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Prostate Cancer Screening Perception, Beliefs, and Practices Among Men in Bamenda, Cameroon

Ernest Kaninjing, DrPH[1], Ivette Lopez, PhD[2], Jennifer Nguyen, PhD[1], Folakemi Odedina, PhD[1], and Mary Ellen Young, PhD[3]

Abstract

Prostate Cancer (CaP) is the most commonly diagnosed cancer among Cameroonian men. Due to inadequate infrastructure, record keeping, and resources, little is known about its true burden on the population. There are rural/urban disparities with regards to awareness, screening, treatment, and survivorship. Furthermore, use of traditional medicine and homeopathic remedies is widespread, and some men delay seeking conventional medical treatment until advanced stages of CaP. This study examined the perceptions, beliefs, and practices of men in Cameroon regarding late stage CaP diagnoses; identified factors that influence screening decision; and ascertained how men decided between traditional or conventional medicine for CaP diagnosis and treatment.

Semistructured focus groups were used to collect data from men in Bamenda, Cameroon. Qualitative data analysis was used to analyze transcripts for emerging themes and constructs using a socio-ecological framework.

Twenty-five men participated in the study, with an average age of 59. Most of the participants had never received a prostate screening recommendation. Socioeconomic status, local beliefs, knowledge levels, awareness of CaP and screening methods, and stigma were prominent themes.

A significant number of Cameroonian men receive late stage CaP diagnosis due to lack of awareness, attitudes, cultural beliefs, self-medication, and economic limitation. To effectively address these contributing factors to late stage CaP diagnosis, a contextually based health education program is warranted and should be tailored to fill knowledge gaps about the disease, dispel misconceptions, and focus on reducing barriers to utilization of health services.

Keywords

prostate cancer, perception, practices, decisions, Bamenda, Cameroon

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Prostate cancer (CaP) is a growing public health challenge in sub-Saharan Africa (SSA). In 2012, it was the most commonly diagnosed cancer for men in Africa with an age-standardized incidence rate of 23.2 per 100,000 persons (Ferlay et al., 2015). The world bank estimates that 40% of the population in SSA is younger than 15 years old (World Bank, 2014). Based on population growth and aging, SSA is projected to have more than 85% increase in cancer incidence by 2030 (Bray, Jemal, Grey, Ferlay, & Forman, 2012). Published figures on cancer incidence and mortality in SSA may not reflect the actual burden of the disease as several studies have noted underreporting of cancer cases in Africa, mainly due to inadequate diagnostic services (Adesina et al., 2013; Morhason-Bello et al., 2013) and limited population-based cancer registries (Bray et al., 2012; Chu et al., 2011; Jalloh, Niang, & Ndoye, 2013; Odedina et al., 2009; Rebbeck & Haas, 2014).

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[1] Department of Pharmacotherapy and Translational Research, College of Pharmacy, University of Florida, Orlando, FL, USA
[2] Institute of Public Health, Florida A&M University, Tallahassee, FL, USA
[3] Department of Occupational Therapy, College of Public Health and Health Professions, University of Florida, Gainesville, FL, USA

Corresponding Author:
Ernest Kaninjing, DrPH, Department of Pharmacotherapy and Translational Research, College of Pharmacy, University of Florida, 6550 Sanger Road, Orlando, FL 32827, USA.
Email: ekaninjing@cop.ufl.edu

Due to the inadequate public health infrastructure, the expected increase in the burden of CaP in SSA by 2030 is a looming public health crisis (Adesina et al., 2013; Morhason-Bello et al., 2013). Low priority given to non-communicable disease in terms of budget allocation in most SSA countries contributes to lack of sufficient resources, awareness, trained personnel, and basic infrastructure dedicated to CaP prevention and care (Farmer et al., 2010; Vento, 2013). Weak health systems, limited access to preventive services, and knowledge deficits about the disease also contribute to late stage diagnosis of CaP in many countries in SSA (Vento, 2013). The survival rates for CaP in SSA are lagging that of other developing regions of the world (Angwafo et al., 2003; Farmer et al., 2010; Sankaranarayanan et al., 2010).

In Cameroon, there is paucity of reliable data on cancer as the country has no active national surveillance system for cancer (Doh, 2006; Orock GE, P, & As, 2012), and one cancer registry for the entire country of over 23 million people (Orang-Ojong et al., 2013). However, published data indicate that CaP is the leading cause of death from cancer among men in Cameroon (Angwafo, 1998; Orock GE et al., 2012). There are major disparities in access to care with urban areas getting most of the public health resources (World Bank, 2014). Some studies have reported poor knowledge of cancer and other chronic diseases among doctors, nurses, and patients (de-Graft Aikins, Boynton, & Atanga, 2010; Morhason-Bello et al., 2013). Existing literature also indicates that local beliefs, poverty, and lack of trained health personnel contribute to a delay in referring patients for treatment. Similar to other countries in SSA, the use of traditional medicine (TM) is widespread in Cameroon (Hillenbrand, 2006; Vento, 2013; Wamba & Groleau, 2012). TM "incorporates plant, animal and mineral-based medicine, spiritual therapies, manual techniques and exercises to diagnose, prevent and treat illnesses or maintain or enhance well-being" (Awah, 2006). Some patients prefer TM, experiment with homemade remedies and usually present in hospitals or clinics (biomedical facilities) with cancer at advanced stages (de-Graft Aikins et al., 2010; Hillenbrand, 2006; Orang-Ojong et al., 2013; Wamba & Groleau, 2012).

Cameroon developed a National Cancer Control Plan in 2004 to emphasize the importance of cancer prevention, diagnosis, treatment, and research (National Cancer Control Committee, 2007). However, implementation of this plan has been hampered by budgetary constraint (Doh, 2006; National Cancer Control Committee, 2007). Intermittent campaigns are organized for CaP screening, but these efforts are usually limited to the two biggest cities of Yaounde and Douala (Orang-Ojong et al., 2013).

A study on CaP knowledge levels among men in Bamenda, Cameroon (Kaninjing et al., 2017) reported, average knowledge level about signs and symptoms of the disease, and low screening rates. However, this study did not examine the cultural and contextual influences on low screening rates. To date, no published study has addressed the decision-making process and practices of men in Cameroon regarding screening for CaP. Since behavioral factors are significant determinants of population health (Ford, Vernon, Havstad, Thomas, & Davis, 2006; Patel et al., 2010; Odedina, 2011), addressing CaP-related health beliefs, cultural beliefs, and decision making are key weapons to fight this deadly disease. Understanding these factors is critical for increasing awareness about the disease and developing effective interventions to increase prevention and informed decision about screening. The primary objectives of this study were to: (a) explore cultural norms and beliefs that contribute to a likelihood of late stage diagnosis of CaP among men in Bamenda; (b) identify factors that influence the decision to abstain or screen for CaP among men in Bamenda; and (c) ascertain how men in Bamenda decide between TM and conventional medicine for CaP diagnosis and treatment.

Theoretical Framework

The socio-ecological framework postulated by Bronfenbrenner (1994), and McLeroy, Bibeau, Steckler, and Glanz (1988) provided theoretical guidance for this study. The ecological approach emphasizes the dynamic interplay between an individual, his behavior, and the environment. It proposes that behavior affects and is affected by multiple layers of influences. The ecological framework was suitable for this study because it provided an avenue for exploring the roles of social, cultural, and institutional contexts with regards to screening behavior for CaP among men in Bamenda. This approach is important for understanding behavioral outcomes (Woods, Montgomery, Herring, Gardner, & Stokols, 2006).

Methods

Three focus groups were used to explore behavioral influences regarding CaP screening among a convenience sample of men in Bamenda. Focus groups provided a naturalistic approach for exploring prevailing cultural practices and beliefs regarding screening for CaP (Chiu & Knight, 1999; Farquhar & Das, 1999), and an opportunity to capture the context in which behavior occurs, especially as little has been published about this population. Participants were recruited through community gate keepers and snowballing methods whereby initial participants were asked to refer other men. To be eligible, participants had to be men at least 40 years old with no prior CaP diagnosis. All participants spoke English or "Pidgin" English (a hybrid regional language) and each session lasted for approximately 1 hr. Institutional Review Board approval was obtained prior to data collection. Participants provided informed consent before each focus group session and completed a demographic questionnaire that requested information about their age, education, employment status, marital status, religion, and income level. Focus groups were digitally recorded.

Data Collection

To encourage full participation and dialogue, the number of participants at each focus group did not exceed 10. The facilitator for all three sessions was a 44-year-old native-born male with graduate level training in qualitative research methods. He spoke both English and Pidgin English, and was familiar with the local community and culture. Clarifying, probing, and transitional questions were used by the facilitator to obtain more in-depth responses from participants. Interaction among participants was encouraged. A native-born male research assistant participated in all sessions, and was responsible for note taking and managing session-related issues. Each focus group was conducted in a community health center that was accessible to all participants.

A semistructured moderator's guide was used to conduct the focus groups. The moderator's guide was developed based on the socio-ecological model, and a review of the literature regarding factors that influence screening behavior for CaP. The guide was developed to be sensitive to cultural considerations and customs. Some of the focus group questions included "When you think of prostate cancer, what comes to your mind?"; "What role does your faith/religion or spirituality play in the decisions that you make about health matters?"; "What are some of the things that you've heard from your parents, grandparents or elders as you were growing up about getting medical check-up for things like prostate cancer?"; and What has been your experience with any of the check-up test like DRE or PSA?" At the end of the focus group, each participant received an incentive of 2,000 francs (approximately $3.30) in appreciation of their time and contributions.

Data Analysis

Recordings of each session were transcribed verbatim and verified for accuracy with field notes from the research assistant and moderator. Transcripts were imported into NVivo 11, qualitative data analysis software (QSR International Pty Ltd. 2012, http://www.qsrinternational.com/nvivo/nvivo-products/nvivo-11-for-windows) for data management and coding. Three researchers independently analyzed data for themes guided by the questions asked in the focus groups and a directed content analysis using the socio-ecological model (Hsieh & Shannon, 2005). Line-by-line open coding was used to develop provisional concepts, while axial coding helped to sort the cluster data into theoretical concepts (Charmaz, 2006). A review of field notes taken by moderator and research assistant during each focus group was examined for social interaction dynamics, noting participants who were more vocal, those who often echoed or nodded in agreement with other participants, and instances where divergent views were expressed (Grønkjær, Curtis, Crespigny, & Delmar, 2011). A general code list was developed based on the reviewed transcripts. The list of themes was further refined after each reviewers' initial coding. To resolve differences in interpretation of text, and or classification of themes, all three researchers met as a team to discuss and reach consensus. Intercoder reliability of data (Sandelowski, 1995) was addressed by re-visiting the transcript when divergent interpretation of text occurred and discussing until all three researchers came to agreement on a common category for that segment of text. Subsequently, the team identified representational quotes for each emergent theme from the transcripts, and examined inter-related themes from all three sessions. The final step included writing short paragraphs summarizing the findings for each subcategory, noting similarities and differences across the three groups.

Results

Sample Characteristics

Out of 35 men who were nominated and invited to participate in the study, a total of 25 men in Bamenda participated in three focus group sessions. The average age of participants was 59.2 years (*SD* = 9.6). Sixty percent of the participants did not complete high school, 48% were employed, and 92% identified as Christians. Married men constituted 80% of participants and 60% were men who earned less than 50,000 francs monthly ($1 is approximately equal to 600 francs). Furthermore, 84% of study participants reported they had never received any recommendation from a health-care provider to screen for CaP. Table 1 summarizes the demographic profile of study participants.

Emerging Model of Decision-Making Process About Screening/Diagnosis for CaP

Figure 1 depicts the salient behaviors and practices of men as they make decisions about whether to seek care for CaP and the type of care to pursue. There are two main pathways that often lead to a higher risk of late stage diagnosis. The main background factors that inform men's decisions include local beliefs, knowledge and awareness of CaP and screening methods, attitude toward CaP, stigma associated with the disease and the

Table 1. Demographic Variables of Focus Group Participants.

Characteristic	Frequency (%)
Age (years)	
0–49	6 (24)
50–59	7 (28)
60–69	6 (24)
70–79	6 (24)
Education	
Less than high school	15 (60)
High school	4 (16)
University	6 (24)
Employment status	
Employed	12 (48)
Retired	10 (40)
Unemployed	3 (12)
Religion	
Christian	23 (92)
Muslim	2 (8)
Marital status	
Single	5 (20)
Married	20 (80)
Income status (monthly)	
Low income (<50,000 CFA)	15 (60)
Middle income (50,000–149,000 CFA)	6 (24)
High income (150,000+ CFA)	2 (8)
Missing	2 (8)
Prostate check-up recommendation (has your health-care provider recommended that you get a CaP check-up?)	
Yes	4 (16)
No	21 (84)

Note. CFA= Communauté Financière Africaine (African Financial Community)

individual's socioeconomic status. Collectively, these factors provide the context and worldview through which decisions about whether to seek care for CaP are made.

For asymptomatic men with some background knowledge and awareness of this disease, the choice to screen is influenced by affordability. Men with the financial resources typically screen at a hospital or clinic with the prostate specific antigen test (PSA) and/or the digital rectal examination (DRE). Men without the financial resources usually delay screening even though they possess some knowledge and awareness about the disease. This delay in screening usually put asymptomatic men at a higher risk for later stage diagnosis of CaP.

When signs and symptoms of CaP start to manifest, men's health-care-seeking decisions are influenced by past exposure to, or experience with traditional healing. Men with prior experience and knowledge of TM typically visit a traditional healer as their first course of action, or experiment with home-made remedies. When symptoms of CaP persist or become more serious, they tend to seek care from a hospital or clinic and are often at risk for later stage CaP diagnosis.

For men with no experience in traditional healing, a major consideration is availability of financial resources to seek care at a hospital or clinic. Those with the financial means typically visit a hospital or clinic while those without the financial resources delay care, hoping that the symptoms will go away or purchase pharmaceuticals from street vendors without a medical prescription. This delay of care and practice of self-medication increases the likelihood of a later stage CaP diagnosis.

Themes. Six themes emerged on contributing factors to late stage diagnosis and provide the context in which men in Bamenda approach decisions about screening for CaP. They include reliance on traditional medicine, lack of knowledge and awareness of CaP, attitude and fear, stigma, self-medication, and lack of financial resources.

Reliance on traditional medicine. The context in which men in Bamenda approach decision points about whether to seek care and the type of care to pursue is influenced by strong cultural norms and worldview. This worldview is shaped by patterns of behavior and practices that men observed from their parents and others in the community. For example, the idea of first seeking traditional healing at the onset of illness was echoed in all three focus group sessions. One participant remarked: "*They [men] go first to the traditional healer because he or she is versed with the traditional treatment. If it doesn't work, then they go to the hospital.*" (Participant 6). Another participant observed: "*When we were growing, the elders will use grasses to heal themselves before the hospital came. So from that way we know that all these drugs is from the herbs, drugs.*" (Participant 4). Traditional medicine is widely practiced in Cameroon and some study participants were introduced to it from an early age. Participant 1 made the following observations:

> *When my father [a traditional healer] was in need of a leaf, he sent me to go and harvest it and bring it to him. He will use it to heal somebody with the herbs. So I was the one going to the bush. My father was sending me to go and harvest it. At the time that my father was to die, he gave me everything.*

There is a strongly held belief among men in Bamenda that diseases like CaP need to be treated as a spiritual illness and traditional medicine is better suited for such. Participant 23 clearly expressed this during the focus group.

> *You know not everyone just goes straight to the doctor, in Africa as a whole, there is this belief about witchcraft and all the like, when one is attacked by prostate cancer, the first thought is witchcraft, and the first place of instinct is going to meet a [traditional] practitioner.* (Participant 23)

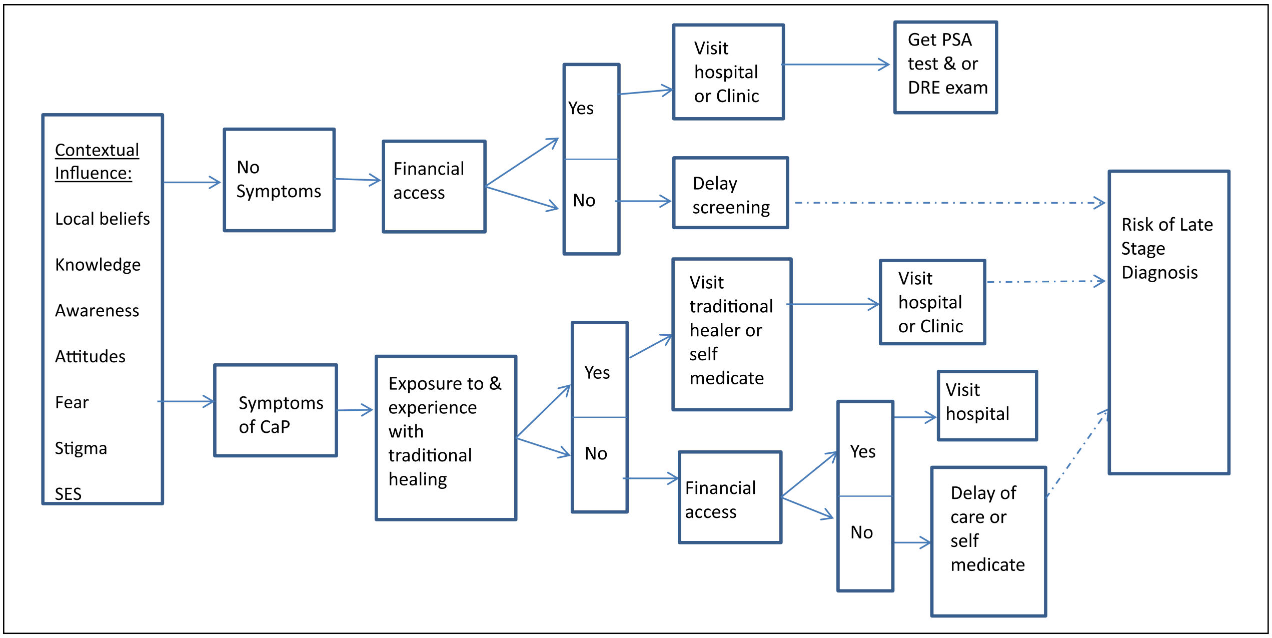

Figure 1. Decision-making model for prostate cancer.

Another participant concurred with this view:

> *"… a muslim person will try his traditional guru first and then consult with them first and then when it gets to a critical point, they go to the hospital."* (Participant 6)

Despite the strong reliance on TM, participants expressed divergent views on its effectiveness at treating CaP. While some participants expressed the view that TM can cure the disease, others challenged that assertion. The following extract exemplifies the opposing views:

> Participant 24 to Moderator: Can I ask Participant 23 a question, because it is interesting. Moderator: Go ahead.
> Participant 24: Have you actually diagnosed a case to be prostate cancer and that herbalist cured it?
> Participant 23: That is right, if not I will not have been saying it here. I said once it is noticed early.
> Participant 24: Noticed early by who?
> Participant 23: For instance if you have your test, and you know that you are suffering from prostate cancer, you meet him then he starts to give you his herbs, if you don't have any cure, you know that you can now go to the hospital. But once it starts to subside you know that it is getting somewhere.

Concurrent use of traditional medicine and biomedicine was common among study participants. The extensive use of TM reported by participants seems to reflect the fact that it is a vital part of the cultural fabric of this community. Affordability of TM (compared to biomedical care), entrenched beliefs and practices make TM a significant institution within the health-care system.

Lack of knowledge and awareness. Behavioral factors such as knowledge and awareness about CaP in the community also provide context in which decisions about health matters are made. Low levels of awareness and knowledge gaps about CaP among the population were noted as contributing factors to later stage diagnosis. One participant observed: "*I am naïve about prostate and I have been hearing about prostate but I never thought I can go to the hospital for check-up. This is my first time of hearing that someone can go to the hospital for check-up for prostate.* (Participant 18). Another participant noted: "*This is my first time of hearing about this prostate cancer.*" (Participant 25). Varying knowledge levels were demonstrated by participants' response to the question "What do you think causes prostate cancer?" The following exchange between two participants illustrate this:

> Participant 23: Untreated venereal disease for a long time or half treated venereal disease, stays in you and is growing and as such it blocks your gland.
> Participant 18: I want to believe that it is age because my patient was a medical doctor, a retired medical district officer for Mezam. So I want to believe that it is age, rather than say it is venereal disease because I don't believe that a doctor can be moving around with a venereal disease without it being treated.

Knowledge deficit about screening and its contribution to late diagnosis was a prevailing topic in all focus group sessions. A consensus view that emerged on this theme was summarized as follows:

> *The issue like I have said before is ignorance. Once you are aware of something and you know the signs and symptoms, immediately you begin to have a sign or a symptom, it will start ringing on you to go for screening. I want to believe that the late diagnosis is due to ignorance and by the time the know it, they get to the hospital and it is very late.* (Participant 21)

In all focus group sessions, participants acknowledge limited knowledge about the signs and symptoms of the disease and methods of diagnosis. While some participants expressed awareness of the disease, it was evident especially during the first focus group that some participants were unfamiliar with the name CaP. In all three sessions, participants expressed an eagerness to learn more about the disease and screening methods.

Attitudes and fear. Participants' attitude about this disease was shaped in part by observing a family member or a client who was diagnosed with the disease and especially by their travail. Poor outcome of CaP cases contributes to negative attitudes about the disease. One participant said "*When I hear about it, [CaP] I am afraid. Even those people who are operated upon they don't live long, some just die, that is my fear about cancer*." (Participant 17). Another participant recalled the experience of a loved one:

> "*My elder brother whom I told you just passed away. Very often my brother will feel pain around his abdomen here and when he starts feeling pains it looks as if he is running out of breath, yes and he screams throughout. We had to take him to the CBC Hospital at Mutengene, then he was diagnosed and operated upon*." (Participant 23) Fear was a dominant theme discussed in each of the focus group sessions. One participant said:

> "*I also want to add that when I hear about prostate cancer I am afraid because it is very painful. The way I saw my patient suffering, so I have been seeing other people in the hospital suffering from it, but I did not take it to be very serious the way I have taken it now."* (Participant 18)

Stigma of cancer. Related to the sense of fear about CaP among participants was the stigma associated with the disease in this community. Study participants noted sociocultural impediments to discussing CaP publicly. *"since the illness looks like a taboo for now, hardly do you meet anybody, who owns up that I have prostate cancer, I have gone to the hospital and this is what has been done. People keep it like some confidential type of health information, so nobody can come back and tell you."* (Participant 2). Furthermore, stigma was manifested in the association of CaP with death. One participant noted, *"cultural values say, people are ashamed that others will say 'that man get cancer oh, that man go die small time."* (Participant 6). Another participant observed the following: *"For us cancer means death has arrived."* The use of a catheter especially by men after surgery for CaP to deal with urinary incontinence, was another source of stigma. *"Some people feel ashamed moving around with a catheter. You see him and he is seating somewhere, sometimes because he has urinated on his dress and the scent is very uncomfortable so he feels so disturbed among people."* (Participant 5). Opposing views were expressed when asked if the subject of CaP was discussed openly in the community. The collective voice that emerged on this topic was that CaP was seldom discussed in social settings. The following extract is representative of the debate among study participants:

> Participant 8: It is discussed in the open now. It is discussed in the open.
>
> Participant 15: I differ with that opinion, it is discussed in small groups that are opened to receive lectures from outside and who solicit, because there are some special groups, I will take example there are some church groups that call medical experts to advise them, that is where they can talk. When we talk of open, you hardly go to a social group, a village njangi group and they start talking about prostate cancer. So I am of the opinion that it is not really talked of in the open.
>
> Participant 9: To add to what Participant 15 has said, if it happens to be discussed in the open it should be a specialist who may have been assigned to go and deliver lectures to a particular social group. Otherwise, left to the members of the social group alone, it is hardly discussed. First of all, people shy away from it.

While the consensus view on all focus groups was that cancer is seldom discussed in social settings, at least one participant in each session openly shared stories of their loved one or client who was diagnosed with the disease. The nature of the meeting (focus group) and the setting (local health center) may have contributed to the frank discuss of personal health stories about cancer.

Self-medication. The purchase of pharmaceuticals from street vendors was mentioned in all focus groups as common practice among men in this community. Otherwise known as self-medication, this practice consists of treatment that is not directed, ordered, or supervised by a medical doctor, nurse, or traditional healer. It is embarked upon by the patient or the caregiver and can take the form of pharmaceutical drugs or herbal remedies. Many study participants indicated knowledge of herbal plants that they use as remedies for illness. Commenting on why some men engage in self-medication, participant 1 observed that: *"Some do it to economize on money. They lack money that is why they are doing that. They try to treat themselves."* The pharmaceuticals sold by street vendors are used by some men as a quick fix for pain relief. According to one participant:

> *They [men] just go to the local chemist and say "I di hear hot [I feel pain] for here" and that pharmacist will just compose, I don't know the type of drugs. Will compose something and just give to the patient to go and drink. You can drink it and feel better for one week and then after that week again the pain will continue.* (Participant 17)

Self-medication was also used as a cheaper alternative to a hospital visit by those with low resources. They experiment with drugs from street vendors or locally made remedies hoping that the illness will go away on its own. One participant noted:

> *"People will like to handle it in their own way, when it goes a little bit offhand, that's when they may like to go for real medical attention."* (Participant 2)

The phenomenon of untrained roadside vendors hawking pharmaceutical products pose serious public health challenges as the products sold are of questionable quality. Additionally, this contributes to an erosion of trust on the health-care system as many participants lamented the lack of any serious attempt to curb the problem.

Lack of financial resources. A major consideration in men's decision to pursue diagnosis or treatment for illness was affordability. Access to health care in Cameroon is largely determined by the patient's ability to pay out of pocket (Wamba & Groleau, 2012). There was unanimity in all focus groups about the lack of financial resources contributing to delay in seeking care for any illness. Study participants reported the high cost of treatment as contributing to delays in seeking care. One participant stated, *"And the cost of the tablets now, so many people cannot afford them. So that worries people not to go to hospital."* (Participant 5). Another participant remarked:

> *My opinion is that medically, the cost of medical follow up in our society seems to be a little bit high for the ordinary man to take the challenge of going for a check-up. Look at the cost. Wherever you are doing the check-up if you look at the cost it is a little bit high. So most people are discouraged because of the cost. They would love to, so even though people stay strong, there are issues that people need to check and you don't need to wait until there is a breakdown. The financial aspect is the handicap."* (Participant 15)

Another participant echoed this point. *"I think I can say finance too contributes. When people don't have money they do not go to the hospital."* (Participant 25)

Economic limitation was also discussed in all three focus groups concerning lack of health insurance by participants. The use of health insurance is not widespread in Cameroon and besides inability to pay premiums, study participants mentioned difficulties accessing care even by those who participate in health insurance plans. Since the health-care system is largely an out of pocket model, the lack of financial resources is a major barrier to access and utilization of health-care facilities.

Discussion

This study explored the cultural norms and beliefs that contribute to the likelihood of late stage diagnosis of CaP among men in Bamenda. The qualitative data gathered in this study identified factors associated with the decisions to abstain or screen for CaP among study participants. These findings can inform the development of public health policies and strategies including health promotion and awareness of CaP. An important theme that emerged was the strong reliance on traditional healing among study participants, particularly the fact that TM was the first treatment option that many participants reported to pursue at the onset of illness. Related to this theme was the idea among some participants that witchcraft was the source of CaP. This provides an insight into the worldview of study participants which is vital for the planning, development, and implementation of programs to address late stage diagnosis of CaP in Cameroon. This is a salient practice and belief that is potentially modifiable through intervention programs. To date, no published study has explored the cultural worldview of men in Bamenda regarding late stage diagnosis of CaP.

Another important theme from this study was the profound sense of fear regarding this disease. The terms commonly used by study participants in reference to CaP was "death sentence," "death has arrived" or in pidgin English "that man go die." Fear of this disease was borne by the belief that cancer is incurable given the poor outcome of CaP patients most of whom were diagnosed with advance stage of the disease. Fear of CaP adds to social isolation and stigma. Many are reluctant to discuss CaP publicly, except for religious organizations that organize educational seminars for their members and invite different health experts as speakers.

Knowledge gaps about CaP were manifested in several ways including not knowing the male anatomy affected by this disease and being unsure about its signs and symptoms. Additionally, there were some misconceptions about the disease, with some participants attributing it to untreated venereal disease. This was not surprising as a study among men in Bamenda (Kaninjing et al., 2017) showed average knowledge levels about the signs and symptoms of CaP.

Emergent themes from this study were interconnected and reflect the complex relationship between personal, environmental, and societal level factors proposed by socio-ecological model. For example, participants' attitude toward CaP was informed in part by observation of the experiences of others dealing with the disease. These attitudes were the dominant source of fear expressed by many participants when asked: "When you think of prostate cancer, what comes to your mind?" Fear of this disease contributed to a culture of silence whereby the disease was seldom discussed in social circles. Self-medication was also interrelated with economic limitations as participants mentioned using home-made remedies or purchasing pharmaceuticals from street vendors mainly due to lack of resources.

Practice Implication

Modifiable factors identified in this study include local beliefs and reliance on TM, knowledge deficit about the signs and symptoms of CaP, attitude and awareness of the disease, fear, and stigma. These are personal attributes that can be addressed via a health education campaign to increase knowledge of CaP and awareness of screening methods. Findings from this study suggest the following elements should be included in a health education campaign: information about the anatomy and function of the prostate, the risk factors for the disease, signs and symptoms, screening outcomes and the outcomes and complications of treatment. A listing of local resources for CaP screening and diagnosis should be made available. The socio-ecological models categorize these personal attributes under the intrapersonal level. These can be addressed through tailored messages to counter misconceptions about CaP among this population, and to increase knowledge levels and awareness of this disease. Community members should be involved in developing message content in order to increase the impact and acceptance of messages (Blakeney et al., 2015; Hawkins, Kreuter, Resnicow, Fishbein, & Dijkstra, 2008).

For effective public health education, a sensitization campaign on CaP should include health-care providers. Only 16% of study participants reported they had ever received a recommendation from a health-care provider about screening for CaP. Given the reliance on TM for health care, it is necessary to educate traditional healers on the signs and symptoms of CaP, so they can determine when to make referrals for patients to get screened or diagnosed in local hospitals for CaP. Physicians and nurses in hospitals and clinics also need to be sensitized to have conversations with their male patients when appropriate about preventive health measures such as screening for CaP.

This focus group research has shown that economic limitation played a significant role in the health-seeking behavior of participants. Many attributed the delay in seeking care or experimenting with local remedies to the lack of financial resources. Therefore, at the policy or health system level, resources need to be allocated to subsidize the cost of screening and diagnostic services. Additionally, local policy-makers need to step up enforcement mechanisms against the sale of pharmaceuticals by untrained individuals to safeguard the health of the public.

Limitations and Future Directions

There are some limitations to the current study. Focus groups are associated with socially desirability bias, whereby participants provide information that will be viewed favorably by their peers or the moderator. Additionally, development of the focus group questions was guided by existing theoretical framework that was not developed specifically for this population and may have resulted in loss of information relevant to this population.

Areas for Future Studies

Future studies should consider a larger sample from this population that includes men with a CaP diagnosis to establish the relationship between variables in the emerging model from this study, and late stage diagnosis of CaP. Pathway analysis should also be considered to definitively ascertain factors that led directly to late stage diagnosis. Furthermore, a needs assessment should be conducted with CaP survivors to generate ideas for designing a cancer support intervention. To eliminate the stigma and fear around this disease, it is critical to fully understand and address the multifactorial issues involved in diagnosis, treatment, and survivorship.

Conclusion

This focus group study provides information that informs the development of educational strategies to promote positive health-seeking behaviors among men in Cameroon. The study shows that the decision-making process about CaP screening is multifaceted and occurs within the larger socio-ecological context that include beliefs, customs, experiences, intrapersonal, and policy-level factors. Therefore, to effectively address these contributing factors to late stage CaP diagnosis, a contextually based health education program is warranted and should be tailored to fill knowledge gaps about the disease, dispel misconceptions, and focus on reducing barriers to utilization of health services. CaP is amenable to early detection and early detection reduces the likelihood of advanced disease, and improves the probability of long-term survival (Lehto, Song, Stein, & Coleman-Burns, 2010; Odedina, 2011; Woods et al., 2006).

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