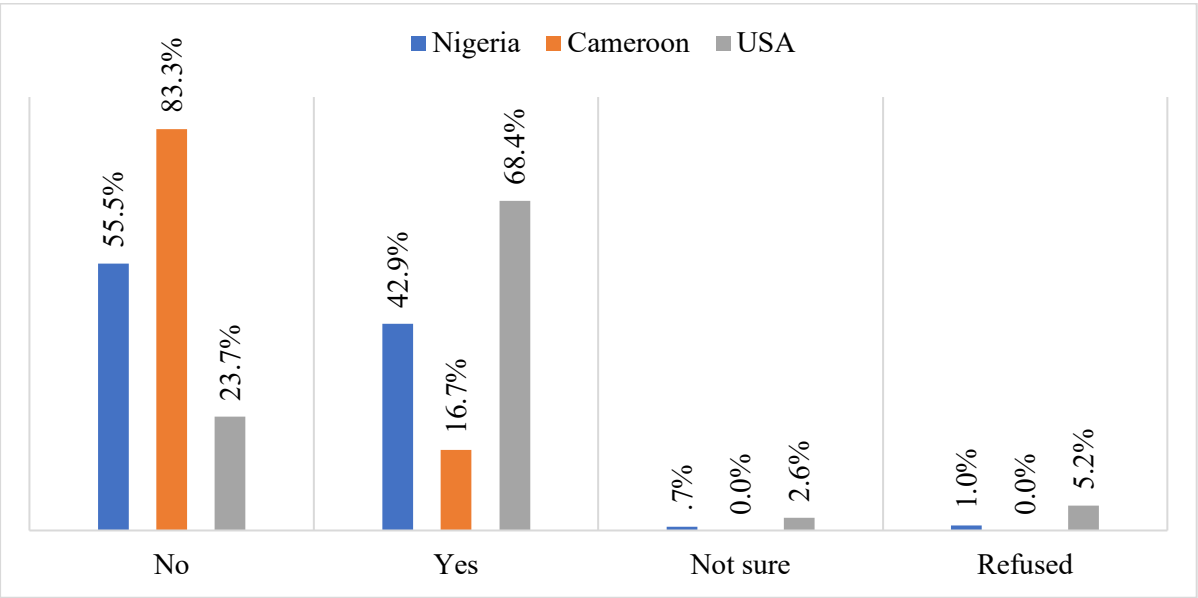

Figure 1b. Healthcare insurance coverage stratified by country

Figure 1c shows that participants' visits to the physician were very low. Only 11.8%, 23.3%, and 5.3% of Nigerian, Cameroonian, and United States participants, respectively, had seen a physician for healthcare in the past 12 months. However, this variation was not statistically significant (p= 0.378).

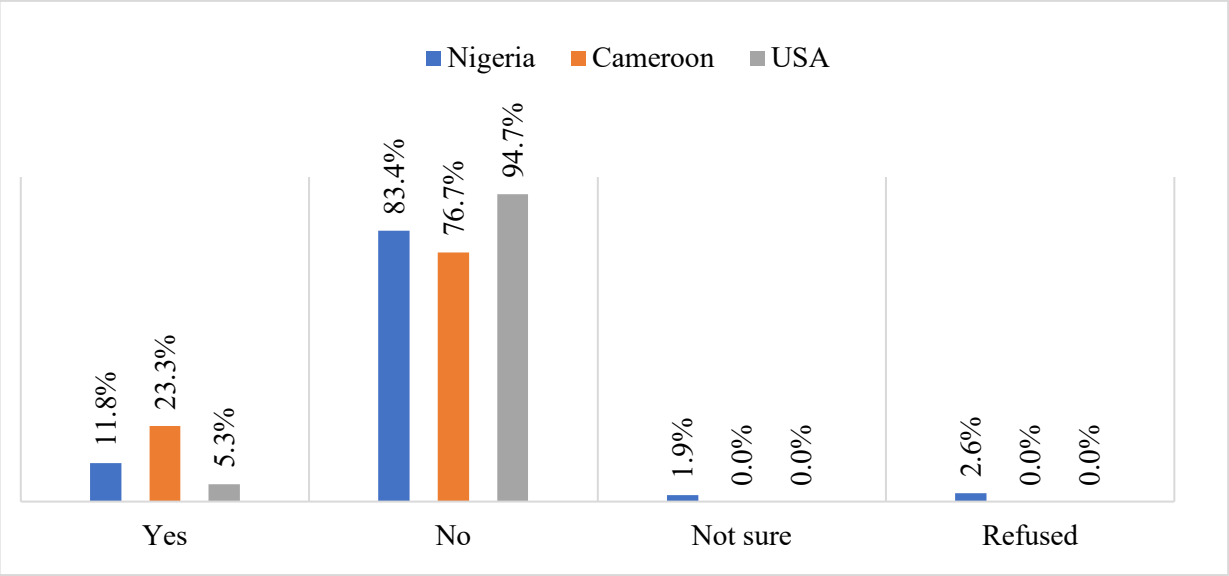

Figure 1c. Participants' physician visits by country

The distribution of participants' routine medical check-ups showed that 76.3% of United States participants had a routine check-up less than a year ago, while only 43.3% and 37.2% of participants in Cameroon and Nigeria, respectively, had a routine check-up less than a year ago (Figure 1d). A greater proportion of participants in Cameroon (16.7%) had a routine check-up less than 2 years ago, compared to Nigeria (8.8%) and the United States (13.2%). In addition, 36.7%, 20.0%, and 7.9% of the participants in Nigeria, Cameroon, and the United States, respectively, never had a routine check-up.

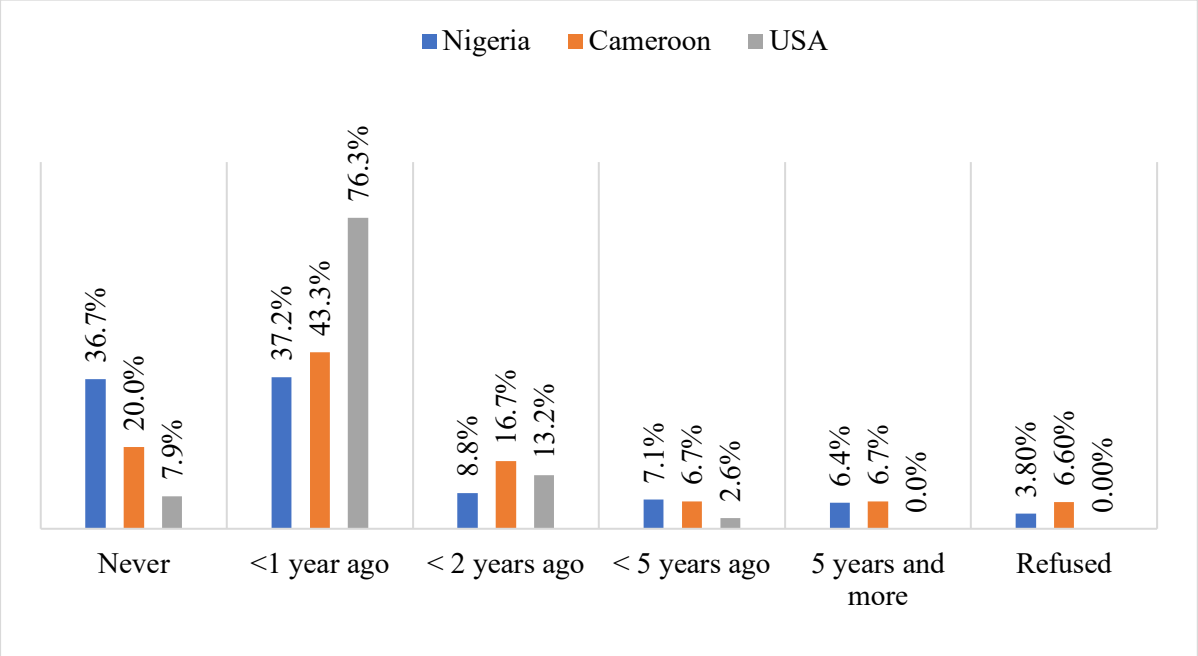

Figure 1d. Routine check-up by participants

DISCUSSION

This study evaluated health access and willingness to screen for CaP among black men in Nigeria, Cameroon, and the United States. More participants from the United States reported that deciding to undergo screening was much easier than those in Nigeria and Cameroon. This difference could be due to inadequate access to screening facilities,[18] perceptions and cultural beliefs,[10] and cost.[23] The lack of willingness and the decision to undergo screening could be the reason for the late presentation observed among BM with CaP.[19-21] The disparities in the screening decision agree with Kaninjing et al. and Alexis & Worsley,[10, 25] who reported that most BM feared screening for CaP. It was also opined that black men, especially those from poor backgrounds, might not necessarily access public clinics as they may be fearful of the outcome following the screening.[26] All of these might contribute to difficulties in deciding to undergo screening for CaP.

Despite the importance of health insurance coverage for optimal health access,[20, 27] less than half of the participants from Nigeria and very few from Cameroon had health insurance coverage. However, most participants from the United States had health insurance coverage. This result also agreed with other studies[15-16, 23] that reported disparities in the country of residence's influence on health insurance coverage. According to the American Hospital Association, 90% of U.S. residents have health insurance, with a significant increase in health coverage in recent years.[27] Odedina et al.[28] identified disparities in access to care, possibly due to more access to health insurance in the United States than in Nigeria and Cameroon.

Earlier studies have established that the reduction in cancer mortality rates through early detection and diagnosis could be achieved by screenings.[29,30] The result of this study revealed that the decision to undergo screening was easier for participants from the United States than for Nigerian and Cameroonian participants. This might result from the disparities in their Health Insurance Coverage. Amini et al. reported that people without health insurance coverage have lower screening rates than those who are insured.[31] Hence,

health insurance coverage is essential for receiving cancer screenings.

The result of this study shows that the number of visits to the physician was very low among the participants in the past 12 months. However, participants' physician visit across the three countries was not found to be significantly different. This may suggest that although participants in the United States had health insurance, they did not seek healthcare from physicians promptly. This poor health-seeking behaviour could be due to inadequate health information, poverty, and out-of-pocket spending.[16-17] Johonniuss identified irregular visits to the physician and inadequate insurance coverage as healthcare system problems in the US.[32] Cultural beliefs and knowledge have also been identified as part of the several factors influencing the poor uptake of screening among black men in the UK.[24] In Sub-Saharan Africa (SSA), some challenges contributing to this disparity might be inadequate health infrastructure, poverty, and lack of knowledge.[10-12] In terms of budget allocation, there is a low priority on noncommunicable diseases in most SSA countries; this contributes immensely to the lack of adequate resources, availability of trained personnel, and basic infrastructure dedicated to CaP prevention and care.[33] In Cameroon, it has been reported that there is no active national surveillance system for cancer,[34] and the country has only one registry for cancer.[35] Hence, weak health systems also add to the burden of late-stage diagnosis of CaP in many countries in SSA.[33]

Routine medical checkups are one of the most effective ways of preventing illness, reducing mortality, and promoting health. [36] The distribution of participants' routine medical check-ups in this study showed that routine medical check-ups are low among participants of Nigeria and Cameroon, with routine check-ups less than a year ago. The disparity might be because respondents from developing countries still have poor knowledge of the importance of early diagnosis in managing cancers. Instead, they perceived clinical diagnosis as a death verdict and preferred not to know their health status**.** Studies have reported that though the level of awareness of medical check-ups in Nigeria is high, however, the practice is low.[37-38] A study conducted in River State, Nigeria, further revealed that most respondents had a positive attitude towards routine health check-ups. However, less than half practised routine health check-ups.[36] Routine medical screening is a cost-effective method of improving population health and life expectancy and reducing the heavy socioeconomic burden of chronic diseases.[39] Hence, adequate knowledge of the importance of routine screening and early detection is needed to bridge the discrepancies gap in CaP screening and promote health-seeking behavior.

CONCLUSION

The study showed that health insurance coverage is limited in developing countries, including Nigeria and Cameroon, and this influenced the screening decisions among the study participants. Furthermore, the country of residence was associated with healthcare insurance coverage and willingness for CaP screening. However, it was not associated with a physician consultation.

This study strongly suggests the need for nationwide campaigns to educate people on the importance of early detection of CaP in managing and reducing the burden and healthcare costs associated with the disease. This study also called for investment in healthcare and capacity building of healthcare professionals to strengthen the health system and increase the screening coverage for CaP. There is a

need to strengthen policies surrounding routine medical check-ups and CaP screening in developing countries. Conclusively, there is also a need for a multi-sectoral collaboration involving the government, healthcare providers, private sector, and community organizations to ensure a comprehensive and sustainable CaP screening program in developing countries.

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