

## KNOWLEDGE, ATTITUDE AND HEALTH SEEKING PRACTICES OF MEN AGED 40 YEARS AND ABOVE TOWARDS SCREENING FOR PROSTATE CANCER AND BENIGN PROSTATIC HYPERTROPHY AT MT ELGON HOSPITAL, MBALE LTD. A CROSS-SECTIONAL STUDY.

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St Micheal Lubaga Training Schools

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### Abstract

#### Background

Prostate cancer is the second most common malignancy and the fifth leading cause of death in men globally and it causes 358,989 deaths per year. The study aims to assess the knowledge, attitude, and health-seeking practices of men aged 40 years and above towards screening for prostate cancer and benign prostatic hypertrophy at Mt Elgon Hospital, Mbale Ltd.

#### Methodology

A cross-sectional study where a total of 40 male outpatients aged 40 years and above at MEH were chosen as the study sample. Participants were selected using a simple random sampling technique data was manually analyzed, entered into the computer, and using a computer program called Microsoft Excel and resented in the form of tables, graphs, and pie charts.

#### Results

21 (52.5%) were married, 8 (20.0%) were widowers, 6 (15.0%) were divorced, 4 (10.0%) separated while 1 (2.5%) was single. 25(63%) didn't know how PC diagnosis could be done, 8 (20%) cited ultrasound scanning, 6 (15%) mentioned PSA test, and 1 mentioned digital rectal examination as a means of diagnosis of PC. 35(87%) had ever heard about prostate cancer while the least 5 (13%) had never heard about it. 9(60.0%) who had challenges with urination did nothing about it, 6 (40.0%) did self-medication and none of them 0 (0%) visited the doctor immediately.

#### Conclusions

The levels of awareness were low about the diagnosis of PC, but their attitude towards screening was positive in some aspects. The practice of men aged 40 years and above on screening for prostate cancer and benign prostatic hypertrophy was poor.

#### Recommendations

The government of Uganda through different mass media should continue sensitizing masses of people about PC screening and the need to seek medical attention whenever they get challenges with Urination.

**Keywords:** Prostate cancer, Benign prostate hypertrophy Mt. Elgon Hospital, Men Aged 40years

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### Background

Prostate cancer is the second most common malignancy and the fifth leading cause of death in men globally and it causes 358,989 deaths per year (AM Alothman, 2022). It causes an estimated 174,650 new cases in the USA alone (American Cancer Society, 2019). The prostate is a small fibromuscular accessory gland of the male reproductive system which produces and secretes proteolytic enzymes into semen, to facilitate fertilization (Shenoy, & Shenoy, 2019). PC is usually asymptomatic at its early stages but can present with symptoms similar to BPH (Benign Prostatic Hyperplasia) such as interrupted urine flow,

frequency, nocturia, hematuria, and dysuria in advanced stages (Almuhanna, et al. 2018). These symptoms would be noted as problems with urination. Metastatic prostate cancer

may spread to bones and cause pain in the hips, spine, or ribs (Morlando, Pelullo, & Di Giuseppe, 2017). The two commonly used screening methods for prostate cancer are digital rectal examination (DRE) and PSA test (Gift, Nancy, & Victor, 2020).

Although the causes of prostate cancer are not yet fully understood, it is thought that age above 50 years, a positive family history of prostate cancer, and an African-American ethnic background are risk factors for the disease (So, et al. 2014). In Asia, a low level of awareness about prostate cancer leads to late presentation and poor prognosis of the disease (Ito, 2014). In Saudi Arabia, although 64.5% of the respondents had heard about prostate cancer, only 20.3% of them had heard about the PSA screening test and 53.1% had a negative attitude toward screening for the disease (Musaad, et al. 2022). Though the awareness of prostatic diseases has increased in recent times, this has not translated into an

increased screening or early presentation in hospitals among men in developing countries but a good knowledge of the disease is associated with a better healthcare-seeking attitude and behavior (Ojewola et al., 2017).

A cross-sectional study in Nigeria revealed that 43.3% of the respondents had a positive attitude toward prostate cancer screening (Aluh, et al. 2018). In Ghana, 58.3% of the soldiers were less aware of PC, though they had positive attitudes toward early detection of the disease but had low intentions of getting tested (Necku, Anaba, & Abuosi, 2019). In Ethiopia, PC is the third most common cancer among men, and those residing in rural areas were reported to have low levels of

PC awareness and screening in comparison with those residing in the urban regions (Solomon, & Mulugeta, 2019).

In a study done in Rwanda, 80% of the respondents were aware of the existence of prostate cancer though 64% of them weren't aware of the risk factors of prostate cancer, 32% did not know the prevention measures of prostate cancer though 64% of them knew about the prostatic specific antigen (PSA) exam and 49% of them had taken a PSA examination (Benurugo, et al. 2020).

In a Kenyan study, only 52.3% of the respondents had good knowledge about prostate cancer and benign prostatic hypertrophy though only 4.1% of them had ever been screened for prostate cancer (Wanyagah, 2014).

A study in Uganda by Okuku, et al. (2016) revealed that the incidence of prostate cancer was increasing at a rate of 5.2% annually and that 90% of the patients presented late with stage IV of the disease and had bone metastasis. No such study had been done at Mt. Elgon Hospital, Mbale Ltd, the reason this study was done was to assess the knowledge, attitude, and health-seeking practices of men towards prostate cancer screening for mitigation measures to be put in place so that early diagnosis of the disease could be done for better health outcomes. The study aims to assess the knowledge, attitude, and health-seeking practices of men aged 40 years and above towards screening for prostate cancer and benign prostatic hypertrophy at Mt Elgon Hospital, Mbale Ltd

## **Methodology**

### **Study Design**

This was a cross-sectional study because all the required data was collected once and there was no follow-up of the study participants.

### **Study Setting**

The study was carried out at Mt. Elgon Hospital Mbale (MEH) which is located in Mbale city. It is a private hospital located in the eastern part of Uganda, about 225 kilometers east of Kampala by road. The hospital renders both general and specialized services to multitudes of patients from several districts in Eastern Uganda. The study setting was chosen because it is convenient for the researcher to do the study.

### **Study Population**

The study population comprised all male outpatients aged 40 years and above at MEH during the period of data collection.

### **Sample Size Determination**

A total of 40 male outpatients aged 40 years and above at MEH were chosen as the study sample.

The 40 participants were chosen as the study sample because they comprised of a number, large enough to ensure that the researcher obtained enough data to fulfill the study objectives. The number was also above the minimum recommended sample size by UNMEB guidelines.

### **Sampling Procedure**

The study participants were selected using a simple random sampling technique after seeking their consent. To achieve this sampling technique, 40 papers were labeled with the word "YES" and another 40 papers were labeled with the word "NO." These 80 papers were mixed and put into a small box from where each selected participant picked one piece of paper. The picked paper was opened to review the word written on it and only participants picking the papers labeled with the word "YES" were recruited into the study. Any participant picking the paper labeled "NO" was excluded from the study but thanked for having accepted to participate in it.

During picking of papers, any picked paper was not returned to the box and the picking process was done till all the papers in the box were exhausted.

### **Definition of Variables**

#### **Dependent variables**

These comprised practices towards screening for prostate cancer and benign prostatic hypertrophy at MEH.

### **Independent variables**

This comprised knowledge and attitude towards screening for prostate cancer and benign prostatic hypertrophy among men aged 40 years and above at MEH.

### **Data Analysis**

The results from the questionnaire were manually analyzed, entered into the computer, and used a computer program called Microsoft Excel, they were then presented in the form of tables, graphs, and pie charts.

### **Research Instruments**

The study instrument was a questionnaire consisting of both structured and semi-structured questions and translated by a research assistant. The questionnaire was designed with guidance from the supervisor and pre-tested to reduce on ambiguity of some of its questions before it was used for the actual data collection.

### **Ethical considerations**

The researcher sought approval of the research proposal from the supervisor and then from the administration of Lubaga Hospital Training Schools. Upon approval of the research, the school issued a letter introducing the researcher to the Research and Ethics Committee of MEH. The research and ethics committee after reviewing the proposal authorized data collection by issuing a clearance letter to the researcher who then introduced themselves to the in charge of the outpatient department of MEH before commencing with data collection.

### **Data Collection Procedure**

Approval of the research was done by the school and from the ethics and research committee of MEH before data collection. Consent was then obtained from each study participant before they were enrolled in the study. From each selected participant who could read and write English, data was collected by self-administration of questionnaires. After the study participants had filled their respective questionnaires, these were immediately reviewed and any partially filled questionnaire was handed back to the respective participant for completion before being resubmitted to the researcher.

The researcher sought consent from each study participant before they were enrolled in the study.

Confidentiality and anonymity were observed during data collection.

### **Data management**

After data collection, the researcher kept the questionnaires in a safe lockable place to minimize access by unauthorized personnel as a way of ensuring safety, privacy, and confidentiality.

The questionnaires were also reviewed and summarized based on study themes before being entered into the computer.

### **Results**

#### **Respondents' demographics**

Table 1 shows that most of the respondents, 12 (30.0%) were aged 70 years and above, 11 (27.5%) were 60 to 69 years, 10 (25.0%) were 41 to 49 years and the least, 7 (17.5%), were 50 to 59 years.

Table 1 also shows that most of the study participants 21 (52.5%) were married, 8 (20.0%) were widowers, 6 (15.0%) were divorced, 4 (10.0%) separated while 1 (2.5%) was single which is the least.

Table 2, shows that most of the study participants 15 (37.5%) had attained tertiary level of education, 12 (30.0%) were illiterate, 8 (20.0%) had attained secondary level of education and the least 5 (12.5%) had stopped in primary school.

Table 2 shows that most of the study participants 15 (37.5%) were traders or business men, 15 (37.5%) were peasants whereas the least 10 (25.0%) were civil or public servants.

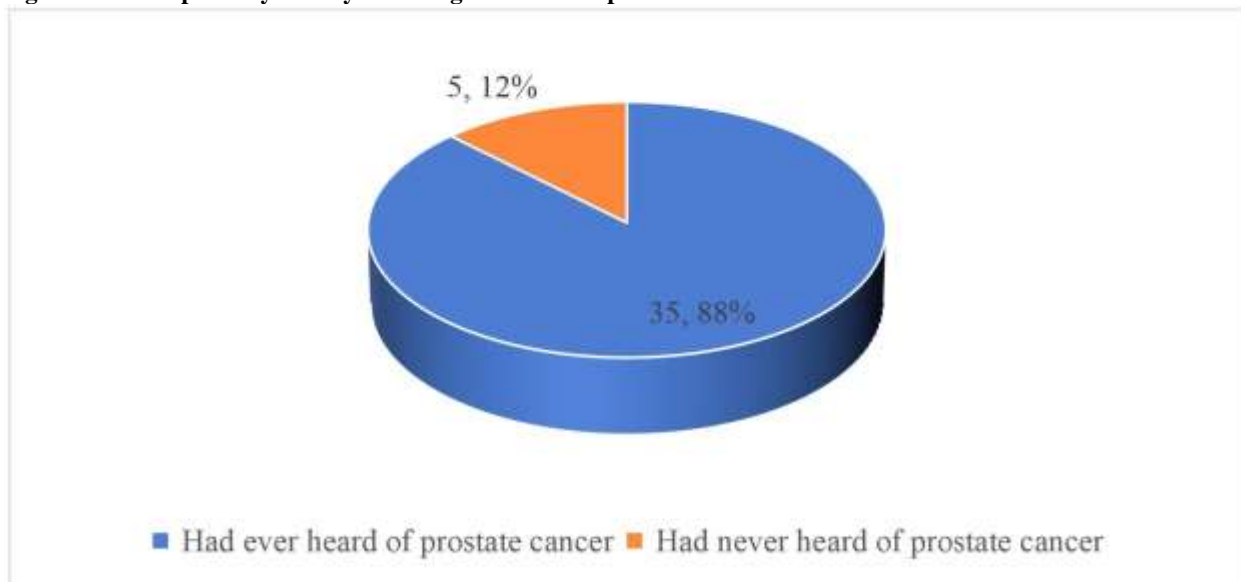
**Table 1: Study participants' age and marital status**

Variable	Status	Frequency	Percentage
Age	41 to 49 years	10	25.0
	50 to 59 years	7	17.5
	60 to 69 years	11	27.5
	70 years and above	12	30.0
	<b>Total</b>	<b>40</b>	<b>100.0</b>
Marital status	Single	1	2.5
	Married	21	52.5
	Divorced	6	15.0
	Separated	4	10.0
	Widower	8	20.0
	<b>Total</b>	<b>40</b>	<b>100.0</b>

**Table 2: Participants level of education and occupation**

Variable	Status	Frequency	Percentage
Level of education	No formal education	12	30.0
	Primary	5	12.5
	Secondary	8	20.0
	Tertiary	15	37.5
	<b>Total</b>	<b>40</b>	<b>100.0</b>
Occupation	Trader/Businessman	15	37.5
	Civil/public servants	10	25.0
	Peasant	15	37.5
	<b>Total</b>	<b>40</b>	<b>100.0</b>

**Figure 1: Participants by history of having heard about prostate cancer**



**Knowledge of men aged 40 years and above about screening for prostate cancer and benign prostatic hypertrophy at Mt. Elgon Hospital, Mbale.**

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Figure 1 shows that most of the study participants 35(87%) had ever heard about prostate cancer while the least 5 (13%) had never heard about it.

Figure 2, shows that most of the study participants 14(40%) had heard about PC from TV/radios, 12 (34%) had heard about it from healthcare workers, 5 (14%) had heard about it from friends/relatives while the least 4 (12%) had read about it.

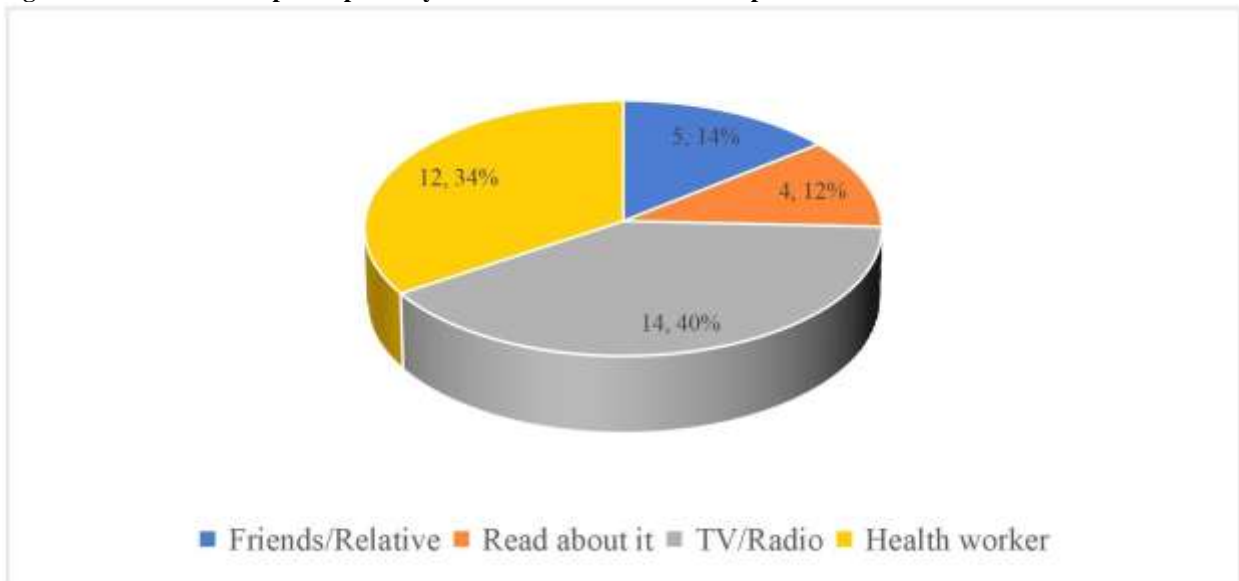
Table 3 shows that most of the participants 32(80.0%) said PC affected men only, 3 (7.5%) said it was a disease of women only, the least 5 didn't know and none of them 0 (0%) said the disease affected both male and female people. 22(55.0%) said that PC was preventable, 14 (35.0%) didn't know whether it was or wasn't preventable while the least 4 (10.0%) said PC wasn't preventable.

Most of the study participants 18(45.0%) didn't know how PC could be prevented, 15 (37.5%) said it was prevented through regular screening, 5 (12.5%) thought that it could be avoided through avoiding many sexual partners, 2 (5.0%) thought genital hygiene was protective against prostate cancer whereas 0 (0%) chose options of dieting or condom use as protective of PC.

Figure 3 shows that most of the study participants 25(62.5%) agreed with early diagnosis increasing chances of cure of PC, 14 (35.0%) couldn't commit themselves on saying it increased or never increased chance of curing PC whereas 1 (2.5%) said there was no association between increased chances of PC cure with its early diagnosis.

Figure 4 shows that of the study participants 25(63%) didn't know how PC diagnosis could be done, 8 (20%) cited ultrasound scanning, 6 (15%) mentioned PSA test and 1 mentioned digital rectal examination as a means of diagnosis of PC.

**Figure 2: Distribution of participants by source of information about prostate cancer**



**Table 3: Participants awareness about gender affected by PC, its being a preventable disease and how prevention can be achieved**

Variable	Status	Frequency	Percentage
Which gender does prostate cancer affect?	Men only	32	80.0
	Women only	3	7.5
	Both men and women	0	0.0
	I do not know	5	12.5
	<b>Total</b>	<b>40</b>	<b>100.0</b>
Is prostate cancer preventable?	Yes	22	55.0
	No	4	10.0
	I do not know	14	35.0
	<b>Total</b>	<b>40</b>	<b>100.0</b>
How can prostate cancer be prevented?	Genital hygiene	2	5.0
	Regular screening	15	37.5
	Condom use/dieting	0	0.0
	I don't know	18	45.0
	Avoiding many sexual partners	5	12.5
	<b>Total</b>	<b>40</b>	<b>100.0</b>

**Figure 3: Participants' awareness about early diagnosis increasing chances of PC cure**

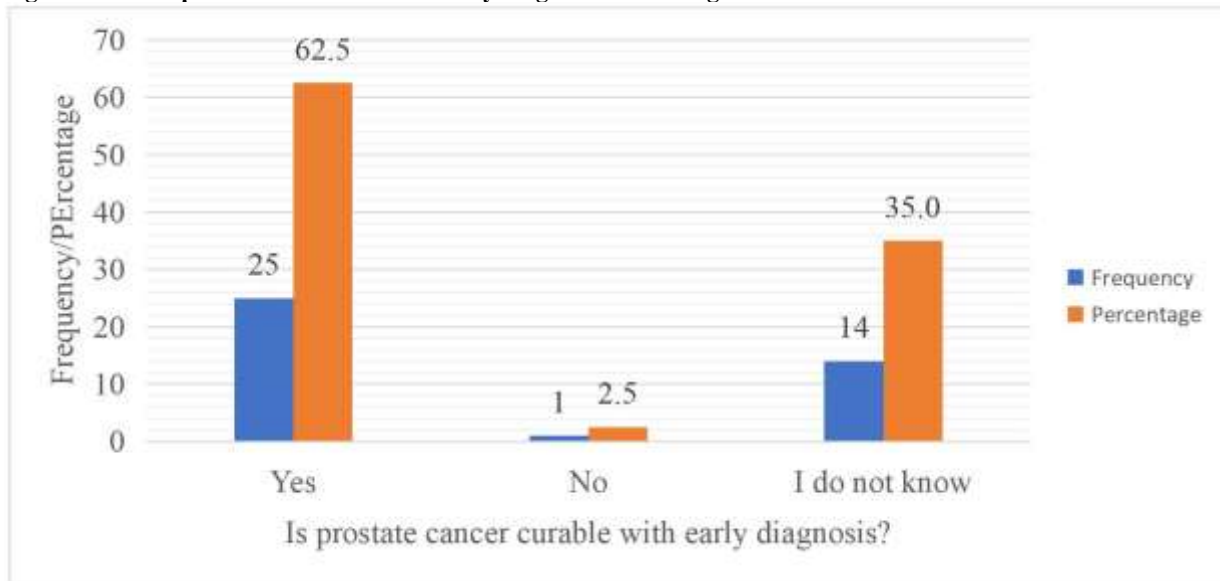


Figure 4: Study participants' awareness about PC diagnosis

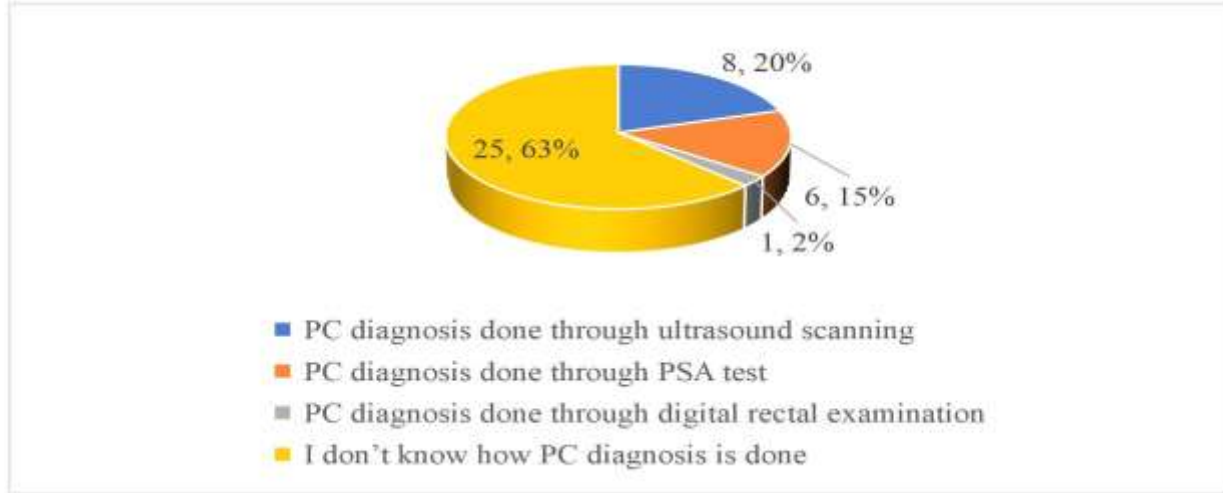


Table 4: Participants perception of PC being a waste of time, willingness to take free PC testing and perception towards PC being a serious disease

Variable	Status	Frequency	Percentage
Going for prostate cancer screening is a waste of time	Strongly agree	2	5.0
	Agree	5	12.5
	Disagree	13	32.5
	Strongly disagree	20	50.0
	<b>Total</b>		<b>40</b>
Will you get screened for prostate cancer in the nearest future if the test is free of charge?	Yes	36	90.0
	No	4	10.0
	<b>Total</b>	<b>40</b>	<b>100.0</b>
Prostate cancer is a deadly disease	Strongly agree	24	60.0
	Agree	16	40.0
	Disagree	0	0.0
	Strongly disagree	0	0.0
	<b>Total</b>	<b>40</b>	<b>100.0</b>

**Attitude of men aged 40 years and above towards screening for prostate cancer and benign prostatic hypertrophy at Mt. Elgon Hospital, Mbale.**

Table 4 shows that 20 (50.0%), 13 (32.5%), 5 (12.5%) and 2 (5.0%) of the study participants strongly disagreed, disagreed, agreed and strongly agreed respectively with PC screening being a waste of time. Table 4 also shows that most of the study participants 36(90.0) were willing to take a free PC screening test while the least 4 (10.0%) weren't willing to do so. Lastly, table 4 shows that 24 (60.0%), 16 (40.0%), 0 (0%) and 0 (0%) of the study participants strongly agreed, agreed, disagreed and strongly disagreed respectively with PC being a deadly disease.

Table 5 shows that 31 (77.5%), 9 (22.5%), 0 (0%) and 0 (0%) of the study participants strongly agreed, agreed, disagreed and strongly disagreed respectively with being at risk of getting PC by virtue of their age.

**Health seeking practices of men aged 40 years and above on screening for prostate cancer and benign prostatic hypertrophy at Mt. Elgon Hospital, Mbale.**

Figure 5 shows that most of the study participants 25(62.5%) had never got challenges with urination while the least 15 (37.5%) had never got such challenges.

Table 6 shows that most of the study participants 9(60.0%) who got challenges with urination did nothing about it, 6

(40.0%) did self-medication and none of them 0 (0%) visited the doctor immediately.

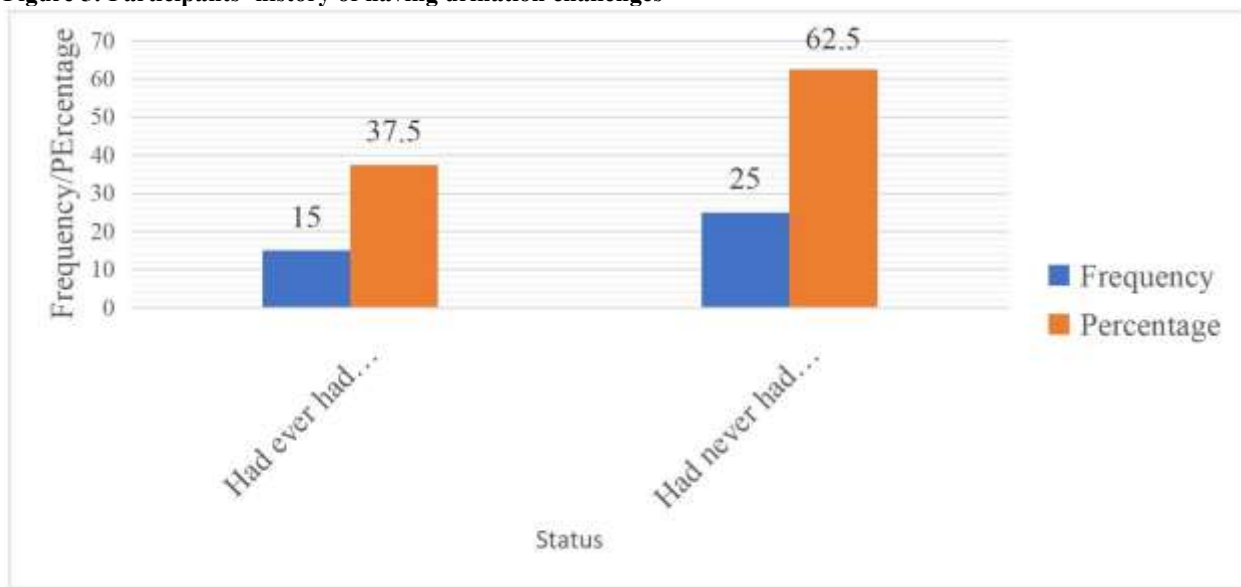
Figure 6 shows that the least of the study participants (22%) had undertaken PC screening within two years preceding the study whereas most of them 31 (78%) had never done so.

**Table 5: Participant’s perception towards being prone to PC by their age**

Variable	Status	Frequency	Percentage
By your age, you are at risk of getting prostate cancer	Strongly agree	31	77.5
	Agree	9	22.5
	Disagree	0	0.0
	Strongly disagree	0	0.0
	<b>Total</b>		<b>40</b>

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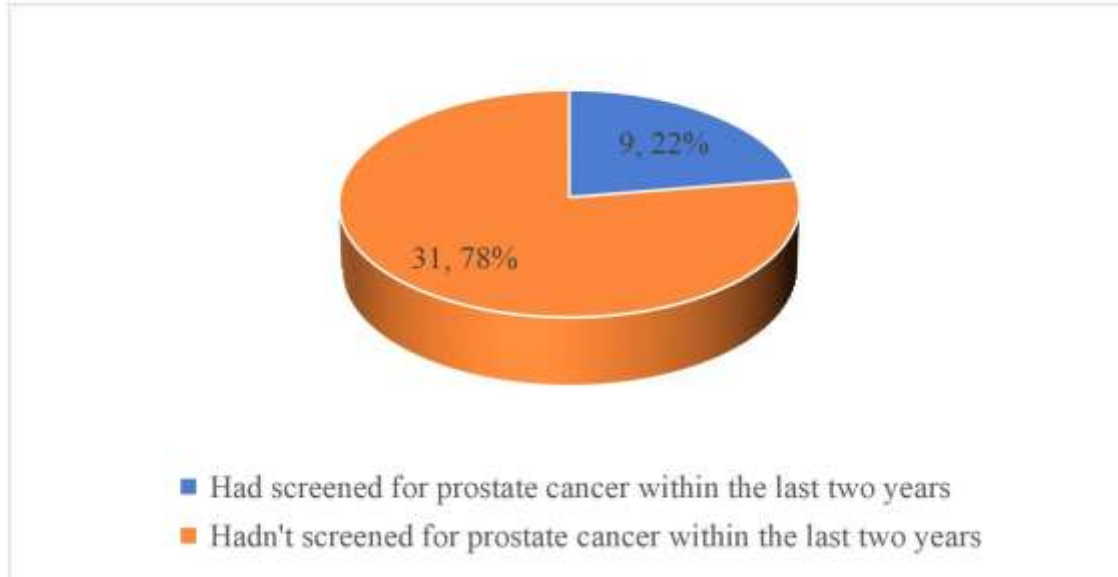
**Figure 5: Participants’ history of having urination challenges**



**Table 6: Participants action on getting urination challenges**

Variable	Status	Frequency	Percentage
Having challenges with urination, what did you do?	Did nothing	9	60.0
	Treated myself	6	40.0
	Visited a doctor immediately	0	0.0
	<b>Total</b>	<b>15</b>	<b>100.0</b>

Figure 6: Participants' uptake of PC screening within 2 years of the study period



## Discussion of research findings

### Respondents' demographics

By age, most of the study participants were aged 70 years and above, some were 60 to 69 years, a few were 41 to 49 years and the least of them were 50 to 59 years (as shown in Table 1).

By marital status, most of the study participants were married, some were widowers, a few were divorced and separated while the least was single (as shown in Table 1).

On assessing the level of education, it was discovered that most of the study participants had attained tertiary level of education, some were illiterate, some of them had attained secondary level of education and the least had stopped in primary school (as shown in Table 2).

By occupation, most of the study participants were traders or businessmen, some were peasants whereas the least were civil or public servants (as shown in Table 2).

### Knowledge of men aged 40 years and above about screening for prostate cancer and benign prostatic hypertrophy at Mt. Elgon Hospital, Mbale.

The majority, 35 (87%) of the study participants had never heard about prostate cancer which revealed high levels of knowledge about it among the study participants (Figure 1). Contrary results were registered in studies done by Ojewola, et al. (2017), Gift, Nancy, & Victor, (2020), and Kabore, et

al. (2014) who found out that only 51.8%, 33.5%, and 62% of their study respondents respectively had ever heard of prostatic diseases, revealing much lower levels of awareness about PC among them. Muhammad, Soon, & Azlina, (2016) also found out contrary to this study's findings that 65.0% of their study participants had never heard about prostate cancer.

Up to 14 (40%) of the study participants had heard about PC screening from TV/radio, and these comprised the majority of the study participants (Figure 2). This was the case in a study done by Ojewola, et al. (2017) who also found out that the main sources of information about PC screening were radio (59.5%) and television (49.4%).

The majority, 32 (80.0%) of the participants said PC affected men only, revealing high levels of awareness about this aspect of the study (Table 3). Much lower findings were documented in a study done by Onyeodi, et al. (2022) who discovered that only 64% of their respondents knew that PC affected only men.

Just over half, 22 (55.0%) of the study participants said that PC was preventable, which revealed average levels of awareness about PC (Table 3). Just like in this study, Kinyao, & Kishoyina, (2018) found low levels of awareness about PC when they discovered that only 3.1% of their study participants knew about the causes of the disease which translated into low levels of awareness about prostate cancer.

It was discovered in this study that 18 (45.0%) of the study participants confessed that they didn't know how PC could be prevented and 15 (37.5%) said it was prevented through regular screening (table 3). This meant that up to 33 (82.5%) of the study participants or more weren't aware of predisposing factors to PC. Similarly, Muhammad, Soon, &

Azlina, (2016) found out that 78.8% of their study respondents didn't know the factors that predisposed one to prostate cancer.

Average levels of awareness were registered in this study when it was discovered that 25 (62.5%) of the study participants agreed with the fact that early diagnosis increases the chances of cure of PC (Figure 3). Similarly, Onyeodi, et al. (2022), found out that 66.9% of their study participants knew that PC was treatable when still in its early stages.

Close to two-thirds, 25 (63%) of the study participants didn't know how PC diagnosis could be done and this was a manifestation of limited levels of awareness about the diagnosis of the disease among the participants of this study (Figure 4). Similar findings were documented in a study done by Ojewola, et al. (2017) who found out that only 31.5% of their respondents were aware of the existence of PC screening implying that 68.5% weren't aware of this fact.

### **Attitude of men aged 40 years and above towards screening for prostate cancer and benign prostatic hypertrophy at Mt. Elgon Hospital, Mbale.**

Over three quarters, 33 (82.5%), of the study participants either strongly disagreed or disagreed, with PC screening being a waste of time (Table 4). This revealed a positive attitude towards PC screening among this study's participants. On the contrary, Onyeodi, et al. (2022) found out that 53.7% of their study respondents were indifferent to men's willingness to undergo prostate cancer screening.

The overwhelming majority, 36 (90.0%) of the study participants were willing to take a free PC screening test (Table 4). This also showed a positive attitude towards PC screening and was certainly better than the findings of a Nigerian study done by Ojewola, et al. (2017) where it was established that 28.2% of the study respondents either agreed or strongly agreed with all adult men undergoing prostate cancer screening. Similar results to those of this study were documented in a study done by Gift, Nancy, & Victor, (2020) who found that 98.5% of their participants had a positive attitude towards prostate cancer screening and were willing to undertake the test.

Contrary to this study's findings, Kinyao, & Kishoyina, (2018) in a Kenyan-based study found a negative attitude towards prostate cancer when they discovered that only 43.6% of their study participants intended to be tested for prostate cancer in the next six months.

All, 40 (100%) of the study participants either strongly agreed or agreed with PC being a deadly disease which revealed a positive attitude towards PC (table 4). A less positive attitude

than that discovered in this study was documented in a Nigerian study done by Onyeodi, et al. (2022) when they discovered that, up to 68.5% of their respondents either strongly agreed or agreed with PC being a deadly disease.

It was established that all 40 (100%) of the study participants either strongly agreed or agreed with being at risk of getting PC by their age (Table 5). This transformed into a positive attitude toward PC screening which was a better attitude than the attitude which was registered in a study done by Onyeodi, et al. (2022) who instead found out that only 31.5% of their study participants either strongly agreed or agreed with advancing male age being a predisposing factor to PC, though only 12.3% of the respondents thought that they were personally at risk of getting PC.

### **Health-seeking practices of men aged 40 years and above on screening for prostate cancer and benign prostatic hypertrophy at Mt. Elgon Hospital, Mbale.**

Slightly over one-third, 15 (37.5%) of the study participants had ever got challenges with urination (Figure 5). Of the study participants who had urination challenges, 9 (60.0%) did nothing about it, 6 (40.0%) did self-medication and none (0%) visited the doctor immediately (Table 6). All this transformed into poor practices by this study's participants about PC screening and management. Only 9 (22%) of the study participants had undertaken PC screening within two years preceding the study yet they were eligible for PC screening by their age which revealed poor practices about screening of PC (Figure 6). Similar results were documented in a study done by Bilgili, & Kitis, (2019) who found out that in Turkey, only 23.8% of their study participants had undertaken prostate cancer screening. A slightly lower prevalence of 8.1%, 5%, and 7.7% was reported in studies done by Bugoye, et al. (2019) in Cameroon, Kenya, and Tanzania respectively. Other studies reporting lower prevalence than that of this study were done by Ojewola, et al. (2017), Gift, Nancy, & Victor, (2020), Awosan, et al. (2018), Onyeodi, et al. (2022) and Shanko, Abute, & Tamirat, (2022) whose prevalence was 10.2%, 13%, 0%, 11%, and 7.2% respectively.

### **Conclusions**

The levels of awareness were low about the diagnosis of PC, but their attitude towards screening was positive in some aspects. The practice of men aged 40 years and above on screening for prostate cancer and benign prostatic hypertrophy was poor.

## Recommendations

The government of Uganda through different mass media should continue sensitizing masses of people about PC screening and the need to seek medical attention whenever they get challenges with Urination.

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Namuddu Jane Frances is the Principal of St Micheal Lubaga Training Schools

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## List of Abbreviations

**BPH:** Benign prostatic hypertrophy

**DRE:** Digital rectal examination

**MEH:** Mt Elgon Hospital Mbale

**PC:** Prostate cancer

**PSA:** Prostatic Specific antigen

**UNMEB:** Uganda Nurses and Midwives Examinations Board

**USA:** United States of America

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## Conflict of interest

The author did not declare any conflict of interest

## Author Biography

Misanya Camilla is a student with diploma in Nursing at St Micheal Lubaga Training Schools

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