

## ORIGINAL ARTICLE

# The Study of Knowledge, Attitude and Practice of Prostate Cancer Prevention and Its Relationship With Socio-demographic Characteristics Among Men at Ppr Lembah Subang 1, Selangor, Malaysia

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## ABSTRACT

**Introduction:** Prostate cancer is one of the most common causes of cancer deaths among men worldwide. In Malaysia however, it is the fifth leading cause of cancer among men. The increases of prostate cancer among men in Malaysia due to its close association with lack of awareness, poor knowledge and attitude. Therefore, this study is to obtain information on the prostate in terms of the level of awareness, perception, and the practice of prevention of prostate cancer among Malaysians, particularly residents of PPR Lembah Subang 1. **Methods:** A cross-sectional survey was collected among 200 respondents aged 18 years and above in PPR Lembah Subang 1 consisting of 37 questions comprised of socio-demographic data, source of information, risk factors, knowledge on prostate cancers, attitude on prostate cancer and practice of prevention. Likert scale scoring system used in this research. **Results:** Men in PPR Lembah Subang 1, show a significant association between knowledge on prostate cancer with age group, level of education, and family history showing (p value: <0.001), (p value: 0.01), (p value: 0.03), respectively. There is an association between attitude towards prostate cancer and age group and income level both with (p value: <0.001). The findings showed a significant association between the practice of prevention towards prostate cancer with level income and education showing (p value: <0.001) and (p value: 0.01) respectively. **Conclusion:** In PPR Lembah Subang, knowledge, attitude, and practice of prevention of Prostate Cancer found to be associated with socio-demographic risk factors.

**Keywords:** Prostate Cancer, Knowledge, Attitude, Practice, Socio-demographic risk factors

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Indians (6%). Majority of males affected were above the age of 45 (99.2%) and a small percentage between the ages of 15 to 44 (0.8%) (2).

## INTRODUCTION

The Global Cancer Conservatory (1) reported that South-east Asian countries have a comparatively lower incidence of prostate cancer than the Western or Northern continents. However, in Malaysia, a report done by the Malaysian National Cancer Registry revealed that prostate cancer is the fifth most common cancer among Malaysian males. The accumulative prevalence recorded from the year 2007 to 2011 was 3107 cases. More than half of the cases were recorded among the Chinese (50.73%), followed by Malays (37.13%) and

In term of level of knowledge about prostate cancer, it varies with age, education level and family history of prostate cancer. Several studies have revealed that younger age is associated with better knowledge of prostate cancer (3, 4). In a study done in Malaysia, it was found that the highest percentage (100%) of men who had good knowledge were of those 20 years old and below. This is followed by 68.4% of those between 41 and 50 years old. The lowest percentage (52%) were men between 51 and 60 years old (3). Participants with higher education were found to have a higher level of knowledge (4, 5). For instance, 90.6% of respondents with tertiary education had knowledge of cancer risk

factors when compared with 28.1% of those without formal education (5). Men with positive family history also have better comprehension in regard to awareness, risk factors, symptoms and screening methods for the disease compared to their counterparts (6).

In regard to the attitude of men towards prostate cancer, studies have shown that it was not associated with their age (5). However, there is a relationship with income level, where a positive attitude towards prostate cancer was seen more in men with higher earnings (7,8). For example, research conducted among African American men in Southside Chicago, 3.5% of those with income less than \$20000 were interested in doing screening for prostate cancer compared to 42.8% of people earning \$50000 and above (8).

The National Cancer Registry of Malaysia reported that prostate cancer has the second-highest 5-year relative survival rate in Malaysia, showing the importance of the practice of prevention. Timing is also vital as 97.3% of men diagnosed at stage I live to 5 years compared to 43.2% of those diagnosed at stage IV(2). Non-modifiable determinants such as increasing age, race or ethnicity, family history and genetics are some of the major risk factors of prostate cancer as listed by the American Cancer Society (9). Hence, the practice of screening as a tool for prevention is necessary especially considering that prostate cancer is slow-growing and can be detected early before it reaches an advanced stage (10). However, screening for cancer is dependent on socioeconomic status, namely the level of education and income. It was found that the higher the level of education and income, the higher the likelihood of screening. For example, the disparity in screening between the lowest and highest income categories was 17.1% (11). Many studies also indicate that the amount of income earned is directly proportional to the likelihood of screening (12).

Although fairly similar studies have been done in Malaysia, there is still limited information concerning our research topic for men in the state of Selangor. This is because previous studies involved men in Negeri Sembilan, Kedah and Perlis (3, 5) Hence, this research aims to study the association between level of knowledge, attitude, and practice of prevention towards prostate cancer and its relationship with sociodemographic factors in a sample of adult men at PPR Lembah Subang 1.

## MATERIALS AND METHODS

An observational cross-sectional study was conducted at PPR Lembah Subang 1. Questionnaires were used to assess the level of knowledge, attitude and practice of prevention of prostate cancer among male residents. It was a self-administered questionnaire were distributed to the male residents who were 18 years and above. Male residents from Projek Perumahan Rakyat (PPR)

Lembah Subang 1 were selected as the respondents for this study. Through the non-probability convenience sampling method, around 200 samples were collected excluding female respondents, residents who refuse to give consent, who are mentally unstable and medical professionals. Questionnaires were used to collect data from respondents. It consists of 37 questions which comprised of socio-demographic data 5 questions, source of information 2 questions, risk factors 4 questions, knowledge on prostate cancer 11 questions, attitude on prostate cancer 12 questions and practice of prevention 3 questions.

The questionnaire was adopted from Samat et al. (5) after getting the permission of use. The questionnaire was of 3-point and 5-point Likert scale scoring system was used in this research. The 3-point Likert scale questions were assessed for knowledge on prostate cancer using agree, disagree and don't know. For every positive statement, it was scored as '1' for agree, '0' for disagree and '0' for don't know. As for negative statements, disagree was scored as '1', don't know as '0' and agree as '0'. But for questions with more than one correct answer, any 1 or more than 1 correct answer was given one mark. If a correct answer was followed by a wrong answer in the same question, that answer was concluded as don't know which carried '0' mark. Therefore, out of a maximum score of 11 for knowledge, participants who scored  $\geq 5$  were classified as having adequate knowledge whereas participants who scored  $\leq 4$  were categorized as having inadequate knowledge. For attitude, we have used 5-point Likert scale which consists of strongly disagree '1' mark, disagree '2' marks, not sure '3' marks, agree '4' marks and strongly agree '5' marks. Therefore, out of a maximum score of 60, an individual who scored more than  $\geq 36$  were classified as having good attitude whereas  $\leq 35$  was considered having a poor attitude. As for the practice of prevention, the scoring will mainly focus on the first question, '1' mark was given for a yes and '0' mark for a no.

Copyright permission for using the questionnaire in the study was requested. Ethical approval was obtained from the MSU Ethics Committee. Participants were informed about the topic and aim of the study. It was voluntary participation and participants were explained regarding the confidentiality of participants. Participants were assured that the information they had given were used strictly for research and academic purposes only. The confidentiality of the respondents was maintained throughout the entire course of this study.

The data was entered and analyzed by Statistical Package for the Social Science (SPSS) program version 23.0 software for windows. Descriptive statistics were used to project the result collected. The Chi-square test was used to see if there was an association between variables. A 'p-value' of  $< 0.05$  was considered statistically significant.

## RESULTS

A total of 200 male residences of PPR Lembah Subang 1 have participated and completed the questionnaire. 58% were in the younger age group and 76.5% are Malays. 61% have a high education level while half of the participants have a higher income. 41.5% are single, 49.5% are married, 4% are divorced and 10% are widowed. Most of them (96%) either don't know or doesn't have a family history of prostate cancer (Table I).

Most of the participants (71.5%) have inadequate knowledge and 76% have a poor attitude towards prostate cancer. Majority of them (86%) mentioned that they don't practice prevention of prostate cancer (Table II).

Table I : Frequency distribution of Socio-demographic factors

Variable		Frequency	Percentage
Age	Young adult (18-44)	116	58.0
	Older adult (above 44)	84	42.0
Race	Malay	153	76.5
	Non-Malay	47	23.5
Education Level	Lower education	78	39.0
	Higher education	122	61.0
Income Level	Lower income (RM0-RM1500)	96	48.0
	Higher income (RM1501 - RM3000)	104	52.0
Marital Status	Single	83	41.5
	Married	99	49.5
	Divorced	8	4.0
	Widowed	10	5.0
Family History of Prostate Cancer	No or dont know	192	96.0
	Yes	8	4.0

Table II : Knowledge attitude about prostate cancer and practice of prevention of prostate cancer

		Frequency	Percent
Knowledge about Prostate Cancer	Inadequate knowledge	143	71.5
	Adequate knowledge	57	28.5
Attitude Towards Prostate Cancer	Good	48	24.0
	Poor	152	76.0
Practice of Prevention of Prostate Cancer	No	172	86.0
	Yes	28	14.0

Results show that older age group and higher education group have adequate knowledge about prostate cancer compared to the younger age group and lower education group respectively. Most of those who don't know or have no family history have inadequate knowledge about prostate cancer (Table III).

The result shows that the older age group and higher income level have a good attitude towards prostate cancer compared to the younger age group and lower-income level respectively (Table IV).

Results show that higher income level and higher education group are willing to practice prevention of prostate cancer compared to those with lower income and lower education level respectively (Table V).

Table III : Association of knowledge about prostate cancer and socio-demographic factors (age , education level and family history)

Socio-demographic factors	Num-ber	Per-cent	Inade-quate knowl-edge	Ade-quate knowl-edge	X <sup>2</sup>	P-value
AGE						
Young adults (18-44)	116	58.0	97	19	19.912	<0.001
Older adults (44 and above)	84	42.0	46	38		
EDUCATION LEVEL						
Lower Education	78	39.0	64	14	6.986	0.01
Higher education	122	61.0	79	43		
FAMILY HISTORY						
No or dont know	192	96.0	140	52	4.727	0.03
Yes	8	4.0	3	5		

Table IV : Association of attitude towards prostate cancer and socio-demographic factors (age and income level)

Socio-demographic factors	Num-ber	Per-cent	Poor atti-tude	Good atti-tude	X <sup>2</sup>	P-value
AGE						
Young adults (18-44)	116	58.0	43	73	25.862	<0.001
Older adults (44 and above)	84	42.0	5	79		
INCOME LEVEL						
Lower income	96	48.0	36	60	24.484	<0.001
Higher income	104	52.0	10	94		

## DISCUSSION

In this study, the knowledge, age group, level of education, family history, attitude, income level and practice of prevention were the influencing factors of prostate cancer among the male residents from PPR Lembah Subang 1 communities. Knowledge on prostate cancer

**Table V : Association table practice of prevention of prostate cancer and socio-demographic factors (income level and education level)**

Socio-demographic factors	Number	Percent	No (no practiced)	Yes (practiced)	X <sup>2</sup>	P-value
<b>INCOME LEVEL</b>						
Lower income	96	48.0	93	3	19.141	0.00
Higher income	100	50.0	75	25		
<b>EDUCATION LEVEL</b>						
Lower Education	78	39.0	73	5	6.118	0.01
Higher education	122	61.0	99	23		

was significantly associated with age group among the study population where a higher number of respondents from the adult age group is thought to have adequate knowledge of prostate cancer compared to young adult age group with a p-value of <0.001. Association between knowledge and level of education also had an impact on prostate cancer, giving a significant p-value of 0.01. A higher number of respondents in our study had a higher education level which indicates highly educated respondents may have wider knowledge in the aspect of health care. This may be due to the accessibility to information as well as the higher ability to understand the information given is better in people with higher education. Furthermore, knowledge was significantly associated with a family history of prostate cancer with a p-value of 0.03. Amongst the of respondents, 4 % had a positive family history of prostate cancer and 96% of respondents has no family history of prostate cancer or is not aware of family members having prostate cancer, the respondents with a positive family history had better knowledge. This may be due to the exposure to prostate cancer information given by the family member who is affected by prostate cancer to the respondents.

Based on research, attitude towards prostate cancer was observed to have a significant association with age group with a p-value of <0.001. Older adult age group was observed to have a higher number of participants with a good attitude when compared to young adults. In this research conducted, there was a significantly higher number of participants with good attitude from the higher income group with a p-value of <0.001. This is thought to be because people with higher income level will be more willing to undergo screening and treatment for prostate cancer as they will be able to afford it compared to those with lower income level. Moreover, the association between practice of prevention towards prostate cancer and income level was observed to have a significant p-value of <0.001. A higher number of respondents in lower and higher income group did not practice the prevention of prostate cancer by undergoing a screening test for prostate cancer. Furthermore, the practice of prevention towards prostate cancer was observed to have a significant association with educational level

with a p-value of 0.01. A higher number of respondents who have practised prostate cancer prevention were from a higher educational level group. This is expected as people with a higher education level has higher awareness and knows the importance of practising the prevention of prostate cancer by undergoing prostate cancer screening compared to people with lower education level.

In this research, the old age group with a higher number of respondents was thought to have adequate knowledge of prostate cancer with a significant p-value of <0.001. This was supported by the study conducted in Saudi Arabia (13) where the higher number of respondents with adequate knowledge was from 50-59 years old. However this finding is in contrast to a study conducted in Turkey by Turkan et al., (4) where a higher number of the respondent with adequate knowledge was from the age group below 60 years old and also a study conducted by University Putra Malaysia done in Negeri Sembilan by Ismail et al. (3) where the highest percentage of knowledge was of 20 years old and below. Moreover, education level also had a significant impact on knowledge of prostate cancer with a p-value of 0.01. The higher education group of respondents had a higher number of respondents with adequate knowledge. This was supported by the study carried out in Turkey by Turkan et al. (4) and study conducted in Kedah and Perlis by Samat et al. (5), where a higher percentage of men with knowledge of prostate cancer was undergraduates and postgraduates. It had also been proven by Paul (14) through a study conducted in Kenya and through the study carried out in Namibia by Fleeson et al., (7) that education is a very important determinant for prostate cancer knowledge. The level of adequate knowledge is also significant in participants with a positive family history with a p-value of 0.03. This is supported by the study conducted among the Malay men in a traditional village in Negeri Sembilan by Ismail et al. (3) and another study done in Nigeria by Oranusi et al., (6) were a higher number of correspondents with a positive family history had adequate knowledge on prostate cancer. However, the study done in Saudi Arabia by Ghunaim et al. (13), opposed this as it showed that a family history of prostate cancer is not significant to the level of knowledge in participants.

Attitude towards prostate cancer had a significant association with age group with a p-value of <0.001. The higher number of participants with good attitude towards prostate cancer was from the older adult age group. This was supported by a study conducted in Negeri Sembilan (3), where the highest number (15.10%) of good attitudes was seen in the age group of 51-60 years old. Besides that, there was a significantly higher number of participants with good attitude from the higher income group with a p-value of <0.001.

This was supported by the study conducted in Nigeria (8), a study conducted in Negeri Sembilan (3). This was thought to be because people with higher income level will be more willing to undergo screening and seek treatment due to affordability. Furthermore, a higher number of respondents did not practice the prevention of prostate cancer by undergoing the screening test. This was supported by a study carried out in Nambia (7) and opposed by a study conducted in the United States of America (15). A higher number of respondents who have practised prostate cancer prevention were from a higher education level group. This is supported by the study conducted in Italy (16).

## CONCLUSION

This study shows that male residences in Project Perumahan Rakyat Lembah Subang 1 (PPR) have inadequate knowledge but has a good attitude towards prostate cancer. It also shows that 86% of the men in PPR do not practice prevention of prostate cancer. We hope our study results will help the authorities to focus more on health promotion campaigns about prostate cancer amongst the public.

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