

## KNOWLEDGE OF PROSTATE CANCER AMONG MALE PATIENTS IN UROLOGY WARD AT PUBLIC HOSPITAL

Hiew IKF<sup>1,2</sup>, Rasid N<sup>1,3</sup>, Aliah N<sup>1,4</sup>, Sahak Z<sup>1,3</sup>, Abu Bakar SNH<sup>1,5</sup>

<sup>1</sup>Institute Latihan Kementerian Malaysia (ILKKM) Sungai Buloh

<sup>2</sup>Hospital Wanita dan Kanak-Kanak, Likas, Sabah

<sup>3</sup>Hospital Selayang, Selangor

<sup>4</sup>Universiti Teknologi Mara, UITM Sg Buloh, Selangor

<sup>5</sup>Hospital Seberang Jaya, Pulau Pinang

\*Corresponding Email: [ivyhiew89@yahoo.com](mailto:ivyhiew89@yahoo.com)

### ABSTRACT

**Background:** Prostate cancer is the second most commonly occurring cancer in men and the fourth most commonly occurring cancer overall. In Malaysia, prostate cancer is a growing problem. This study assessed knowledge of prostate cancer among male patients in urology ward at public hospital, to determine the demographic factors among male patients in urology ward at public hospital and to identify the relationship between demographic factors with knowledge of prostate cancer among male patients in urology ward at public hospital. **Method:** This cross-sectional study was carried out with 206 male patients excluded patient who are already diagnosed with prostate cancer in urology ward 7C and 7D at Selayang Hospital who agreed to participate and were recruited on giving oral and written consent. **Result:** Majority 181 (87.90%) of respondents had a poor knowledge level of prostate cancer. Descriptive statistic analysis using one-way anova and independent T-test was done to determine the difference between level of knowledge and the demographic data on 206 respondents. Result shows that there is significantly difference between the level of knowledge and the demographic factors at the level of P-value 0.05. An analysis using chi-square/likelihood ratio test done to determine the relationship between the level of knowledge and the demographic factor was done, result shows that there is no significant relationship between the level of knowledge and the demographic factors among male patients in urology ward at public hospital. **Conclusion:** Male patients should have knowledge of prostate cancer to increase information on the risks of prostate cancer and the benefits of prostate cancer screening and prevention. Knowledge about prostate cancer in men will also increase the acceptance of early prostate cancer screening for prevention in the future as early treatment for a better care.

*Keywords: prostate cancer, male patient, urology word, public hospital, knowledge*

### INTRODUCTION

Prostate cancer statistics showed that Guadeloupe, France had the highest rate of prostate cancer in 2018 (Martinique & France, 2019). In Malaysia, prostate cancer is the sixth most frequent cancer and accounts for 5.70% of cancer cases in males (Malay Mail, 2019). Although prostate cancer ranked sixth among male cancers in Malaysia, it is expected to move up in position with an increasingly ageing population. As the country undergoes further development and there is a greater awareness of the disease leading to increasing diagnosis, our incidence pattern will approach that of developed countries.

Knowledge regarding prostate cancer plays an important role in cancer screening utilization (Ebuehi & Otumu, 2011). A worrying lack of knowledge is preventing men from acting on concerns they have about the most common cancer in men. According to studies done by Awosan et. al, (2018) showed that only 5.00% and 1.30% of the 300 respondents have ever heard of prostate cancer and prostate cancer screening respectively. Most, 95.00% of the 300 respondents had poor knowledge of prostate cancer, while only a few had fair 2.30% and good 2.70% knowledge of the disease. Only a few respondents 5.00% and below knew the risk factors, and the symptoms and signs of prostate cancer. In South Korea, the prostate cancer knowledge was found to be significantly high in prostate cancer examinees compared to

non-examinees. The correct answer rate of prostate cancer knowledge was only 44.70% out of a total of 147 study subjects at average (Lee et al., 2016). According to a study by Morlando, Pelullo & Di Giuseppe (2017), it is important and necessary to increase information on the risk of Prostate Cancer and the benefits of Prostate Cancer prevention in view of only 29.60% of men had undergone a PSA-test due to lack of knowledge regarding prostate cancer.

Lack of awareness, poor knowledge and attitude regarding cancer have been identified as possible reasons accounting for the late presentation which lead to the poor survival of cancer patients in Malaysia. A study conducted by Hafiz M. S. (2016) showed that a low level 68.80% of knowledge and awareness on prostate cancer among male public staffs in Kelantan, Malaysia. In addition, a research done in Negeri Sembilan, Malaysia showed only 63.00% are aware of prostate cancer and less than half of the respondents have good knowledge and attitude towards prostate cancer. The percentage of awareness, knowledge and attitude regarding prostate cancer among the study population are still low (Ismail et al., 2018).

This was mainly due to lack of knowledge regarding prostate cancer. Therefore, we would like to do this study in our population to determine the knowledge of prostate cancer among our patients in urology ward at public hospital so that in the future, early detection and prompt treatment may improve the chances of cure in cancer and increase their quality of life.

#### MATERIAL AND METHOD

This cross-sectional study was carried out with 206 male patients excluded patient who are already diagnosed with prostate cancer in urology ward 7C and 7D at Selayang Hospital who agreed to participate and were recruited on giving oral and written consent. Calculation of sample will be done using online Raosoft sample calculator and 206 (n) will be the sample of the study from population 355 (N) of male patients who admitted to urology ward. A confidence interval of 95% margins of error 5.00%, +/- 0.50 standard deviation however we included 10.00% allowance to our study. This plan to recruit 206 samples (n).

#### Subject inclusion criteria

1. age above 18 years old
2. malaysian only
3. able to read and write in bahasa malaysia and english

#### Subject exclusion criteria

1. The patient who are already diagnosed with prostate cancer.
2. The patients who is too ill to respond to this study.
3. Foreigner
4. Illiterate patients. Patient who cannot read and write in Bahasa Malaysia and English.

A self-administered questionnaire written in Malay and English was used. The questionnaire will be given in two languages (Malay or English) according to patient understanding. English version assessment consist 12 items adapted from the study Ogunsanya et al., (2017). A pilot study of malay version questionnaires was done on 21 patients from first class ward of urology ward 9A and 9B at Selayang Hospital on 15th June 2019 and Cronbach Alpha analysis using SPSS version 23 was done and showed result of Cronbach alpha values is 0.862 with a cronbach alpha coefficient value of  $>0.7$  was considered reliable. The questionnaire also validated by 3 urologists in Selayang Hospital and "Ketua Panitia Bahasa Melayu" from SMK Taman Seri Kluang, Johor.

Data were analyzed using the SPSS version 23. The questionnaires consisted of 12 questions to be answered with the options of "True", "False" and "Don't Know". Question answered correctly were scored as 1 and questions answered wrongly will be scored as 0 as well as "Don't Know" responses. The knowledge level will be divided to 3 levels which is good, medium and poor knowledge level. Scores range between 10 to 12 reflecting a good level of knowledge and scores range between 7 to 9 are reflecting to medium knowledge level while scores range below 7 are considered as poor knowledge level. (Weinrich et al., 2004).

Correct answers are question number: 1, 2, 4, 5, 6, 7, 11 & 12

Wrong answers are question number: 3, 8, 9 & 10

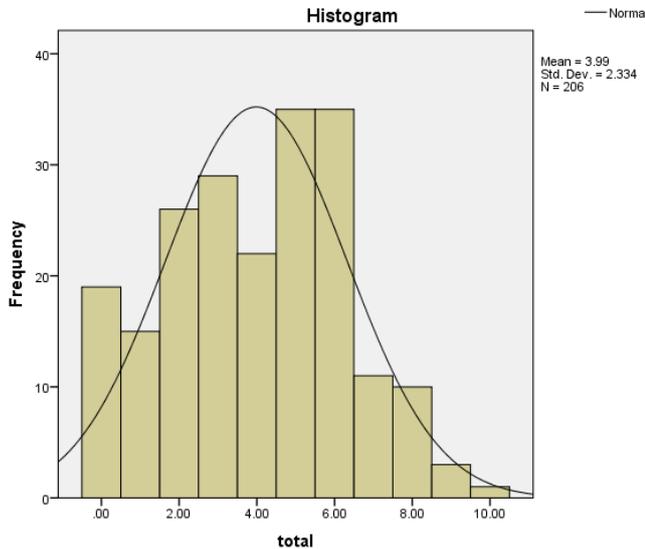
#### RESULT

In this study, most of the male patients were age above 61 years old with 120 (58.30%) respondents. The lowest age group was 9 (4.40%) respondents which is 31-40 years old. Secondary was the highest education of male patients with 111 (53.90%) respondents while no formal education was the lowest rate with only 13 (6.30%) respondents. Mostly the respondents are both unemployed and self-employed with 74 (35.90%) each characteristic. Majority the male patients are married with 185 (89.80%) and the lowest rate are single 21 (10.20%) respondents.

#### 1. Normality of the total knowledge of patients

In this study, the normality test was done to determine if the data (total knowledge) set is well-modeled by a normal distribution. Based on the empirical distribution shows the data (histogram) in figure 1 is bell-shaped and resemble the data is normal distributed. Therefore, the parametric test was used in this study.

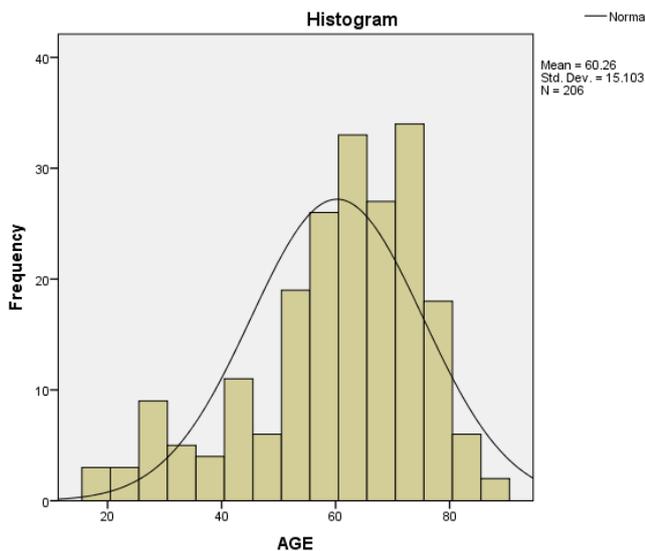
Figure 1 histogram of normality of the total knowledge of patients



### 1.1 Normality of the age of patients

In this study, the normality test was done to determine if the data (age) set is well-modeled by a normal distribution. Based on the empirical distribution shows the data (histogram) in figure 2 is bell-shaped and resemble the data is normal distributed. Therefore, the parametric test was used in this study.

Figure 2 histogram of normality of the age of patients



## 2. Demographic data of male patients

Table 1 demographic data of male patients

Variables	Frequency	Percentage (%)	
Age	Lowest thru 30	15	7.30
	31 thru 40	9	4.40
	41 thru 50	17	8.30
	51 thru 60	45	21.80
	61 thru highest	120	58.30
Academic classification	No Formal Education	13	6.30
	Primary	55	26.70
	Secondary	111	53.90
	College/University	27	13.10
Occupation	Unemployed	74	35.90
	Government Sector	14	6.80
	Private Sector	44	21.40
	Self Employed	74	35.90
Marital status	Single	21	10.20
	Married	185	89.80
	Other	0	0.00

Note: Descriptive Statistic

## 3. Knowledge of prostate cancer among male patients

Table 2 below presented the level knowledge of prostate cancer among male patients. The level of knowledge was categorized into 3 levels namely good, medium, and poor based on scores range between 10 to 12 reflecting a good level of knowledge and scores range between 7 to 9 are reflecting to medium knowledge level while scores range below 7 are considered as poor knowledge level.

Majority 181 (87.90%) of respondents have a poor knowledge level of prostate cancer.

Only 1 (0.50%) respondent had a good knowledge level of prostate cancer. About 24 (11.70%) respondents had a medium knowledge level of prostate cancer. As a conclusion,



majority 87.90% of the male patients in urology ward 7C and 7D of Selayang Hospital had poor knowledge level of prostate cancer with total mean knowledge 2.873 and standard deviation 0.347.

Table 2 knowledge of prostate cancer among male patients

Knowledge	n	Frequency	Percentage (%)	Mean Knowledge	SD
Good (10-12)		1	0.50		
Medium (7-9)	206	24	11.70	2.873	0.347
Poor (<7)		181	87.90		

Note: Descriptive Statistic

#### 4. Comparison between level of knowledge and the demographic factor

An analysis to compare the difference between level of knowledge and the demographic factors was done using one-way anova and independent T-test as below. Result shows that there is significantly difference between the level of knowledge and the demographic factors.

##### 4.1 Comparison between level of knowledge and age group

Table 3 below shows the comparison between level of knowledge and age group of the male patients. P-value is 0.01 which is less than alpha 0.05. Therefore, there is significant difference between level of knowledge and age group.

Table 3 comparison between level of knowledge and age group

Variable	n	Mean knowledge	Std deviation	F-statistic	P-value
Lowest : thru 30	15	5.400	1.919		
31 thru 40	9	4.888	2.368		
Age				3.179	0.01
41 thru 50	17	4.529	2.527		
51 thru 60	45	4.244	2.237		

61 thru highest	120	3.566	2.303
Total	206	3.985	2.334

Note: One-Way Anova

##### 4.2 Comparison between level of knowledge and academic classifications

Table below 3.1 shows the comparison between level of knowledge and academic classifications of the male patients. P-value is 0.00 which is less than alpha 0.05. Therefore, there is significant difference between level of knowledge and academic classifications.

Table 3.1 comparison between level of knowledge and academic classifications

Variable	n	Mean knowledge	Std deviation	F-statistic	P-value
No Formal Education	13	1.85	2.15		
Academic Classifications					
Primary	55	3.20	2.26		
Secondary	111	4.42	2.21	9.12	0.00
College/University	27	4.81	2.08		
Total	206	3.99	2.33		

Note: One-Way Anova

##### 4.3 Comparison between level of knowledge and occupation

Table below 3.2 shows the comparison between level of knowledge and occupation of the male patients. P-value is 0.03 which is less than alpha 0.05. Therefore, there is significant difference between level of knowledge and occupation.

Table 3.2 comparison between level of knowledge and occupation

Variable	n	Mean knowledge	Std deviation	F-statistic	P-value
Unemployed	74	3.81	2.35	2.85	0.03
Occupation					
Government Sector	14	5.57	2.37		
Private Sector	44	4.22	2.40		
Self Employed	74	3.71	2.167		
Total	206	3.95	2.33		

Note: One-Way Anova

#### 4.4 Comparison between level of knowledge and marital status

Table below 3.3 shows the comparison between level of knowledge and marital status of the male patients. P-value is 0.62 which is more than alpha 0.05. Therefore, there is no significant difference between level of knowledge and marital status.

Table 3.3 comparison between level of knowledge and marital status

Variable	n	Mean knowledge	Std deviation	F-statistic	P-value
Marital Status					
Single	21	4.381	2.178	10.109	(41.7%) (60.2%)
Married	185	3.940	2.352	0.238	0.62

Note: Independent T-Test

#### 5. Relationship between level of knowledge and the demographic factor

More than half 109 (60.20%) of respondent age above 61 years old had poor level of knowledge. Secondary academic recorded 94 (51.90%) and self-employed respondent 66 (36.50%) had poor knowledge level. Most of the respondents with poor knowledge level are married 161 (89.00%). Based on the statistical chi-square/likelihood ratio analysis done as below, result shows that there is no significant relationship between the levels of knowledge demographic factors.

#### 5.1 Correlation between level of knowledge and the age group

Table 4 below shows the correlation between level of knowledge and the age group, *r* value shows 0.11 which is positively negligible relationship based on the Guildford Rule of Thumb. P-value shows 0.09 which is more than alpha

at the level of 0.01. Therefore, researcher failed to reject the null hypothesis and decided to accept the null hypothesis, where there is no significant relationship between level of knowledge and age group.

Table 4 correlation between level of knowledge and the age group

Variable	Level of knowledge			<i>r</i>	P-value	
	Good	Medium	Poor			
	F (%)	F (%)	F (%)			
Age	Lowest thru 30	0 (0.0%)	3 (12.5%)	12 (6.6%)	0.11	0.09
	31 thru 40	0 (0.0%)	2 (8.3%)	7 (3.9%)		
	41 thru 50	0 (0.0%)	4 (16.7%)	13 (7.2%)		
	51 thru 60	0 (0.0%)	5 (20.8%)	40 (22.1%)		
	61 thru highest	0 (0.0%)	10 (41.7%)	109 (60.2%)		

Note: correlation is significant at the 0.01 level (2-tailed)

#### 5.2 Relationship between level of knowledge and academic classifications

Table 4.1 below shows the relationship between level of knowledge and academic classifications. The p-value is equal to 0.18 (likelihood ratio) which is more than alpha at the level 0.05. Therefore, researcher failed to reject the null hypothesis and decided to accept the null hypothesis, where there is no significant relationship between level of knowledge and academic classifications.

Table 4.1 relationship between level of knowledge and academic classifications

Variable	Level of Knowledge	Statistic*	P-value		
				Good	Medium
	F (%)	F (%)	F (%)		
No Formal Education	0 (0.0%)	0 (0.0%)	13 (7.2%)	8.86	
Academic Classification	Primary	0 (0.0%)	3 (12.5%)		52 (28.7%)
	Secondary	1 (100.0%)	16 (66.7%)		94 (51.9%)
	College/University	0 (0.0%)	5 (20.8%)	22 (12.2%)	

Note: \*Chi Square/ Likelihood ratio; F= Frequency

### 5.3 Relationship between level of knowledge and occupation

Table 4.2 below shows the relationship between level of knowledge and occupation. The p-value is equal to 0.12 (likelihood ratio) which is more than alpha at the level 0.05. Therefore, researcher failed to reject the null hypothesis and decided to accept the null hypothesis, where there is no significant relationship between level of knowledge and occupation.

Table 4.2 relationship between level of knowledge and academic classifications

Variable	Level of Knowledge	Statistic*	P-value			
				Good	Medium	Poor
	F (%)	F (%)	F (%)			
Occupation	Unemployed	1 (100.0%)	4 (16.7%)	69 (38.1%)	9.90	0.12
	Government Sector	0 (0.0%)	4 (16.7%)	10 (5.5%)		

Private Sector	0 (0.0%)	8 (33.3%)	36 (19.9%)
Self Employed	0 (0.0%)	8 (33.3%)	66 (36.5%)

Note: \*Chi Square/ Likelihood ratio; F= Frequency

### 5.4 Relationship between level of knowledge and marital status

Table 4.3 below shows the relationship between level of knowledge and marital status. The p-value is equal to 0.46 (likelihood ratio) which is more than alpha at the level 0.05. Therefore, researcher failed to reject the null hypothesis and decided to accept the null hypothesis, where there is no significant relationship between level of knowledge and marital status.

Table 4.3 relationship between level of knowledge and marital status

Variable	Level of Knowledge	Statistic*	P-value			
				Good	Medium	Poor
	F (%)	F (%)	F (%)			
Marital Status	Single	0 (0.0%)	1 (4.2%)	20 (11.0%)	1.55	0.46
	Married	1 (100.0%)	23 (95.8%)	161 (89.0%)		

Note: \*Chi Square/ Likelihood ratio; F= Frequency

## DISCUSSION

The result of the research is male patient's knowledge towards prostate cancer are about 181 respondents (87.90%) have poor knowledge level, 24 respondents (11.70%) have moderate knowledge level and only 1 respondent (0.50%) have good knowledge level in prostate cancer. The researcher uses Chi-square to explore the relationship between demographic data and knowledge. Researcher's decision is failed to reject null hypothesis because P-value for the age is P-value 0.09, academic classification is P-value 0.18, occupation is P-value 0.12, and marital status is P-value 0.46 which is the entire demographic factors are more than P-value 0.05 at the significant level. Therefore, researcher conclusion is there is no significant relationship between

demographic factors with knowledge of prostate cancer among male patients in urology ward at public hospital. Our study revealed that patient in urology ward with other type of diagnosis had very poor knowledge regarding prostate cancer due to lack of awareness among male patient about this issue. Some said that they had never heard about prostate cancer and even worst, there are some patient did not even know what is prostate was. These findings highlights the need for government and healthcare providers to increase knowledge by giving information on the risks of prostate cancer and the benefits of prostate cancer screening and prevention. Knowledge about prostate cancer in men will also increase the acceptance of early prostate cancer screening for prevention in the future as early treatment for a better care. The strength of this study is that a total 206 participants that selected randomly in hospital based response 100 percent to this study without failure. This help the researchers to study the knowledge of prostate cancer among male patient is important and improvement is indispensable.

#### RECOMMENDATION

Prostate cancer is one of the most common cancers affecting the male population globally. Although prostate cancer has a high prevalence and mortality rates, personal and social information and sensitivity levels must be increased as it can be treated if diagnosed at an early stage.

Education and screening can be done at primary health care level to increase the level of awareness in the community. It is also important to include both patients and physicians in these awareness campaigns, in order to create culturally relevant prostate cancer information and testing services.

Television and radio were shown to be the most available media. Health promotion, education and prevention using these media, therefore become key strategies to raise awareness, especially from men of 40 years onwards and those who have family history of prostate cancer. It will also be important to target men from rural areas, poor socio-economic background and with low level of education.

According to Mofolo et al., (2015), more than half of the respondents indicated that they had not heard of prostate cancer. Of those who have heard of the condition, the majority had moderate knowledge. In multivariate analysis level of school education was significantly associated with knowledge. Factors significantly associated with level of knowledge need to be considered in educational campaigns, prostate cancer screening and treatment.

The major sources of information about the PSA tests were physicians; television, newspapers and family members. Man who had received information by a physician was more likely to know about and to receive a PSA test. Therefore, education and screening can be done at primary health care level to increase the level of knowledge and awareness in the community. It is also important to include both patients and

physicians in these awareness campaigns, in order to create culturally relevant prostate cancer information and testing services.

Male patients should have knowledge of prostate cancer to understand the importance of knowledge of prostate cancer to increase information on the risks of prostate cancer and the benefits of prostate cancer screening and prevention. Knowledge about prostate cancer in men will also increase the acceptance of early prostate cancer screening for prevention in the future as early treatment for a better care.

#### CONCLUSION

As a conclusion, more than half of the respondents 181 (87.90%) out of 206 respondents in total indicated that they had poor level of knowledge regarding prostate cancer among male patients in public hospital which is very harmful to the society especially to the male population. It shows that educational campaigns, prostate cancer screening and treatment need to be considered in all general hospital, because with good knowledge level of prostate cancer, it can be treated if diagnosed at an early stage.

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#### CONTRIBUTORS LIST

All of this personnel affiliated to *Advanced Diploma in Oncology Care nurse at Institut Latihan Kementerian Kesihatan Malaysia (ILKKM) Sungai Buloh:*

- i. Ivy Hiew Kent Fong, ADOC, RN  
[ivyhiew89@yahoo.com](mailto:ivyhiew89@yahoo.com)
- ii. Norzila Abdul Rasid ADOC, RN  
[norzila3006@gmail.com](mailto:norzila3006@gmail.com)
- iii. Nurafezza Aliah, ADOC, RN  
[nurafezza@gmail.com](mailto:nurafezza@gmail.com)
- iv. Nurul Zielawati Sahak ADOC, RN,  
[zielawati7154@gmail.com](mailto:zielawati7154@gmail.com)
- vi. Siti Nur Hafiza Abu Bakar, ADOC, RN  
[fizaonco@gmail.com](mailto:fizaonco@gmail.com)



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