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A qualitative assessment of the social cultural factors that influence cervical cancer screening behaviors and the health communication preferences of women in Kumasi, Ghana

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Abstract

Cervical cancer is the leading cause of cancer death among women in Ghana. Despite the availability of cervical cancer screening in healthcare facilities throughout the country, less than 4% of Ghanaian women seek preventive cervical cancer screenings regularly. There is a lack of culturally relevant cervical cancer education material available in Ghana. The aims of this study were to assess the social cultural factors that influence cervical cancer screening behaviors and the health communication preferences of Ghanaian women. A focus group guide based on the constructs of the PEN-3 model was used to conduct six focus groups that were stratified by educational attainment. Thirty-four women participated in the study. The qualitative data revealed that most participants were not aware of cervical cancer or cervical cancer screening. However, many of the participants were willing to seek screening if they knew more about it. The most common sources of health information were television, radio, friends, and family. And the participants preferred inspirational cervical cancer screening messages that would be delivered by a doctor and a cancer survivor.

Introduction

Cervical cancer is the leading cause of cancer death among women in Ghana, West Africa [1, 2]. The cervical cancer mortality rate in Ghana, is nearly three times the global cervical cancer mortality rate [3]. Data from the International Agency for Research on Cancer indicate that in 2009, approximately 3,038 Ghanaian women were newly diagnosed with cervical cancer and approximately 2,006 Ghanaian women died from the disease [3]. Without an intervention, the World Health Organization (WHO) estimates that by 2025, more than 5,007 new cases of cervical cancer and 3,361 deaths due to cervical cancer will occur annually in Ghana [3].

Invasive cervical cancer can be prevented when cervical intraepithelial neoplasia (CIN) is detected and treated in the early stages [4]. The Pap test and visual inspection with acetic acid (VIA) are screening tests that have been proven to be effective at detecting CIN [5–7]. The Pap test, which is a resource intensive method, is available in hospitals and clinics in

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urban cities in Ghana [1]. VIA does not require laboratory processing, therefore it is available in rural, resource-poor areas in Ghana [5].

Despite the availability of the cervical cancer screening tools, Ghanaian women do not commonly seek preventive cervical cancer screening [8]. Data from the 2001 – 2002 WHO Household Survey that was conducted in Ghana indicate that only 2.2% of women living in rural areas, and 3.2% of women living in urban areas had a cervical cancer screening within the last three years [3].

The social cultural environment influences the knowledge, beliefs and values that are used when making health behavior decisions, including the decision to get a cervical cancer screening [9]. Currently, some hospitals and clinics in Ghana have a limited amount cervical cancer education material that has been imported from the United States and European countries in the form of pamphlets and flyers that are written at high literacy levels. The general lack of awareness about cervical cancer and cervical cancer screening among Ghanaian women suggests that these channels of delivering cervical cancer information have not been effective.

Airhihenbuwa [10, 11] has challenged researchers to investigate the roles of the social cultural contexts that nurture health behaviors of Africans rather than believing the notion that “that what works in the United States or Europe should work in Africa”. The aims of this study were to conduct a qualitative assessment of the social cultural factors that influence cervical cancer screening behaviors and to identify the preferred health communication methods and channels of Ghanaian women. To our knowledge, this is the first study to explore Ghanaian women’s preferred methods of cancer education. The results of this study can be used to develop culturally relevant cervical cancer education interventions aimed at Ghanaian women.

Methods

This study was conducted in Kumasi, Ghana, an urban city with a population of nearly 2.1 million people. A person was hired to assist the moderators in recruiting participants from the community. A purposive sampling plan based on education attainment was used to ensure that women of varying levels of education were recruited to participate in the study. General eligibility criteria were: women age 18 and older, who could speak and understand English or Twi, the most common native language. The institutional review boards at Kwame Nkrumah University of Science and Technology (KNUST), and Komfo Anokye Teaching Hospital approved this study.

In order to minimize the possibility of participant intimidation, the focus groups were stratified by educational attainment. Three focus groups consisted of women who had less than an 8th grade education, two groups consisted of women who had completed high school or a tertiary degree, and one group consisted of doctors and nurses. Focus groups were conducted at KNUST, on a participant’s porch, at a bar owned by a participant, and in a participant’s living room. Each participant was given 10 Ghana Cedis (~\$7) for participating in the focus group.

Before each focus group started, participants completed a demographic survey using an audience response system. The questions and answer choices were read aloud by the focus group moderator. The participants used a clicker to indicate their responses. Only one participant required assistance completing the survey using the audience response system. For all focus groups, the informed consent form was read aloud. Written informed consent, in the form a signature or a thumbprint, was obtained. The focus groups lasted between 45 minutes and one hour.

A Ghanaian female, who had a graduate level education in community health, moderated all of the focus groups. The focus groups were conducted in English, Twi, or both depending on the participants' preferences. The moderator translated and transcribed all of the focus group recordings. A note taker was present at all focus groups to record thick, rich descriptions of the settings and participants non-verbal reactions. Data collection ended after saturation was reached.

The PEN-3 model is a theoretical model that was originally created to guide the development of culturally sensitive and culturally appropriate health education programs in African countries [9]. The model consists of three domains of health (Cultural Empowerment, Relationships and Expectations, and Cultural Identity) and each domain is subdivided into categories that create the PEN acronym (see figure 1) [9]. The PEN-3 model was the theoretical framework that guided the development of the semi-structured focus group guide that was used for this study. The focus group guide contained questions that addressed the constructs in the two domains in the assessment phase of the PEN-3 model, the Relationships and Expectations domain and the Cultural Empowerment domain.

The Relationships and Expectations domain of the PEN-3 model is used to identify perceptions, enablers, and nurturers that enable or hinder health behaviors [12]. For example, questions such as "What are some things that might stop you from getting one of these tests [Pap Smear and VIA]?" were used to gather information about the participants' barriers to cervical cancer screening. The Cultural Empowerment domain is used to identify positive, existential and negative health beliefs and behaviors [9]. For example, questions such as "What comes to mind when you hear the word cancer," and "What do you think causes women to get cervical cancer?" were used to gather data about the participant's beliefs about cervical cancer and cervical cancer screening.

The focus group guide also included modified questions from the Project Toolbox focus group guide, which has been used for the development of culturally, linguistically, and literacy-sensitive cancer education material [13]. The modified questions were used to collect data about the participants' preferred methods of learning, preferred channels of communication, preferred types of health messages, and trusted sources of health information. For example, the questions "How did you learn about cancer?" and "How did you learn about health issues such as malaria?" were used to assess the participants' usual channels for health information. After being provided with a brief scenario about developing a video to increase cervical cancer awareness, the participants were asked to discuss the type of health message (alarming, factual, motivational/inspirational, or storylike) that they prefer

and the type of person they prefer to deliver health messages (a health expert, a person from the community, a cancer survivor or patient, or a famous Ghanaian).

The demographic data was analyzed using SPSS v. 21 for Mac. Frequencies were computed to assess the participant's characteristics.

The focus group transcripts were first coded using inductive coding to identify themes in the qualitative data. During the second cycle of coding, the themes that occurred most frequently across the six focus groups were identified. A 3×3 table (see table 2.) was created to cross-tabulate the themes according to the constructs in the PEN-3 model's Relationship and Expectations domain and Cultural Empowerment domain.

Results

Six focus groups were conducted with 34 Ghanaian women. Table 1 provides an overview of the participants' characteristics. The majority of the participants (n = 25) were between the ages of 18 and 36. Twelve participants had completed college, graduate or professional school, ten completed senior high school, and twelve had a junior high school or lower level of education. Only two participants reported that they had obtained a cervical cancer screening in the past.

We have provided the results for the positive, existential, and negative perceptions, the positive and negative enablers, and the positive nurturers. Existential enablers and nurturers, and negative nurtures were not frequently discussed during the focus groups.

Positive Perceptions

Several participants, especially those with a higher level of education, believed that cancer could be cured. Although, many of the participants had not personally witnessed a cancer survivor live for an extended period of time, they were aware of the role that late detected played in the cancer survivors' deaths. The following statement represents this perception:

It [surviving cancer] is possible if early attention is sought. There is a lady I use to be with, she never knew that it was cervical cancer. She usually has longer menstrual periods. Her husband advised her that they should see a gynecologist but she refused and relied on spiritual aid, which was futile. Later a doctor... diagnosed the disease as cervical cancer but was too late to be cured. This means that if early attention was sought she might not have died...

Many of the participants were aware of the importance of having cancer detected and treated in the early stages. For example, one participant stated:

Cancer of the breast even when it is removed one will definitely die. This is the picture created in our minds the fact that no matter what one will die. However, current discussion on the media has proved that early treatment is possible for those who have been affected by this disease [breast cancer].

Participants who were working in a health care field were more likely to be aware of some of the risk factors for cervical cancer. Although only two participants had knowledge of the role that HPV plays in the development of the disease. For example, one participant stated:

I think it is through early sexual intercourse and when one comes into contact with the papilloma virus that causes the cancer.

Women working in a health care field also appeared to have some knowledge of cervical cancer screening. Although few women were aware of both the Pap test and VIA, some were familiar with at least one type. For example, a participant stated:

I have also heard of it before, through a doctor I worked with in the field. I rather know of the acid wash and not the Pap smear test.

Several participants stated that being too shy to show their body to a male doctor was not a barrier to getting a Pap test. Women with less education were more likely to state that having a male preform the exam, would not deter them from getting the screening. This perception is illustrated in the statements below:

...But not so [being too shy] for women who have given birth before like me. We don't mind exposing our nakedness to the eyes of others.

For some, their life is more important than exposing their nudity. It is your health which is at stake here, hence the issue of shyness does not hold.

Several participants stated that they would not have any barriers, including fear, to getting a Pap test. In fact informing them about the test during the focus group, motivated them to get the screening. For example, two participants stated:

Nothing [will prevent me from getting the screening]. I was not afraid to take up an AIDS test, so I prefer such a test...

Not me. I now have the vim to go for the test (laughs).

Existential Perceptions

Several participants had misconceptions about the risk factors for cervical cancer that can be classified as existential perceptions. The discussions revealed that several of the misconceptions related to cultural beliefs about abortion and the insertion of herbs and drugs into the vagina. For example, one participant stated.

Our traditional herbs are also to be blamed [for causing cervical cancer]. My sister prepares this herbs called atodro it smells very awful but I learned is good for abortion when inserted into the vagina before sex with ones partner...

Negative Perceptions

When asked what they thought about when they heard the word cancer, several participants stated that cancer causes fear, sadness, or panic. For example, one participant stated:

First of all is panic and fear. This fear results from concern for your family particularly the young ones. Who will take care of them, one might reason. This is because, no matter what you will die.

Several participants indicated that because of the fear and panic generated by a cancer diagnosis, they would prefer not to know that they had cancer. They believed that knowing that they had cancer would actually speed up the impending death. Therefore, they believed that many Ghanaian women would not want to get tested and know their cancer status. For example, a participant stated:

There is a saying that if you don't go and do the test, how would you know that you have it. So for the fear of the unknown, many would not do the test to find out if they have it or not. It is just like the HIV/AIDS test. The perception is that once you know that you have the cancerous cells, you would die early. So some do prefer the unknown in order to live a bit longer.

Many of the participants, including the doctors and nurses, stated that they did not believe that cancer could be cured. Several participants felt that an “*inevitable death*” would occur even when cancer was detected early or a person received expensive medical treatment. This perception is illustrated in the following statement:

I think fighting the cancer virus is difficult. For instance, there are people with money like Michael Jackson who still died of cancer despite their ability to afford the best medical care. This is what generates the fear that no matter what one would eventually die.

Several participants were not aware of cervical cancer. Breast cancer was the only type of cancer that most of the participants had heard of prior to the focus group. This is illustrated in the following statement:

In this community and in Ghana, we are familiar with cancer of the breast. It is just recently that we heard that there are various forms of cancer and is because we don't do test to find out the type of cancer one might suffer from.

Many of the participants were not aware of the Pap test or VIA despite the widespread availability of cervical cancer screening, including an organized cervical cancer screening program that offered free VIA screenings. However, most of the women who were aware of at least one type of screening test, admitted that they had never been screened. For example, one participant stated:

Once, I heard that doctors were examining the womb of women but I personally never went there.

Several participants believed that cervical cancer is hereditary. As a result of that belief, they felt that having a family history meant that the disease could not be prevented or cured. Those beliefs are illustrated in the following statement:

To me this question is something because one can avoid multiple sexual partners, avoid early sex and others, but once there is a positive family history it becomes difficult to say it can be prevented.

When discussing barriers to cervical cancer screening, the most common barrier mentioned was shyness. Several participants stated that they were too shy or did not want an invasion of their privacy by male doctors. Even when some participants were aware of the screening

tests, shyness prevented them from seeking it. The strength of this barrier is illustrated in the following statements:

I felt a bit shy about this screening and test. For the visual screening I was worried about the private parts being exposed to the eyes of others, particularly young and male doctors. This indeed prevented me from taking up a test at the Agogo hospital [which was offering free VIA screenings].

There is a big difference between child delivery and cervical cancer. Delivery is natural when you are unconscious of your state. But with cervical cancer you are conscious and know what is happening. For me, I have my reservations about this.

The lack of symptoms was another common barrier to cervical cancer screening. Several participants stated that they would not go for a screening if they did not have signs or symptoms of illness. The following statements exemplify the fact that many participants do not engage in preventive health screenings, and only seek healthcare when symptoms are present:

...many including myself will not feel comfortable. It is a different case altogether when I have symptoms that indicate that I have the disease and should go for the test. And when I don't have it but I am requested to have it. For the latter case, many of us may not be willing to go for the test.

Some will, others will not. Once CCC church sent doctors to check our eyes but because I don't have an eye problem, I did not go. The same applies to this.

Positive Enablers

A few participants were aware that cervical cancer screening is available at hospitals and clinics. Those participants also knew that some hospitals provided the screening for free. For example, one participant stated:

I heard there was an ongoing test at the Agogo hospital from a friend... it is free.

Radio and television were the most common sources of health information for women in all of the groups, including the doctors and nurses. For example, when asked where they usually got health information, one participant stated:

From the media particularly the FM. The women's fellowship sometimes invites medical staff from the Komfo Anokye Hospital to educate them

Several participants stated that education about cervical cancer and cervical cancer screening would enable more Ghanaian women to seek the screening. For example, one participant stated:

I think people will be reluctant to do it[cervical cancer screening] but with education, they would know that it is best and beneficial.

Negative Enablers

Relatively few negative enablers were discussed across the groups. The most common barrier to cervical cancer screening was having a male doctor. Several participants indicated

that they would not be comfortable having a man perform a cervical cancer screening. For example, one participant stated:

If the education goes down well with the people, many will feel comfortable to do the test. But the truth is many women are not comfortable with male screeners.

Positive Nurturers

Social networks appeared to be a common source of health information. Several participants stated that family and friends were sources of health information, including cancer. For example, one participant stated:

I heard it [cancer] from friends. They said a lady was red all over, sores all over, and the mouth almost torn. It was explained spiritually but later I learned that is cancer.

Several of the participants who had higher levels of education indicated that they learned about health issues in high school and college. Churches and religious organizations were also a source of health information for many participants. It appeared that the participants trusted the information that was delivered through these institutions. For example, a participant stated:

This [cervical cancer education] should take place at religious places like churches and mosques. The people have confidence in their religious leaders and it is likely that they would bring other people along for the screening.

Health Communication Preferences

The majority of the participants stated that the radio, television, friends, and family were their usual sources of health information. A few indicated that they obtained health information from the Internet. However, no one stated that they obtained health information from pamphlets or flyers. For example:

The radio and TV. But such programs are on general health issues and not on cervical cancer.

When asked what types of health messages they preferred, (alarming, factual, motivational/inspirational, or storylike), the overwhelming majority of the participants stated that health messages that motivated or inspired them to engage in the cervical cancer screening would be the most effective. Several participants stated that the fear that is generated by alarming messages, would actually lead to more inaction. The statement below is representative of those beliefs:

I think the inspirational is most appropriate because people want to be encouraged. Like the HIV/AIDS awareness campaign, people know the danger they're in but are unwilling to go for the test because some of the facts presented are scary. Some reason that if about 200 people are infected daily in Ghana, then what is the big deal if they are also infected. After all, they are not alone.

The participants were asked to discuss who they would like to receive cervical cancer information from (a health expert, a community member, a cancer survivor/patient, or a

famous Ghanaian). Women in all groups stated that they would prefer a team, although that was not an option that was given by the moderator. The participants stated that they, and other women, would be more likely to believe a team that included a doctor and a cancer survivor. Although a few participants stated that a Ghanaian actress would be preferred, most participants believed that a doctor and a cancer survivor would be more likely to present accurate information. This is described in the statement below:

I prefer a doctor and a cancer surviving patient. These are specialist in this area and offer the necessary advice. It is not about popularity here. Musicians like Daddy Lumba are no specialist here, so we would not listen to him.

Many women stated that researchers should focus on creating cancer education interventions that “*encourage them to go for early detection and prevention.*” It is also important that these interventions are delivered via channels they prefer, such as FM radio. As one participant stated, cervical cancer screening awareness messages should inform women that “*the screening should be part of every Ghanaian woman.*”

Discussion

To our knowledge, this is the first study to explore the social cultural factors that influence the cervical cancer screening behaviors of Ghanaian women, and the first study to investigate Ghanaian women’s preferred methods of learning cancer education information. In regards to women’s knowledge of cervical cancer, the results of this study were similar to the results of the quantitative pilot study that was conducted in Kumasi and other studies of Ghanaian women’s knowledge of cervical cancer and HPV [8, 14, 15]. Many Ghanaian women are not aware of cervical cancer, cervical cancer risk factors, or cervical cancer prevention strategies. Similar to findings from the WHO Household Survey, only 2 of the 34 participants in this study had ever obtained a cervical cancer screening [3].

Many participants indicated that they would obtain a cervical cancer screening if they knew more about the disease and the screening procedures. Since cervical cancer screenings have been provided for free by some hospitals, it is clear that cost was not a barrier for many women. The most frequent barriers to screening that were reported were shyness, the fear of knowing that you had, and having male doctors perform the screening. Although many women indicated that those factors would not prevent them from seeking screening.

The results of this study revealed also that cervical cancer information that is currently available in Ghana, in the form of pamphlets and other print media, is not reaching Ghanaian women. This was evident in all of the focus groups when the participants, including nurses and doctors, stated that their primary sources of health information were radio, television, friends, and family. These sources of health information are consistent with the “oral traditional culture” that is common in many African countries [9].

The Ghana Ministry of Health has begun to focus on the prevention and treatment of non-communicable diseases including cervical cancer [15, 16]. Also, a national cancer control plan is currently being developed [17]. Therefore, it is now time begin developing, disseminating, and implementing cervical cancer education interventions that are accurate,

culturally, and linguistically appropriate for Ghanaian women, rather than relying on information from the United States and Europe [18]. Many women would be willing to seek screening if they had more information about it. Therefore, the development of cervical cancer education interventions targeting Ghanaian women should be done using a culturally based, Africanist approach that involves them in every aspect of program development and incorporates positive values and cultural norms as suggested by the PEN-3 model [19].

The person who delivers health messages and the manner in which the message is delivered is a critical component of the oral traditional culture [20]. Culturally and linguistically appropriate cervical cancer education interventions delivered in a manner and through channels that Ghanaian women prefer (i.e., radio and television) may increase their awareness of cervical cancer and cervical cancer risk factors. Subsequently, cervical cancer screening rates will increase and disparities in cervical cancer incidence and mortality rates will decrease. Reducing the number of years of potential life lost due to cervical cancer could have far reaching implications for social and economic development in Ghana.

The primary limitation of the study was the use of a purposive sampling plan to select participants. Since the participants were not randomly selected, they may not be representative of the general population. Therefore, the results may not be generalizable to all Ghanaian women.

Summary

Social cultural factors that influence Ghanaian women's decisions regarding cervical cancer screening, and their health communication preferences should be taken into consideration during the development of cancer education interventions. We discovered that many Ghanaian women would willingly get a cervical cancer screening if they knew more about it. The development, and dissemination of culturally appropriate cervical cancer education interventions should be included in Ghana's nascent national cancer control plan.

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Cultural Empowerment

Relationship & Expectations

Figure 1.
The PEN-3 Model

Table 1**Participant Demographic Characteristics**

	Participants n(%)
Age	
18–24	13 (38.2)
25–36	12 (35.3)
37–48	3 (8.8)
49–64	3 (8.8)
65 and older	3 (8.8)
Education Level	
No formal Education	4 (11.8)
Primary School	5 (14.7)
Junior High School	3 (8.8)
Senior High School	10 (29.4)
University, Graduate, or Professional School	12 (35.3)
Relationship Status	
Single	20 (58.8)
Married	14 (41.2)
Health Insurance	
Yes	20 (58.8)
No	9 (26.5)
Not Sure	1 (2.9)
Family History of Cervical Cancer	
Yes	1(2.9)
No	31 (91.2)
Not Sure	2(5.0)
Ever had a Cervical Cancer Screening	
Yes	2 (5.9)
No	31(91.2)

Table 2

Results of the PEN-3 Analysis

Domains	Positive	Existential	Negative
Perceptions	<ul style="list-style-type: none"> • Cancer can be cured • Treatment depends on stage of cancer • Early treatment saves lives • Cervical cancer is caused by early sex • Some knowledge of cervical cancer • Aware of Pap test or VIA • Shyness is not a barrier to screening • No barriers to screening 	<ul style="list-style-type: none"> • Cervical cancer caused by abortion • Cervical cancer caused by inserting drugs/herbs in the vagina • Cervical cancer cause by toilet paper • Cervical cancer caused by heat in underwear 	<ul style="list-style-type: none"> • Not aware of cervical cancer • Not aware of cervical cancer screening tests • Fear of knowing cancer status • After cancer diagnosis death is inevitable • No cures for cancer • The thought of cancer causes fear/sadness/panic • Barrier to screening is fear • Cervical cancer is hereditary • Barrier to screening is shyness • Will only seek screening when symptoms are present • Barrier to screening is fear of side effects
Enablers	<ul style="list-style-type: none"> • Health information from the radio and TV • Testing offered at hospitals/clinics • Screening available for free • Education will motivate women to get screened 		<ul style="list-style-type: none"> • Male healthcare providers performing the screening
Nurturers	<ul style="list-style-type: none"> • Family and friends are sources of health information • Schools/college are sources of health information • Church/religious organizations sources of health information 		