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Perception and Knowledge of Cancer and Cancer Screening among Staff of Military Hospital Lagos

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Abstract

Perception and knowledge of cancer remain poor in developing countries. Problems associated with cancer incidence include late reporting due to fear, ignorance and financial constrains relating to cancer screening. This study sought to determine the perception and knowledge of cancer among health workers in Lagos. Method: A mixed-method study design comprising a qualitative study (Focus Group Discussions and In-depth Interview) and a quantitative study was employed to collect information from the staff of Military Hospital Lagos, southwest Nigeria. 30 Participants for the qualitative study were purposely recruited, while 200 participants for the quantitative study were selected using the proportional probability sampling technique after approval was received from the management of the hospital. Qualitative data was recorded using a recorder, transcribed verbatim, and analyzed thematically. Quantitative data was analyzed using SPSS 25.0 software at 95% CI, alpha set at 5%. Findings: The majority were women, 16(64.0%), with only 8(27%) of them under health insurance, with a minimum qualification of secondary school certificate, and mostly health attendants in the group discussion, while those in the interview group were all health professionals. The quantitative study revealed more males 106(53.0%), 73(36.5%) between 20-30 years, with 114(57.0%) married, over half, 122(61.0%) possessed a college degree, average income being >50-100 thousand naira monthly, 132(66.0%) respondents had health insurance. All cited fear and death sentence on hearing "cancer", most had limited knowledge about cancer screening, only 5(2.5%) had any screening in the last 6 months.

Keywords*: Awareness, Cancer Screening Uptake, Healthcare Workers, Perception of Cancer.*

Introduction

The International Agency for Research on Cancer (IARC) estimates that worldwide, 1 in 5 people will be diagnosed with a form of cancer during their lifetime, with 1 in 8 men and 1 in 11 women eventually dying from cancer. Breast cancer accounts for 1 in 4 cancers diagnosed amongst women worldwide, while lung and prostate cancers are the most seen cancers in men, both of which make up about one-third of all male cancers. In Nigeria, the two most common causes of death from cancers in women are breast (38.7%) and cervix uteri

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(16.4%). In men, it's from prostate (29.8%) and colorectal (8.4%) cancer, as revealed by GLOBOCAN 2012. [1]. These unnecessary deaths can be easily avoided by prompt and adequate screening.

Accurate perceptions of cancer and the risk factors associated with cancers are vital information in helping to promote primary, secondary, and tertiary prevention modalities.

The prevailing stigma and fear of cancer, influence how cancer is perceived by different people, even amongst health workers. Many people still perceive cancer to be due to "karma", "evil forces or witchcraft", "old age", "poor diets" etc. some of these erroneous beliefs, even denial when the diagnosis is positive, eventually leads to serious problems with seeking appropriate and timely health intervention, and ultimately impeding cancer control strategies.

Methods

Study Design

This study used a cross-sectional descriptive study design to facilitate the gathering of data from the subset of the population and to identify independent variables and associations among them [2].

Study Area

The study was carried out using personnel from the different departments in the military hospital, Lagos, from the 25th of August to the 9th of September 2021. Military hospital Lagos (once popularly known as Creek Hospital) is a reference hospital located in Onikan, Lagos Island. The hospital was chosen because it has a good reputation for medical expertise being a referral center for most hospitals on Lagos Island and has specialists in all the major specialties and a few sub-specialties as well. MHL offers some screening services such as Self-breast examinations (SBE) and practical teaching sessions and Ultrasounds, (mammography is in view shortly); Visual Inspection with Acetic acid, Pap smear, Trans-vaginal scan; Direct Rectal Examination, Prostatic Specific Antigen; Double Barium Enema studies and stool test, for Colorectal cancer screening.

Study Population

The target population includes both permanent and temporary staff with ages ranging from 20 to 55 working in the hospital. They represent a community on its own, with people from diverse socio-economic backgrounds, ethnic groups, and academic levels.

The eligibility criteria included all who could communicate well in the English language or in "pidgin" English, those not having any symptom or prior diagnosis of cancer at time survey (verified by prior questioning on health status and types of drug usage), possess a MHL identity card (to rule out casual workers) and those able to give informed consent (verbal and written).

Sample Size and Sampling Technique

The qualitative data was obtained using focused group discussions (FGD), which was designed according to interviews for people with low literacy, and the In-depth interviews (IDI), which used the self-reporting design. These were used to highlight the viewpoints and differences among the groups and to fill in gaps left unexposed by survey-based research alone. A total of 30 respondents were used in the qualitative study using the Purposive sampling technique. Two FGD comprising of 10 females in the 1st group and 10 males in the 2nd group. The IDI comprised 10 professionals from different fields of expertise in the hospital to gain deeper knowledge into the research topic.

Data for the FGD was obtained using 2 pre-trained health guides (male and female) who assisted in moderating the two groups to allow for freedom of speech and elimination of cultural and societal bias in responses. Each session lasting about 60 minutes each. The IDI

were carried out personally by me. The interviews were recorded with an android phone recorder and transcribed verbatim. The transcripts were analyzed thematically. Interview/discussions audio recordings were confidential, and the participant's personal information was handled appropriately during the study to maintain privacy. Transcripts were identified by the unique identifier assigned (e.g., for the IDI; - participant 1/age/gender/profession etc. till the 10th participant, and for the FGD, since the participants were already assigned in gender groups, they just identified themselves as - participant 1-10/age/job description). Unique identifiers were used to link the guides and the interview only after the conclusion of transcription. All IDIs and FGDs were coded line manually by line after the creation of themes/sub-themes based on the research question and literature. Manually generated thematic codes were processed to produce final outputs for the study.

The quantitative data was obtained using a well-structured, self-administered questionnaire (Appendix 1) after a thorough literature review and was pre-tested in another military hospital.

In the first section of the questionnaire, respondents were asked about their socio-demographic characteristics like *Gender, Age Range, Marital status, educational level, Average income per month, whether under health insurance, Job description, and department*; all these from research have been seen to be determining factors in health seeking behaviors [3]. Being a female, advancing age, being married, having a higher educational qualification, being under or having health insurance, and having a higher income all help in better overall health seeking behaviors [4].

In the second section, respondents were asked about their *awareness of cancer screening; knowledge on any of the tests, if the test were widely known or not if they themselves had undergone any cancer screening test in the last 6 months, how likely they were to submit themselves to a colorectal screening test, their opinions on why people do or do not go for cancer screening and finally if they had ever recommended any cancer screening test for their family or friends as healthcare workers*; these were seen as positive indicators for cancer screening uptake.

The third section had 13 questions which sort to seek out the beliefs of the respondents on how important or necessary they thought cancer screening was, from *"Extremely necessary", "Very necessary", "Necessary", "Not really necessary"* to *"Totally unnecessary"* were used to assess their level of perception to cancer screening, that is, their real thoughts about cancer screening. The responses to the items were scored using a five-point Likert scale from *extremely necessary* = 5 to *totally unnecessary* = 1.

The final section used the *"Health Belief Model"* to elicit the respondent's thoughts on their *susceptibility to cancer, on the severity of cancer, the benefits to early screening, their perceived barriers to screening, motivation for screening, and how confident they were in going for screening*, this model was used to seek to understand how the respondent's attitude to cancer screening could influence their compliance or otherwise to cancer screening. Respondents' responses were rated as HIGH, MEDIUM, or LOW to questions on perceived susceptibility to cancer, perceived severity of the disease, perceived benefits of early screening, perceived barriers in overcoming obstacles of going for cancer screening, cues to action i.e., motivators, and self-efficacy i.e., confidence, which were all assessed using a modified Likert scale of High, Medium, and Low beliefs. High was rated as 3, medium as 2, and low as 1. The highest score being 18 and lowest 6, higher scores indicative that preventive measures like cancer screening can lead to increased uptake of cancer screening in populations like that of MHL.

The questionnaires were numerically coded before being administered to the respondents.

Ph.D. colleagues in public health working with the cancer research institute in Nigeria helped in the validation of the questionnaires. The 6 respondents who took part in the pilot test found the instrument easy to understand and needed only 15 to 20 minutes to complete the questionnaires, and 3 participants used to verify the reliability of the FGD & IDI questions were able to answer all questions in depth in about 10 minutes. The few bugs and ambiguities in the questionnaire were modified according to their comments, and its validity was confirmed using Cronbach's alphas for the pilot study and main study, which were 0.75 and 0.78, respectively, indicating a good level of reliability. Data were analyzed using the SPSS 25.0 software (SPSS Inc., IBM, USA).

Results

The results of both the qualitative and quantitative analysis are presented simultaneously**.**

Qualitative Analysis

The mean ($\bar{x}$) age for those in the IDI group was 41.9 years with a standard deviation (SD) of 4.98; the minimum age was 35 years while the maximum age was 48 years.

For the male FGD group, the mean ($\bar{x}$) age was 28.1 years with a standard deviation (SD) of 4.01. The female FGD group had a mean ($\bar{x}$) age was 31.5 years with a standard deviation (SD) of 6.50.

Theme 1: Perception and Knowledge of Cancer

All the participants in the in-depth interview group said the cancer was indeed of great concern to them because not a lot is known about it, many theories and assumptions abound; some healthy people still develop cancer of various organs, and it induces a lot of fear because there are no cures only palliative treatment. These responses from the participants in the in-depth interview group showed they had good knowledge about Cancer. Some of the reasons associated with this depth of knowledge were because the participants were all senior medical personnel in respective fields and had interacted with Cancer patients in the cause of their medical and clinical practice.

Most participants in both the FGD (male and female), on the other hand, showed little or no clear knowledge of what cancer was all about. For some of the participants, their encounter with cancer was when a close relation or friend was diagnosed with cancer as stated by P2/32yrs/ Health attendant of the Female FGD.

"As i talk before about the test for cancer, no be everybody know say i get cancer or i no get am. Especially, there is one example of my sister. She gets cancer but she no know. After we get accident, na through that accident, as she goes hospital, dey come test am, dey come know say she get cancer".

***(Interpretation:** "As i mentioned before on the test for cancer, it's not everyone who knows they have cancer or not. A sister of mine only knew she had cancer after we were involved in an accident and on getting to the hospital, after a series of test were carried out that it was discovered she also had cancer"**)**.*

P3/F/44 years /Optometrist in the IDI group, due of a relation who had cancer and died from it claimed.

"*People talk about Cancer openly around me. I had a younger brother who died from cancer some years back, we took him abroad but it was too late for him. I also have friends and patients who are cancer survivors".*

While P5/F/37yrs/Physiotherapist claimed;

"People around me talk about cancer because i work in a medical environment".

But P4/F/46yrs/Nurse stated;

"people around me, though i also work in a medical environment, don't really talk about cancer majorly due to fear, i know people around me who have died of cancer because it was discovered late, people don't want to discuss it at all and that's the problem".

P9/M/47yrs/Medical Doctor stated that;

"Thinking of cancer, what comes to my mind is a death sentence. It's a very big concern to me in that I've had people around me that have died of cancer. So, there are no solutions for me, for now ... no really good contributions

because when people talk about it, they don't have solutions".

Consequently, 6(54.5%) participants in the female FGD claimed that whenever cancer was mentioned, they had concern for knowing the causes and symptoms of cancer, 4(36.4%) participants stated they had no idea of what the word meant while 1(9.1%) respondent claimed to be scared of the uncertainties associated with the disease (Figure 1).

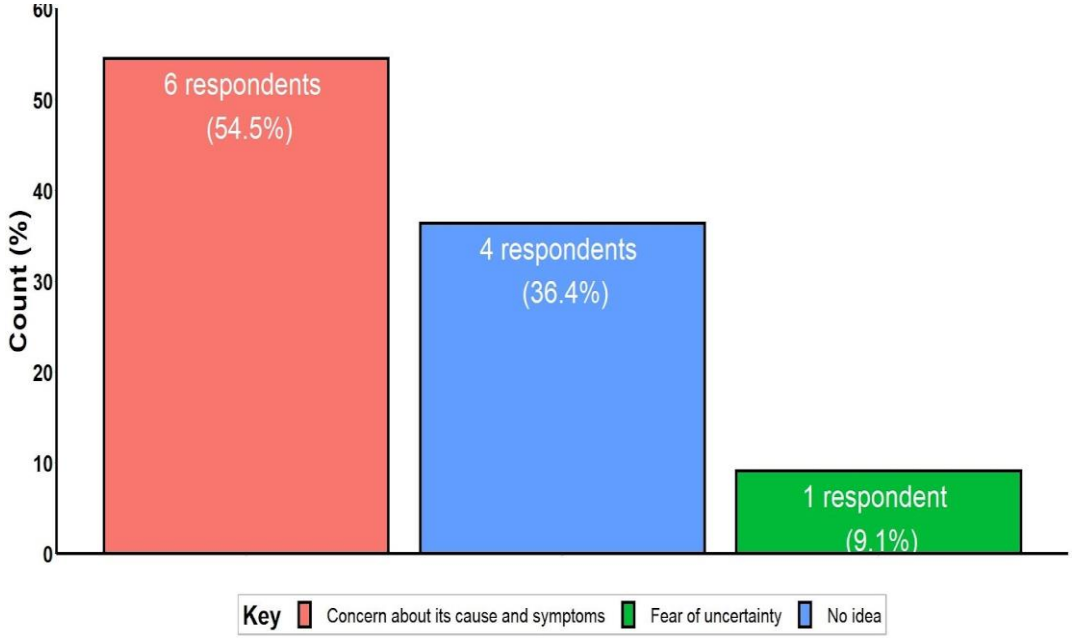

Figure 1. Showing What Readily Comes to Mind when "Cancer" is Heard by the Female Focus Group

Response by P3/30yrs/Clerk, in the male FGD on what he perceived about cancer, was that cancer was a;

"*Slow and steady sickness that leads to death*"

P1/35yrs and P2/27/ both Health Attendants in the male FGD stated respectively.

"Cancer could be contracted from others".

And,

"*Cancer patients should discuss their health status openly so as not to get others infected, there may be a possibility of getting treatment through this means of speaking out*".

On what causes cancer, participants in the IDI group identified eating habits, heredity (or genetic make-up), exposure to radiation, ignorance of risk factors, and lack of physical activities as predisposing factors to Cancer (Figure 2). For eating habits and what was consumed, tobacco, alcohol, Shisha, and cigarette consumption were top of the list, excess sugar intake, certain body creams used, IUDs, and consumption of westernized or non-organic foods were also identified as predisposing factors. The use of nylon or plastics to cook in microwaves and exposure to extreme irradiations (e.g., sunlight) were mentioned as examples for exposure to radiation. Some of the participants provided response for more than one potential item predisposing to Cancer, while others identified only one Cancer-causing risk factor.

For instance, while P4/F/46 yrs/Nurse identified;

"*Heredity, eating habit or foods eaten, ignorance and exposure to radiation*" as potential risk factors predisposing to cancer.

P1/M/42yrs/Dentist noted;

"Physical activities (i.e., smoking and keeping multiple sex partners) are some potential risk factors.

Subtheme 1.2: Perception of Cancer Predisposing Factors

On whether people were aware of factors predisposing to cancer, 6 (54.5%) of the responses of the Participants of the IDI study

group showed that most persons were ignorant of cancers risk factors, while the remaining 5 (45.5%) claimed that people were aware of these factors but just had a nonchalant attitude towards it. The Participants went further to affirm that some of those who were aware of some of these cancer predisposing factors were such who either didn't believe that cancer truly existed, or they believed but had become so addicted with their way of life, consequently finding adjustments very difficult to make. For instance.

P1/M/42 yrs/Dentist stated.

"People are aware of some of these risk factors because the information is out there readily and so they cannot claim that they are not aware. For example, cigarette smoking, you know it's readily written on the package and said on adverts that smoking is bad ... even those that manufacture it are always saying that smokers are likely to die young. So, people are aware of some of these risk factors".

P4/33yrs/Cleaner of the female Focused Group, however observed Cancer to be caused.

"*When a man sucks his spouse's breast during sexual intercourse*"

P4/29yrs/cashier of the male FGD group said cancer is;

"*Contracted when women keep money in their breast".*

Other factors identified by P5/22yrs/Health Attendant of the male FGD group as predisposing to cancers were;

"Dirt's, environmental pollution and what we consume".

All participants of this group, however agreed that cancer was not possible through a spiritual attack.

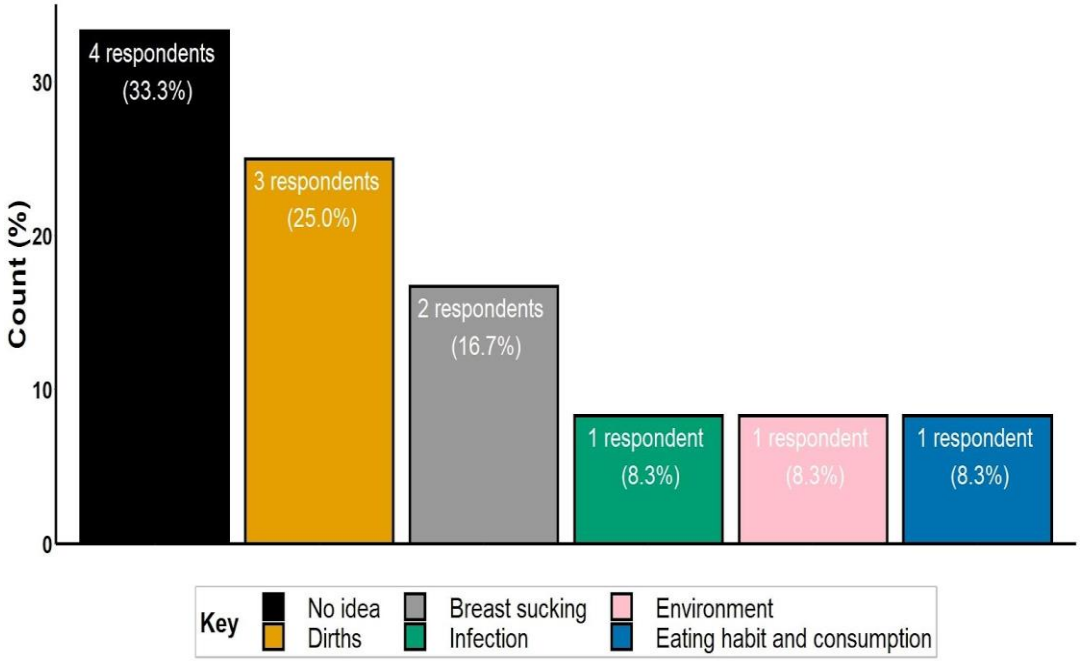

Figure 2. Showing Some Causes of Cancer Identified by FGD Group

On whether cancers could be prevented, all the participants of the IDI study group claimed that most cancers could be prevented through early detection, except P9/M/47yrs/Medical Doctor who said.

"Most times the diagnosis of cancer in quote translates to the death sentence. If you look at the example of cancer of the Pancreas, i've never seen anyone who has survived it. And i've had two very close persons that were affected, and they did not come out of it".

Other mediums for preventing some cancers according to P10/M/48yrs/Nurse of the IDI group were.

"Attitudinal change increased awareness and proper Medicare".

Six of the female participants in the FGD study group claimed not knowing whether some cancers could be prevented, while one affirmed that some cancers could be prevented. P1/30yrs/Clerk of the Female FGD group said.

"You can prevent it. Let's say in the early stage when they notice it immediately, they start giving the treatment, and the rules and regulations the doctors give are followed, then it can be prevented".

One of the males (P5) within the male-focused group said some cancers couldn't be prevented, one (P3) said it could be prevented, while the others didn't provide any response on whether cancers could be prevented.

Theme 2: Awareness of Cancer Screening and Services

Though 7 (77.8%) of the responses on screening (comprising responses from four females and three males) for cancer screening was applauded by the IDI study group, some of the participants showed concern on the quality of the screening that was served. Some of the participants stated that some screenings were poorly and scantily done, while some others claimed the potential of some persons deliberately avoiding the screening services in order to avoid stigmatization (Figure 3). P10/M/48yrs/Nurse from the IDI group stated;

"My views of screening for cancers are that the screening is very low, very poor and very scantily done because it's supposed to be done routinely, especially when you attain the age of 40 and you come to report sick, you supposed to be screened".

P8/F/46 yrs/Chief Medical Lab Scientist noted that;

"The call of "cancer" scares people from going for cancer tests because they don't want it mentioned around them. Some people prefer to even die without knowing the cause of the disease because some people die socially, mentally, psychologically even before the main thing, before the main disease".

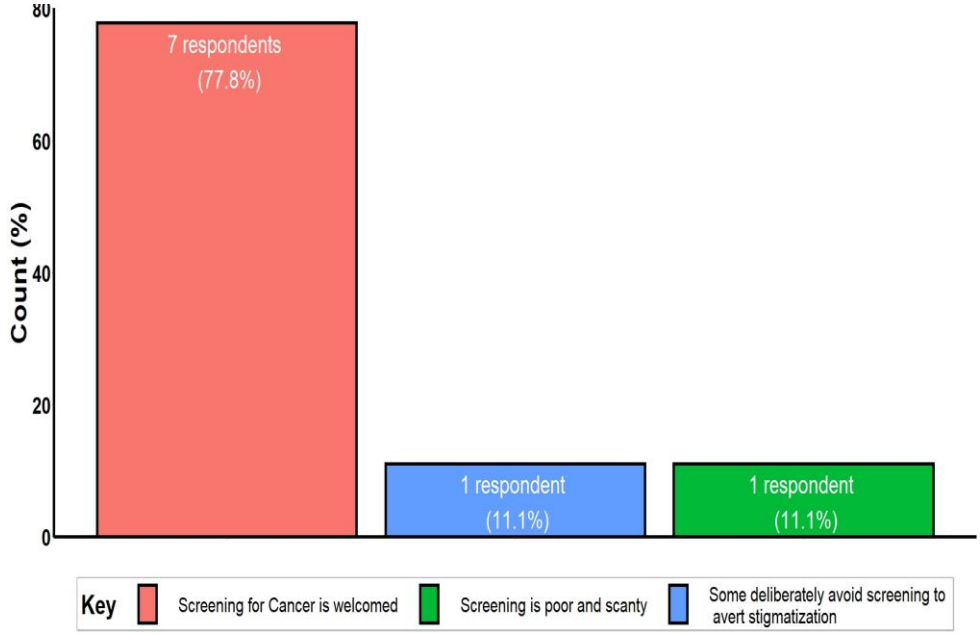

Figure 3. Showing Views of Cancer Screening amongst the IDI Group

All the participants of the FGD (both female and male) welcomed the idea of routine cancer screening, the females stating that cancer *"awareness should be done constantly"* while the male participants affirmed, *"undertaking constant screening is a good cancer preventive measure"*. The participants appealed that the awareness of cancer be done adequately, one of the participants of the female FGD (P8/40yrs/Health Attendant) appealed that.

"*The awareness be done just like the awareness done for malaria and HIV/AIDS".*

On whether they have been screened for cancer, 7(70.0%) of the female FGD participants stated, "*they had never been screened before"* while the remaining 3(30.0%) claimed *"they had been screened at one time or the other".* One of these females (P10/42yrs/Cleaner) who had been screened claimed.

"I was screened for cervical cancer when the screening exercise was brought to my neighborhood, so I used the opportunity as the screening exercise was free".

Subtheme 2.1: Factors Promoting Awareness of Cancer Screening

Three factors were identified by the IDI group capable of promoting cancer screening. 6(60.0%) of the responses favored knowledge or awareness of cancer, 3(30.0%) favored evidence that a close relation was infected with cancer while 1(10%) stated level of education could improve cancer screening awareness (Figure 4). Participants who claimed knowledge or awareness of cancer as motivating factors for cancer screening noted that if proper awareness was done at different levels in the community, adequately engaging religious bodies to champion this awareness and providing good reasons on why cancer screening was to be embraced, more persons were possibly going to be motivated to go for cancer screening. For instance, P3/F/44 yrs/ Optometrist stated.

"The motivation is if we have a proper awareness if we go to, I don't know, maybe community, or even during LGA meetings because that is the forum where we can get people gathered together. In Churches they can talk about it, in Mosques also they should talk about it and probably tell us how to go about the screening because most of us don't know".

P1/M/42 yrs/Dentist stated;

"If the right information is there and you know that if you are detected early of having any of these cancers you can be guaranteed proper management, I think it's a good motivation for one to want to be screened for cancer rather than to be caught off guard for then you end up losing your life for what would have been better managed if picked up early".

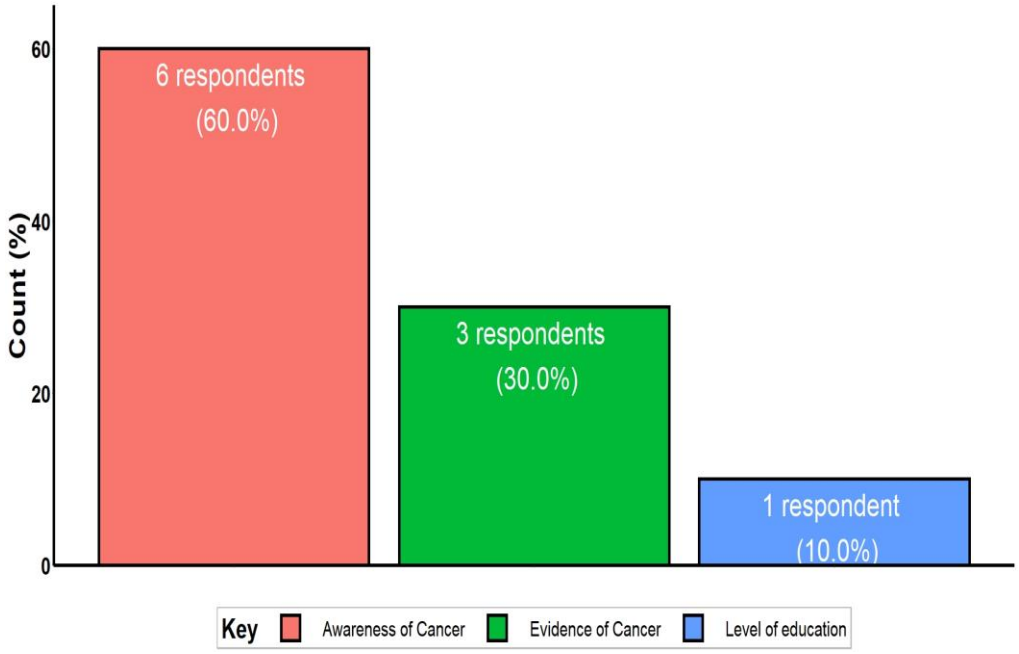

Figure 4. Showing Factors Promoting Cancer Screening as Identified by IDI Group

On factors challenging or hindering Cancer screening, the participants of the IDI group identified six different factors. 6 (33.3%) responses were given for finance, 4 (22.2%)

responses were given for availability and distance of the screening centre, and ignorance, religion and culture, fear and stigmatization, and hospital protocol each received 2 (11.1%) responses each.

According to P7/M/38yrs/Consultant Clinical Pharmacist;

"Funding is a hindrance to cancer screening because most of the screening are expensive and the vaccines too are very expensive. Then number two, ignorance, some people don't actually know anything about it, so i think education is key. Then number three; some because, you know, this part of the world we are more religious so they say they believe they can't be sick, it's not their portion etc".

The female-focused group corroborated the opinions of the in-depth interview group as about 7(70.0%) responses were recorded stating that their religious beliefs had a strong influence on their health-seeking behaviors. For example,

P5/22/Cook stated;

"*I believe through my prayers, and God can heal me of any disease or sickness".*

P3/29/Clerk claimed;

"Cancer is not my portion; it can never come my way in the mighty name of Jesus Christ".

P6/36yrs/Cleaner stated;

"I never think of cancer like this, i just think it can never happen to me, some people fall sick, and we think its juju or something like that, but now i know it may be cancer, so it's good we all go for testing … but the money go cost too much, i don't know"{laughs}.

While P2/27yrs/Health Attendant from the male FGD stated;

"Me i know myself, i try to stay away from bad and harmful things, so i believe i cannot get cancer … by God's grace (laughs)".

Subtheme 2.2: Awareness of Cancer Treatments Modalities

Three major cancer treatment modalities were identified by the IDI group: irradiation, lump removal, and therapeutic measures (Figure 5). 6(46.2%) mentions were made on irradiation which comprised chemotherapy and radiotherapy, 4(30.8%) mentions were made on lump removal or surgery, while 3(23.1%) responses were given for therapeutic measures of treatment or use of drugs.

P5/F/37 yrs/Physiotherapist stated;

"A patient can be placed on chemotherapy, a patient can undergo drug therapy, and patients can also undergo radiotherapy for the treatment of Cancer".

While P2/F/35yrs/Optometrist claimed as known treatment modalities;

"*Chemotherapy, mastectomy and removing of lump".*

While participants of the FGD identified the use of drugs, surgery and blood exchange as known means of treating cancer.

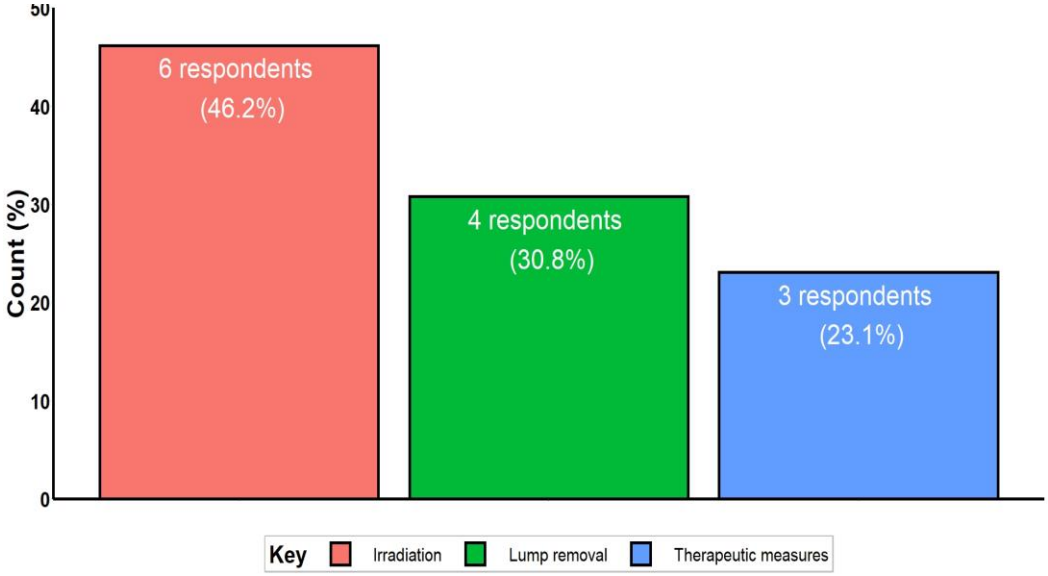

Figure 5. Showing Cancer Treatment Modalities as Identified by the IDI Group

Quantitative Analysis

The results (Table 1) of the socio-demographic characteristics of the respondents showed there were more male 106(53.0%) respondents participating in the research than females 94(47.0%), with a vast majority, 73(36.5%) of them falling within the 20-30 year age range, most, 114(57.0%), were married, with over half of them, 122(61.0%) possessing a college degree, the average income of the majority of the respondents was >50-100 thousand naira monthly, with the majority of them, 132(66.0%) having health insurance.

Table 1. Showing the Socio-demographic Characteristics of Respondents

Variables	**Frequency (%)**
Gender	
Male	106(53.0%)
Female	94(47.0%)
Age range (years)	
20-30	73(36.5%)
>30-40	65(32.5%)
>40-50	40(20.0%)
>50	22(11.0%)
Marital status	
Single	(never being married) 82(41.0%)
Married	114(57.0%)
Separated	2(1.0%)
Divorced	2(1.0%)
Educational level	
Finished primary school	3(1.5%)
Finished secondary school	30(15.0%)
Technical school graduate	32(16.0%)
College graduate	122(61.0%)

Postgraduate	13(6.5%)
Average monthly income (Naira)	
≤50 thousand	42(21.0%)
>50-100 thousand	90(45.0%)
>100-200 thousand	52(26.0%)
>200-500 thousand	12(6.0%)
>500 thousa	nd 4(2.0%)

On **Awareness of cancer:** Table 2 below shows - 52(26.0%) respondents could mention at least one cancer screening test, with only 57(28.5%) respondents claiming cancer screening was widely known, but only 5(2.5%) of them had ever done any cancer screening in the previous 6 months. Though the majority of the respondents, 124(62.0%) said, they would likely submit themselves for colorectal screening, even though 52(26.0%) had never recommended cancer screening to any family member or friend.

Table 3 shows that higher educational levels is vital for understanding the importance of cancer screening in healthcare management, and this was seen to be statistically significant.

Table 4 highlights how average income can influence perceptions on cancer screening in healthcare management and decision-making on cancer screening, and this was seen to be statistically significant.

Table 2. Showing the Awareness of Respondents on Cancer Screening

Variables	**Frequency (%)**
Do you know of any cancer screening test?	
Yes	52(26.0%)
No	148(74.0%)
In your opinion is cancer screening widely known?	
Yes	57(28.5%)
No	143(71.5%)
Have you had any cancer screening in last 6 months?	
Yes	5(2.5%)
No	195(97.5%)
How likely would you submit yourself for colorectal screening?	
Extremely unlikely	21(10.5%)
Unlikely	31(15.5%)
Likely	124(62.0%)
Extremely likely	24(12.0%)
Have you ever recommended cancer screening for family or friends as a health worker?	
Yes	i have 52(26.0%)
No	i haven’t 148(74.0%)

Table 3. Showing Perception of Respondents to Cancer by Educational Level

Perception	Educational level					Chi-square value	p-value
	Finished Primary	Finished Secondary	Technical School Graduate	College Graduate	Postgraduate/ Professional Degree		
1) Is Cancer screening necessary in healthcare management?							
Extremely necessary	3 (100.0%)	16 (53.3%)	10 (31.3%)	33 (27.0%)	6 (46.2%)	22.137	0.036*
Very necessary	0 (0.0%)	11 (36.7%)	13 (40.6%)	56 (45.9%)	7 (53.8%)		
Necessary	0 (0.0%)	1 (3.3%)	7 (21.9%)	29 (23.8%)	0 (0.0%)		
Not really necessary	0 (0.0%)	2 (6.7%)	2 (6.3%)	4 (3.3%)	0 (0.0%)		
2) Should Cancer screening be compulsory for employment?							
Extremely necessary	1 (33.3%)	7 (23.3%)	1 (3.1%)	8 (6.6%)	0 (0.0%)	30.265	0.017*
Very necessary	1 (33.3%)	1 (3.3%)	8 (25.0%)	23 (18.9%)	4 (30.8%)		
Necessary	0 (0.0%)	11 (36.7%)	9 (28.1%)	28 (23.0%)	2 (15.4%)		
Not really necessary	0 (0.0%)	11 (36.7%)	13 (40.6%)	49 (40.2%)	6 (46.2%)		
Totally unnecessary	1 (33.3%)	0 (0.0%)	1 (3.1%)	14 (11.5%)	1 (7.7%)		
3) Is Cancer screening necessary for those below 20 years?							
Extremely necessary	0 (0.0%)	11 (36.7%)	4 (12.5%)	9 (7.4%)	0 (0.0%)	33.234	0.007*
Very necessary	1 (33.3%)	6 (20.0%)	7 (21.9%)	25 (20.5%)	2 (15.4%)		
Necessary	1 (33.3%)	3 (10.0%)	4 (12.5%)	39 (32.0%)	7 (53.8%)		
Not really necessary	1 (33.3%)	9 (30.0%)	14 (43.8%)	43 (35.2%)	4 (30.8%)		
Totally unnecessary	0 (0.0%)	1 (3.3%)	3 (9.4%)	6 (4.9%)	0 (0.0%)		
4) Is Cancer screening recommended after 75 years of age?							
Extremely necessary	1 (33.3%)	8 (26.7%)	6 (18.8%)	22 (18.0%)	5 (38.5%)	26.227	0.051
Very necessary	1 (33.3%)	1 (3.3%)	6 (18.8%)	30 (24.6%)	2 (15.4%)		
Necessary	0 (0.0%)	13 (43.3%)	8 (25.0%)	37 (30.3%)	4 (30.8%)		
Not really necessary	0 (0.0%)	8 (26.7%)	12 (37.5%)	25 (20.5%)	2 (15.4%)		
Totally unnecessary	1 (33.3%)	0 (0.0%)	0 (0.0%)	8 (6.6%)	0 (0.0%)		

p-value is significant at ≤ 0.05

Table 4. Perception of Respondents to Cancer Screening across Average Monthly Income

Perception	Average monthly income (₦)					Chi-square value	p-value
	≤ 50,000	>50,000-100,000	>100,000- 200 000	>200,000- 500 000	≥500,000		
1) Is Cancer screening necessary in healthcare management?							
Extremely necessary	23 (54.8%)	25 (27.8%)	13 (25.0%)	4 (33.3%)	3 (75.0%)	21.674	0.041*
Very necessary	12 (28.6%)	43 (47.8%)	28 (53.8%)	3 (25.0%)	1 (25.0%)		
Necessary	5 (11.9%)	17 (18.9%)	10 (19.2%)	5 (41.7%)	0 (0.0%)		
Not really necessary	2 (4.8%)	5 (5.6%)	1 (1.9%)	0 (0.0%)	0 (0.0%)		
2) In your opinion, is it necessary to go for periodic Cancer screening from age 40?							
Extremely necessary	15 (35.7%)	26 (28.9%)	9 (17.3%)	1 (8.3%)	2 (50.0%)	26.953	0.042*
Very necessary	13 (31.0%)	27 (30.0%)	31 (59.6%)	3 (25.0%)	1 (25.0%)		
Necessary	10 (23.8%)	31 (34.4%)	10 (19.2%)	8 (66.7%)	1 (25.0%)		
Not really necessary	4 (9.5%)	5 (5.6%)	2 (3.8%)	0 (0.0%)	0 (0.0%)		
Totally unnecessary	0 (0.0%)	1 (1.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)		
3) How necessary is a high uptake of Cancer screening amongst health workers?							
Extremely necessary	9 (21.4%)	21 (23.3%)	11 (21.2%)	1 (8.3%)	2 (50.0%)	36.708	0.002*
Very necessary	18 (42.9%)	26 (28.9%)	19 (36.5%)	5 (41.7%)	1 (25.0%)		
Necessary	9 (21.4%)	30 (33.3%)	17 (32.7%)	6 (50.0%)	0 (0.0%)		
Not really necessary	5 (11.9%)	13 (14.4%)	5 (9.6%)	0 (0.0%)	0 (0.0%)		
Totally unnecessary	1 (2.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)		

p-value is significant at ≤ 0.05

Discussion

The purpose of this study was to find out if those working as health workers in different capacities in a health establishment had better cancer and cancer screening understanding and awareness. Information was gathered to better understand perceptions about cancer and perceived barriers towards cancer screening among healthcare workers.

The most widely held perceptions among the respondents were that screening was only relevant when symptoms were present, and consequently, most of the participants in both FGD groups had a very low awareness about cancer and cancer screening due to scarcity of information on cancer and available screening modalities as shown in other qualitative studies [5, 6]. The majority of the respondents, even those in the IDI group, were not even aware that some cancer screening tests were available in MHL, this was surprising as they all worked in the hospital, some were clinicians etc., but never availed themselves or made enquires. This was also observed by some other studies among female doctors who had never had a mammogram or pap smear carried out. [7-9].

The dominant barriers to cancer screening noted in the accounts of the participants were majorly fear of receiving bad news, pain and discomfort resulting from the test, attitudes of health workers and cost implications as revealed in other studies as well on cancer screening [10-13]. There are consistencies with other qualitative syntheses, which report screening as an emotional experience and fear as a barrier in screening, especially for colorectal screening [12,13, 15].

The findings of experiences of fear in cancer screening are consistent with patients' reported experiences in quest of help for cancer symptoms [15, 16]. The role of fear and its link with cancer anxiety and the perceived susceptibility in cancer screening uptake has been established in the literature [13,15,19]. The source of fear could be from a number of aspects of the screening, which includes the hospital settings, discomfort or pain from the screening procedures, anxiety in waiting for test results and the eventual consequences [19].

An extension of the public health involvement in cancer screening like immunization could capitalize on an existing trusted relationship to promote an increased awareness and familiarity of cancer screening. For example, an appointment from the patient's physician has been shown to increase awareness, information, and the eventual uptake of colorectal, cervical and breast screening [20-22]. Such interventions could lead to other desirable outcomes as a result of increased levels of trust in the patient-doctor relationship.

A review of the literature showed studies where meta-synthesis of qualitative findings on cancer screening were carried out, showing similar trends in anxiety and fear in going for screening [22-24]. Also, some studies found out a slight increase in patient awareness and visitation on the invitation for cancer screening, but this did not translate to higher uptake of cancer screening [23, 24] as screening has been described as an emotional experience [15].

Conclusion

This research study highlighted the fact that most people, including healthcare professionals and those working in health institutions, seem to have a low awareness and perception of cancer and cancer screening modalities due to lack of awareness or being too busy, ignorance, fear, and the high cost of cancer screening.

Hence the difficulty in cancer screening behaviors with the various influences on compliance raises issues in the understanding of cancer screening perceptions. This knowledge can be used to enlighten needed health awareness interventions and public policy. More research is needed to advance such understanding for a better understanding of cancer screening, especially among healthcare practitioners and workers at large, which is very crucial if there is to be any advancement in the

public health goal of using screening to reduce cancer mortality.

Intensification of awareness cancer screening campaigns is needed, particularly among health workers who are not doctors and the middle/lower cadre non-health workers.

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Conflict of Interest

The author declares that there is no conflict of interest.

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