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# KNOWLEDGE, ATTITUDE, AND PRACTICES TOWARDS PROSTATE CANCER SCREENING AMONG MEN AGED 40-60 YEARS ATTENDING KISENYI HEALTH CENTRE IV, KAMPALA. A CROSS-SECTIONAL STUDY.

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## ABSTRACT.

### Background:
Purpose of the study: The purpose of the study was to determine the knowledge, attitudes, and practices toward prostate cancer screening among men aged 40-60 years attending Kisenyi Health Centre IV, in Kampala.
Objectives**:** The objectives of the study were to determine the knowledge, attitudes, and practices towards prostate cancer screening among men aged 40-60 years attending Kisenyi Health Centre IV, Kampala, whereas the specific objectives were to, determine the knowledge, assess the attitudes, and determine the practices of men aged 40-60 years towards prostate cancer screening.

### Methodology:
The study employed a descriptive cross-sectional study design. it facilitated the collection of adequate data despite the limited time frame that was allocated as well as the limited resources that were available for the study.

### Results:
Study findings revealed that the majority 90% were urban residents and 10% were rural residents,72 (62%) respondents were between (40-49) years and 44(38%) were between (50-60) years,111(96%) respondents were married and 5(4%) were divorced. 114(98%) had good knowledge, 106(91%) had positive attitudes and 95(82%) had never been screened for prostate cancer.

### Conclusion:
From the findings majority of the respondents had sufficient knowledge about prostate cancer and positive attitudes toward prostate cancer screening practices however screening practices were still very poor.

### Recommendations:
With support, and funding from the Government of Uganda and the non-government organizations through the Ministry of Health, I recommend that more prostate cancer screening departments be established on a health Centre level, services provided should be free of charge, prostate cancer screening messages should be broadcasted in all languages to the public.

*Keywords: Knowledge, Attitude, Practices, Prostate Cancer, Screening*
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## BACKGROUND OF THE STUDY.

In the study done by Singh et al, (2021) about the Anatomy, abdomen Pelvis, and prostate. The prostate gland lies directly inferior to the urinary bladder and wraps around the proximal urethra in the lower pelvis. The prostate gland plays a supportive role in males by secretion of an alkaline solution protective for sperm in the acidic medium of the vagina. Prostate cancer is one of the most common types of cancer and occurs in the prostate gland. Many prostate cancers grow slowly and are confined to the prostate gland(Kelly, 2023). However, while some of these cancers grow slowly other types may be aggressive and can spread quickly.

Globally, according to the study done by Wang et al (2022), prostate cancer incidence and mortality using the Global status and temporal trends among 89 countries. The study revealed that a total of 1414259 new cases of prostate cancer and 375304 related deaths were reported in 2020 globally.
According to a study done by Karadag et al, (2018), about the knowledge level of prostate cancer screening in Turkey. The Ministry of Health showed that prostate

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cancer incidence is 37.6 per 100,000 and it is reported to be the second most prevalent cancer type. It also forms 28% of all cancer types in men.

France's World Health Ranking revealed that in 2020, prostate cancer Deaths in France reached 10,873 or 2.27% of the total deaths, the age-adjusted death rate is 13.24 per 100,000 of the population, and ranked 118th in the world. Columbia prostate cancer deaths were 3,584 or 1.74% of the total deaths. The age-adjusted death rate from prostate cancer is 14.99 per 100,000 of the population and ranks 101st worldwide.

In a study, the American Cancer Society estimated prostate cancer in the United States in 2023 to be about 288,300 new cases of prostate cancer and about 34,700 deaths from prostate cancer, they further claimed that prostate cancer is more likely to develop in older men and none – Hispanic black men. Currently, the American Cancer Society's estimates for prostate cancer in the United States are about 288,300 new cases of prostate cancer and about 34,700 deaths from prostate cancer (Siegel et al, 2023)

According to the study done by Seraphin, et al, (2021), In Africa, sub-Saharan Africa (SSA) regarding the incidence and mortality, published data from a few registries in SSA suggest that the rates are still rising(Seraphin et al., 2021). Data analyzed shows that 13,170 incident prostate cancer cases arise in men aged 40 and above, from 12 population-based cancer registries in 11 SSA countries with observed increase in cumulative risks being highest in Seychelles and Harare (Zimbabwe) and Eastern Cape.

The study done by Ramaliba et al, 2022 about prostate cancer patterns and trends revealed that an increase in prostate cancer has been observed in many parts of Africa at the rate of 23.2 per 100,000. The highest incidence rates of 64.1 per 100,000 were in Southern Africa, followed by Northern Africa with 35.9 per 100,000., Western Africa recorded 31.9 per 100,000, whereas Eastern and Western 23.9 per 100,000 and 13.2 per 100,000, respectively.

An estimate of the incidence of prostate cancer in Africa revealed that 40 studies spreading across 16 African countries, estimated a prostate cancer incidence rate of 22.0 per 100,000 populations and also reported a median incidence rate of 19.5 per 100,000 populations which indicated an increasing trend of prostate cancer with advancing age.

In the East African region, prostate cancer incidence varies widely across countries, in Tanzania, a study reported an incidence rate of 28.6 per 100,000 person-years.
In Kenya, a study conducted, about cultural factors associated with the intent to be screened for prostate cancer among adult men in rural Kenya revealed that Kenya's age-standardized rate towards prostate cancer is 40.6 per 100,000 populations, prostate cancer accounts for 17.3% of all male cancers and 10.2% of other cancers.

A study done by WHO (2020) about world health ranking, revealed that prostate Cancer deaths in Rwanda reached 396 or 0.68% of total deaths. The age-adjusted Death Rate is 25.46 per 100,000 population ranks Rwanda 43th in the world.
In Uganda, according to the study done by Asassira et al., (2022), about Infection-related and lifestyle-related cancer burden in Kampala. Prostate cancer incidence was projected to increase by 33.4% and the age-standardized rate (ASR) of prostate cancer was estimated to Increase from 41.6 to 60.5 per 100,000 men. These changes were due to changes in risk factors and population growth

The study by Okuku et al, (2016), about the prostate cancer burden at the Uganda Cancer Institute (UCI). Indicated that the incidence of prostate cancer was increasing at a rate of 5.2% annually with a 3% increment of prostate-specific antigen (PSA) value of above 100ng/ml with a Gleason score of 10 in 66.7% of patients, of which 90% having stage IV cancer.

According to the study done by Katongole et al, (2020), the incidence of prostate cancer in 2018 in Uganda was 6.4% with over 2086 new cases and 1177 deaths. A total of 874 men were diagnosed with prostate cancer, 57.32% had localized prostate cancer. Among patients with localized prostate cancer, 56.52% were at high risk of the cancer metastasizing.

### General objective.

The general objective of this study is to assess the knowledge, attitude, and practices towards prostate cancer screening among men aged 40-60 years attending Kisenyi Health Centre IV in Kampala.

## METHODOLOGY.

### Study design.

The study employed a descriptive cross-sectional study design as it facilitated the collection of adequate data despite the limited time frame that was allocated as well as the limited resources that were available for the study.

### Study area.

The study was carried out at the outpatient department of Kisenyi Health Centre IV in Rubaga division, Kampala. Kampala is the capital city of Uganda and is located in the central part of the country. The outpatient department operated daily, Monday to Friday from 8 am to 5 pm, and yet on average, this single department received 500 patients on every single clinical day. The study setting was

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chosen because Kisenyi Health Centre IV, outpatient department served a large population of patients who were eligible for the study. This study focused on Knowledge, attitude, and practices towards prostate cancer screening among men aged 40-60 years attending Kisenyi Health Centre IV, Kampala. The study was carried out from June to July 2023.

## Study population.

The study population comprised men aged 40-60 years who attended Kisenyi Health Centre IV, Kampala.

## Sample size determination.

The sample size was determined using Kish Leslie's (1965) formula
n = Z2PQ/e2
Where; n= sample size required
e= acceptable error/required precision of the estimate=0.07
Z= to the standard deviation score corresponding to the confidence interval i.e. for the confidence interval (95% Z= 1.96)
P =the estimated knowledge, attitudes, and practices towards prostate cancer screening among men aged 40-60 years attending Kidney Health Centre IV, Kampala
n = Z2PQ/e2
n= $\frac{(1.962\times0.1813\times 0.8187)}{0.072}$
n= 116 respondents
Hence, the study will involve 116 respondents.

## Sampling technique.

A convenience sampling technique was used to select the respondents. All men aged 40-60 years who attended Kisenyi Health Centre IV were interviewed. This method was relatively cheap and offered faster results and did not require a sampling frame.

## Sampling procedure.

I used convenience sampling and a random number table to recruit participants. From the first person, I approached every 10th man who visited Kisenyi Health Centre IV, outpatient department, and the one who met the inclusion criteria participated in the study. The participants were selected after being explained to, the objectives of the study.

## Data collection method.

Questionnaire method, pre-tested questionnaires were used for data collection in the study. This method was simple, time-saving, and cheap. many questionnaires were administered to various respondents simultaneously. Record keeping and retrieval for future reference were also made possible.

## Data collection tool.

Data was collected from correspondents using the self-administered questionnaires that encompassed both open and close-ended questions. These were printed on paper in English and they will be handed over to the respondents.
Questions addressed information about knowledge; attitudes and practices towards prostate cancer screening among men aged 40-60 years were sought.
Respondents were guided on how to fill out questionnaires using either a pen or pencil. Writing material such as pencils or pens was provided to the participants. Parcels for proper storage of the questionnaire forms were used before and after the study.

## Data collection procedure.

Data was collected from respondents who attended Kisenyi Health Centre IV, Kampala. The respondents were informed about the content and intent of the study and informed consent was sought. The questionnaire forms were then handed over to the respondents and they were instructed on how questionnaires would be filled.
For more clarification, a thorough interpretation of the questions was provided by the researcher or research assistant to the respondents.
The time of collection of the questionnaires was communicated to the respondents. Upon filling out the questionnaires, the forms were returned to the researcher. Data was collected daily while interacting with about 20 participants on each occasion until the required sample was obtained. Later on, a compilation of the questionnaires was made for analysis and interpretation.
In case of refusal to consent, the respondents were eliminated from the sample size and were replaced by other respondents, and in case of faulty filling of the form by the respondent, another form was provided at the expense of the researcher. This was catered for by obtaining a surplus of questionnaire forms.

## Study variables.

This included the dependent and independent variables

## Independent variables.

The independent variables of the study were Knowledge, attitude, and practices towards prostate cancer screening among men aged 40-60 years who attended Kisenyi Health Centre IV, Kampala.

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## Dependent variable.

The dependent variable was prostate cancer screening among men aged 40-60 years who attended Kisenyi Health Centre IV, Kampala.

## Quality control.

The data collection i.e. the questionnaires were pretested by selecting randomly a few respondents from the community and subjecting them to these questions. Their answers were then analyzed to check for their feasibility. The questionnaires were checked for errors and omissions to ensure completeness and accuracy and necessary adjustments were made.
For quality data collection the research assistant was selected from the institution of which the principal researcher was not part. These were trained on how to handle respondents ethically, and how to translate questions to different local languages and ample time was also given to the respondents, to allow them to provide adequate information. All the above was carried out while adhering to the institution's rules and regulations.

## Pilot study.

A pilot study was carried out a week before the start of the actual data collection at Kisenyi Health Centre IV, Kampala. This was relevant to the study to assess whether the required research and information was available from the population hence ascertaining the area feasibility for the study.

## Inclusion criteria.

For clients to be included in this study, they were to be men of 40 to 60 years, who had no history of prostate cancer and had not been screened for prostate cancer in the last two years.

## Exclusion criteria.

Clients were excluded provided they had a history of prostate cancer or had been screened for prostate cancer in the last two years.

## Data analysis and presentation.

Data was analyzed using statistical software (SPSS version 25.0). descriptive statistics (percentages, and standard deviation) were used to summarize the data. Bivariate and multivariate regression were used to determine the association between the dependent variables. (prostate cancer screening among men aged 40-60 years that attended Kisenyi Health Centre IV, in Kampala) and independent variables (Knowledge, attitude, and practices towards prostate cancer screening among men aged 40-60 years that attended Kisenyi Health Centre IV, Kampala.). A P-value of less than 0.05 was considered statistically significant.

## Ethical consideration.

A letter of introduction was obtained from the Medicare Health Professionals College administration that was used to seek permission from the Director of Kisenyi Health Centre IV. Allow the researcher to carry out research in the Health Centre.

The study participants were provided with written informed consent in the language they understood. The participant confidentiality was ensured by assigning them unique identification codes and data collected was kept confidential and used only for research purposes.

The respondents were also informed of their right to refuse enrolment in the study and their right to withdraw from the study at any time along the way without any repercussions.

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## RESULTS.

Socio-demographic data



**Table 1: Distribution of respondents by socio-demographic data. (n=116)**

| VARIABLES | CATEGORY | FREQUENCY (f) | PERCENTAGES |
|---|---|---|---|
| Age | 40 -49 | 72 | 62% |
| | 50-60 | 44 | 38% |
| Tribe | Banyankole | 30 | 26% |
| | Baganda | 50 | 43% |
| | Bakonjjo | 7 | 6% |
| | Bakiga | 10 | 9% |
| | Banyore | 7 | 6% |
| | Others | 12 | 10% |
| Marital status | Married | 111 | 96% |
| | Divorced | 5 | 4% |
| Religion | Muslim | 32 | 28% |
| | Anglican | 12 | 10% |
| | Born again | 24 | 20% |
| | Catholic | 45 | 39% |
| | Others | 3 | 3% |
| Residence | Urban | 104 | 90% |
| | Rural | 12 | 10% |
| Education level | Primary | 26 | 22% |
| | Secondary | 42 | 36% |
| | Tertiary | 42 | 36% |
| | None | 6 | 5% |
| | Total | 116 | 100% |

From Table 1, out of 116 respondents, 72 (62%) were between 40-49 years, and 44 (38%) respondents were between 50-60 years. Majority 50 (43%) were Baganda. Bakonjjo and Banyore made up 6% respectively.111 (96%) respondents were married and 5 (4%) respondents were divorced. 45 (39%) were Catholics, 12 (10%) were Anglicans. Out of 116 respondents, 104 (90%) were from urban and 12 (10%) resided in rural areas. respondents that attained secondary and tertiary education accounted for 42 (36%) respectively and 6 (5%) respondents had never gone to school.

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**Table 2: Distribution according to the men's knowledge of risk factors for prostate cancer (n=116)**



| RISK FACTORS | FREQUENCY ( f ) | PERCENTAGES |
|---|---|---|
| 40 years and above | 80 | 69% |
| Family history | 27 | 23.3% |
| Through sexual intercourse | 5 | 4.3% |
| None of the above | 4 | 3.4% |
| **Total** | 116 | 100% |

From Table 2, out of 116 respondents, the majority of 80 (69%) respondents responded that men of 40 years and above had a higher chance of getting prostate cancer as 4 (3.4%) respondents replied that none of the listed objectives was right.

**Table 3: Distribution according to Responses on signs and symptoms of prostate cancer (n=116)**

| SIGNS AND SYMPTOMS | FREQUENCY ( f ) | PERCENTAGES |
|---|---|---|
| Urination is normal | 2 | 2% |
| Blood in urine | 12 | 10% |
| Erectile dysfunction | 32 | 28% |
| Pain during urination | 70 | 60% |
| **Total** | 116 | 100% |

Table 3, on signs and symptoms of prostate cancer in men aged 40-60 years. 70 (60%) of the participants mentioned that a person with prostate cancer would experience pain during urination, well as 2 (2%) respondents mentioned that urination would be normal in a person with prostate cancer.

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**Attitudes of respondents towards prostate cancer screening among men aged 40-60 years.**

**Table 4: showing responses on attitudes towards prostate cancer screening (n=116)**

| RESPONSES | FREQUENCY (f) | PERCENTAGES |
|---|---|---|
| All adult men should undergo prostate cancer screening | 105 | 91% |
| I strongly disagree with prostate cancer screening | 1 | 1% |
| it feels uncomfortable | 9 | 7% |
| I will only screen for prostate cancer when I get sick | 1 | 1% |
| **Total** | 116 | 100% |

In Table 4, out of 116 participants, 105 (91%) respondents replied that it was good for every adult man to undergo prostate cancer screening, 9 (7%) respondents said prostate cancer screening felt uncomfortable, as 1(1%) respondents replied that they strongly disagreed with prostate cancer screening and others would only go for screening when they got sick respectively

.

**Practices of respondents about prostate cancer screening among men aged 40-60 years.**

**Figure 1: Distribution according to Responses on prostate cancer screening practices. (n=116)**

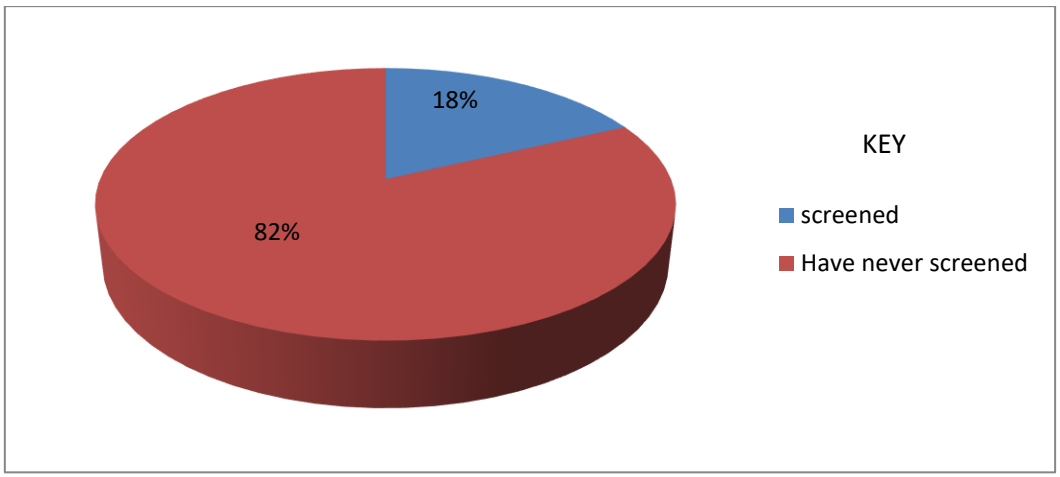


Figure 1 shows that out of 116 respondents, the majority of 95 (82%) respondents had never been screened for prostate cancer, and only 21(18%) had been screened for prostate cancer.

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**Table 5: showing responses on methods that were used during prostate cancer screening (n=21)**



| METHODS | FREQUENCY (f) | PERCENTAGES |
|---|---|---|
| prostate-specific antigen test | 8 | 38% |
| Digital rectal examination | 13 | 62% |
| Prostate biopsy | 0 | 0% |
| TOTAL | 21 | 100% |

Table 5 shows that out of 21 respondents, 13 (62%) respondents had been screened through digital rectal examination, 8(38%) respondents used prostate-specific antigen test and none used the prostate biopsy method.

## DISCUSSION OF RESULTS.

### Knowledge of men aged 40-60 years about prostate cancer screening at Kisenyi Health Centre IV in Kampala.

According to this study out of 116 respondents, the majority 114 (98%) of the respondents knew about prostate cancer while only 2 (2%) did not know about prostate cancer. Respondents were able to tell that prostate cancer was a disease of the prostate gland. the findings of this study are slightly higher than that in the study conducted by Yee et al (2022) in Malaysia, Penang which revealed that the majority of the respondents 78.02% had good knowledge of prostate cancer, this was probably due to the difference in the study areas where these studies were carried out.

This study revealed that 92.3% of the respondents knew about the risk factors for prostate cancer. This was evident because they were able to mention that family history and being 40 years and above predisposed a male individual to prostate cancer. These findings were in line with the study conducted by Maladze, et al, (2020), among males at Dzingahe Village, Limpopo Province about knowledge and attitude towards prostate cancer screening, which revealed that 35.1% of the respondents could identify family history as a risk factor for developing prostate cancer. This could be probably due to the difference in levels of education attained by the respondents.

This study revealed that 60% of the respondents were aware of common symptoms of prostate cancer such as pain during urination. This figure is slightly lower than that in the study conducted by Yee et al (2022) in Malaysia about knowledge and attitude toward prostate cancer among males in Penang which revealed that 73.48% were aware of the common symptoms of prostate cancer such as poor flow and intermittent urination. and blood in urine. This could be probably due to the means of communication used in dissemination of the health information about prostate cancer.

### Attitudes of men aged 40-60 years towards prostate cancer screening at Kisenyi Health Centre IV in Kampala.

This study revealed that 106 (91%) respondents had positive attitudes, with only 10 (9%) with poor attitudes towards prostate cancer screening, this was evidence evident when they were asked if they would wish to undergo prostate cancer screening majority agreed that they would screen undergo prostate cancer screening when given an opportunity.

According to this study, 8 (7%) respondents, responded that the procedures used seemed uncomfortable, 1(1%) responded that they strongly disagreed with prostate cancer screening since to them these were channels through which whites eliminated Ugandans and the others confessed never to indulge into such programs not until they became sick respectively. The study findings slightly agreed with the study conducted by Ugochukwu, et al, (2019), which revealed that 40% agreed that screening for prostate cancer is not necessary if an individual is healthy 16.3% of the respondents reported that they would only consider going for prostate when they feel sick. The difference in percentages is probably due to differences in study areas and the level of education of participants.

### Practices of men aged 40-60 years towards prostate cancer screening at Kisenyi Health Centre IV in Kampala.

According to this study, 95 (82%) respondents had never been screened, with only 21(18%) respondents who had been screened. This was evident when asked if they had ever been screened for prostate cancer. The majority had never been screened. The findings are slightly higher

compared to the study conducted by Sakala, et al, (2020), in Zambia among male patients aged 40 years and above at Kitwe Teaching Hospital which revealed that only 13% had been screened out of the 200 participants. The difference in figures is probably due to the difference in study areas and how individuals in each study area perceived the practices.

This study revealed that 62% had been screened through digital rectal examination, while 38% were screened using prostate-specific antigen test the findings are in agreement with the study conducted by Morlando, et al, (2017), about prostate cancer screening, Knowledge, attitudes, and practices in Italy which revealed that 76.9% respondents pointed out DRE as the method used while 12.5% pointed out PSA test. This was probably because some respondents attributed to a few healthcare service providers

## CONCLUSIONS.

This study about Knowledge, attitude, and practices towards prostate cancer screening among men aged 40-60 years attending Kisenyi Health Centre IV, Kampala revealed that the majority 114 (98%) had good knowledge, 106 (91%) had positive attitudes and 95 (82%) had never been screened for prostate cancer.

## RECOMMENDATIONS.

With support, and funding from the Government of Uganda and the non-government organization through the Ministry of Health, I recommend that more prostate cancer screening departments or units be set up on a health Centre level and services provided should be free of charge for this will influence more people towards the screening practices nevertheless more information about prostate cancer and prostate cancer screening should be disseminated in all languages to the public through different media so that even illiterate people can benefit in this program.

## ACKNOWLEDGMENT.

I would like to thank my supervisor for his indebted support, encouragement, and guidance throughout writing this report. Without his support, this piece of work wouldn't be possible. to all my fellow students, in particular, DCM 3.2 class students thank you so much for the support rendered to me.

## LIST OF ABBREVIATIONS/ACRONYMS.

**DCM:** Diploma in Clinical Medicine and Community Health
**DRE:** Digital Rectal Examination
**MOH:** Ministry of Health
**Pca:** Prostate Cancer
**PSA:** Prostate Specific Antigen test
**UAHEB:** Uganda Allied Health Examinations Board
**WHO:** World Health Organization

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