

## Awareness of Prostate Cancer, Screening and Methods of Managements in a Hospital in Riyadh, Saudi Arabia

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### ABSTRACT

**Background:** screening for prostate cancer (PCa) is surrounded by controversies regarding the benefits, risks and uncertainties of undergoing the screening. Current practices of prostate cancer involve measuring the level of PSA and digital rectal examination. This study aimed to measure the knowledge and awareness of undergoing a prostate cancer screening and the available treatment options amongst the participants.

**Method:** a questionnaire-based quantitative cross-sectional study which focuses on determining the knowledge of prostate cancer screening and management in a hospital in Riyadh.

**Results:** three hundred and twenty-three participants filled the surveys (100% males), more than 80% of all ages had heard about prostate cancer and that it is a disease of the male. A higher level of education is significantly associated with the level of awareness (P-value <0.001). More educated participants selected 40 years old as the appropriate age for PCa screening (P-value 0.009) and radiotherapy as the mode of treatment (P-value 0.01). 43.34% saw PCa as a cause of death and 41.4% saw it associated with smoking. Only 17.84% undergo continuous PCa screening most of them in 50-60 age group with "reassurance" as the main motivator. 37.8% of the participants did not know the symptoms of PCa and around 25% selected pain in micturition, difficult frequent micturition and bone pain as symptoms of PCa.

**Conclusion:** although prostate cancer is known amongst the majority of the participants, only a minority of them has knowledge of the symptoms and undergoes regular screening.

**Keywords:** Carcinoma, Prostate cancer, PCa, awareness survey, prostate.

### INTRODUCTION

It is common knowledge that prostate cancer (PCa) is a major illness in the world. Screening for prostate cancer is performed through digital rectal examination (DRE) and prostate specific antigen test (PSA). The benefits of this is controversial with the European Randomized Study of Screening for Prostate Cancer<sup>(1)</sup> finding a significant reduction of PCa mortality with PSA screening while the US-based Prostate, Lung, Colorectal and Ovarian Cancer Screening Trial<sup>(2)</sup> showed no beneficial reduction in mortality with PSA and DRE<sup>(1,2)</sup>. However, a living meta-analysis found a small beneficial reduction of mortality with adequate duration of screening<sup>(3)</sup>. The American Cancer Society recommends individual with high risk to develop PCa to receive information about the potential benefits, risks and uncertainties of prostate cancer screening by the age of 40<sup>(4)</sup>. Prostate cancer is the most common cancer among men and the second most common cause of death in men worldwide. In Saudi Arabia, there were 323 cases of prostate cancer among males in the year 2014 which ranked 4th among males. The ASR was 5.5/100,000 among male population and the highest region was the east at 12.6/100,000 then AL Riyadh at 9.5/100,000.

Median age at diagnosis was 73 years<sup>(5)</sup>. This study aims to determine the awareness and attitude of prostate cancer screening and management.

### METHODOLOGY

#### *Study Design*

A quantitative cross-sectional study which focused on determining the knowledge of prostate cancer screening and management in Saudi Arabia. Data was collected from King Khaled University Hospital (Riyadh) using a self-administered questionnaire. Data was collected from 300 participants.

#### *Study Setting*

The target population was males present in the waiting area of the outpatient clinics of King Khaled University Hospital. Exclusion criteria are; age less than 40 years old, cannot read Arabic, tourists. Participants were consecutively selected and asked to fill out a questionnaire.

**The study was done after approval of ethical board of King Saud university.**

#### *Tool of Data Collection*

A questionnaire written in Arabic was face validated by showing it to consultant of urology in King Khaled University Hospital and

modifications were made based on their feedback. A copy of this questionnaire was administered to the participants; along with the questionnaire was a consent form. The questionnaire included closed ended questions and multiple choice questions related to the following:

1. Demographic data of the participant (Gender, age, education level and marital status)- **Table 1.**
2. Knowledge of prostate cancer - **Table 2.**
3. Attitude towards prostate cancer screening - **Table 2.**
4. Knowledge of prostate cancer Signs and symptoms - **Table 3.**

**Table1:** Demographic Data of the participants

Frequency	
Total Number	(100 %) N = 323
<b>Age Groups :</b>	
( 40 – 50) y	%51.4 166
( 51 – 60 ) y	27.9% 90
( 61 – 70 ) y	%17.3 56
( 71 – 80 ) y	%3.4 11
<b>Education Levels</b>	
Uneducated	%3.7 12
Primary	%6.8 22
Elementary	%10.2 33
High school	%24.5 79
Academic	%53.9 174
<b>Marital Status</b>	
Married	%90.1 291
Single	%5.6 18

**Statistical Analysis**

The data have been analyzed by using the Statistical Package for Social Science (SPSS) version 22.0 with a p-value <0.5 was considered statistically significant.

**Conflict of Interest**

The Authors declare no conflict of interest in the conduction of this study.

**RESULTS**

Participants’ Responses are captured and % were calculated in **Table 2.**

323 participants responded to the questionnaire, all of them are males. Regarding the knowledge of the prostate cancer disease we found that 82.3% of the participants heard about the disease. We observed high knowledge awareness about disease among participants in the age range (40-50) with 51.4% having heard about prostate

cancer. In regard of education level, we found that participants who have university level education have a higher proportion of individuals who heard about prostate cancer with p-value <0.001, 43.34% saw PCa as a cause of death and 41.5% saw it associated with smoking.

**Table 2:** Participants’ Responses

Question	Percent
<b>Heard about prostate cancer</b>	<b>82.30%</b>
<b>Prostate cancer causes death</b>	<b>43.30%</b>
<b>Smoking is a risk factor for prostate cancer</b>	<b>41.50%</b>
<b>Prostate cancer is curable</b>	<b>70.20%</b>
<b>Prostate cancer spreads to other parts of the body</b>	<b>39.20%</b>
<b>Screened for prostate cancer</b>	<b>18%</b>
<b>Prefer to have screening programs</b>	<b>98%</b>
<b>Believe initial examinations and investigations prevent prostate cancer mortality</b>	<b>58.80%</b>

Only 17.84% underwent continuous PCA screening, most of them in the 50-60 age group with “reassurance” as the main motivator. 37.8% of the participants did not know the symptoms of PCa and around 25% selected pain in micturition, difficult frequent micturition and bone pain as symptoms of PCa. More educated participants selected 40 years old as the appropriate age for PCa screening (P-value 0.009) and radiotherapy as the mode of treatment (P-value 0.01).

**Table 3:** Participants knowledge of prostate cancer symptoms

Symptoms	No	%
I don’t know	122	37.80%
Blood in urine	68	21.10%
Pain in micturition	89	27.60%
Low libido	66	20.40%
Difficulty in micturition	81	25.10%
Bones pain	17	5.30%
Infertility	19	5.90%
Pain during sexual intercourse	46	14.20%

**DISCUSSION**

Prostate cancer is mostly diagnosed in geriatric populations <sup>(3)</sup>. As Saudi Arabia is developing in health care and screening advances, the number of cases of clinically diagnosed

prostate cancer is expected to rise. Especially that abnormal lesions were historically found incidentally in clinical settings<sup>(5)</sup>.

In the present study, it was observed that the number of participants who routinely undergo continuous PCa screening was very low at 17.84%.

A Brazilian study has found appropriate knowledge and attitude amongst their participants 63.8% amongst their participants had proper knowledge and 40.6% had proper attitude<sup>(6)</sup>. Another study done in Australia found knowledge deficits amongst their participants, however three quarters of them had undergone a prostate related examinations including PSA measurement and DRE<sup>(7)</sup>.

Obviously, research discussing the health care and the social construct of masculinity is lacking. Hence, further research should be warranted<sup>(8,9)</sup> – nevertheless, further to the results we could obtain, it's highly recommended that awareness campaigns particularly in KSA are funded to enable more routine screening for early detection and management of prostate cancer.

## CONCLUSION

Although prostate cancer is known amongst the majority of the participants, only a minority of them has knowledge of the symptoms and undergo regular screening.

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