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KNOWLEDGE, AWARENESS AND PERCEPTION TOWARDS PROSTATE CANCER AMONG MALE PUBLIC STAFFS IN KELANTAN

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ABSTRACT

Background: In Malaysia, prostate cancer is the fourth most common cancer among men. Its incidence is rising due to the aging population. Assessing knowledge and awareness of prostate cancer are necessary to promote screening behavior for early detection of prostate cancer. The aim of this study was to determine levels of knowledge, awareness and perceptions of prostate cancer among male staffs in a tertiary teaching hospital in Kelantan.

Materials and Methods: A cross-sectional study using purposive sampling technique was conducted from December 2014 to January 2015. A structured questionnaire was administered to eighty participants. Descriptive statistics was used to summarize socio-demographic and medical characteristics of the participants. Pearson Chi-Square analyses were conducted to explore the association between knowledge, awareness, and perception and socio-demographic data.

Result: Fifty-two participants (65.0%) reported having heard about prostate cancer but the majority (n=55, 68.8%) have a low level of knowledge and awareness about it. Of the participants, 63 (78.8%) do not know the factors that make a person more likely to get prostate cancer. Although there is no significant association between socio-demographic characteristics and knowledge, awareness, and perception but majority (n=76, 95%) has a good perception of susceptibility, seriousness and benefit to prostate cancer.

Conclusion: This study revealed that knowledge and awareness of prostate cancer among these male staffs was low. The findings of the present study indicate needs for health promotion on prostate cancer and screening program to improve public understanding and acceptance for early prostate cancer screening.

Keywords: Prostate cancer, knowledge, awareness, perception, public staff

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1.0 Introduction

Prostate cancer an adenocarcinoma of the male prostate gland, is one of the leading cause of the cancer-related deaths among males globally (Abu-El-Noor & Abu-El-Noor, 2014). The GLOBOCAN (2012) reported that 307,000 men were estimated to die of prostate cancer and was ranked as the fifth leading cause of deaths from cancer in males accounted for 6.6% of the total men deaths. Although the causes of prostate cancer are not yet fully understood, it is believed that advanced age (above 50), positive family history of prostate cancer and an African-American ethnic background are risk factors (So et al., 2014). The incidence and mortality rate of prostate cancer in Asian are low compared to Western countries, nonetheless the percentage of the advanced stage prostate cancer remains high (Nakandi et al., 2013). In Malaysia, age-specific incidence for prostate cancer was documented to increase after the age of 45 years and 59.4% of cases were diagnosed with stage III and IV (Kassim & Haflah, 2013; Puteh et al., 2013; Zainal Ariffin & Nor Saleha, 2011). Lack of awareness about prostate cancer has been identified as the cause of late presentation and poor survival (Ito, 2014; Nakandi et al., 2013).

Knowledge regarding prostate cancer and prostate cancer screening plays an important role in cancer screening utilization (Ebuehi & Otumu, 2011). The study of the impact of undergoing prostate cancer screening on knowledge done in USA revealed that men who prefer not to get screened had less knowledge and less positive attitude toward screening as compared to men who prefer to get screened. Thus, suggesting that giving men information about prostate cancer screening would increase screening rates (Arafa, Rabah, & Wahdan, 2012; Hoffman, 2011). Although older Nigerian man had high awareness rates on prostate cancer, their low knowledge of the etiology, treatment, and prevention, perception on the risk of developing the disease and uptake of screening was low (Oladimeji, Bidemi, Olufisayo & Sola, 2010). However, other studies, among a native urban Nigerian population with less than average population shows that a large proportion of men are unaware of the prostate cancer and screening method using prostate-specific antigen (PSA) (Ajape, Babata, & Abiola, 2010). In a recent study, most men are still unaware of the controversy or uncertainty that aggressive treatment may not cure their cancer or improve their survival (Xu, Victoria Neale, Dailey, Eggly, & Schwartz, 2012).

Most of the literature on prostate cancer has been generated from the studies conducted in Western population; however, there is considerable heterogeneity of prostate cancer between East and West. Furthermore, prostate cancer is now becoming an emerging health priority. According to Hong et al. (2010), the number of aging population in Malaysia is increasing and therefore the incidence of prostate cancer will increase as well. To our knowledge, there has not been any study published reporting on the knowledge, perception, awareness and screening behavior among Malaysian male public staff, particularly in Kelantan. True knowledge, awareness and perception of our male public employees on this burning health issue will help health care professionals know the gaps and then strategize on how to fill these gaps. Thus, it is necessary to conduct this study as it will provide useful data on knowledge, perception, awareness, and screening behavior regarding prostate cancer in the male population. The aim of this study was therefore to determine the level of knowledge, awareness and perception about prostate cancer among male public staffs at a tertiary teaching hospital in Kelantan.

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2.0 Materials and Methods

A cross-sectional study was conducted at the Engineering Department in a tertiary teaching hospital in Kelantan. Purposive sampling was used to recruit the participants. This method was used as it involved a careful and intentional selection of participants; male public staffs in Engineering Department at a teaching hospital in the east coast of Peninsular Malaysia (Macnee & McCabe, 2008). The sample size was determined using Naing, Winn, and Rusli (2010) single mean formula. Twenty percent drop-out rate was added to anticipate non-response with a total of 81 participants. The inclusion criteria of this study were male aged 40 years and above and worked in the Engineering Department of a tertiary teaching hospital. Those who have been diagnosed with prostate cancer were excluded in the study. Age 40 years and above were used in this study as it is the age at risk for developing prostate cancer (Kirby, Patel, Roger, & Kirby, 2012). Ethical clearance was obtained from the Human Research Committee Universiti Sains Malaysia (USM).Eligible participants consented to take part in the study by signing the informed consent form after they had been thoroughly briefed about the purpose of the survey. A structured questionnaire was adapted by the researchers with permission to use from the original author, Atulomah, Olanrewaju, Amosu and Adedeji (2010).

The questionnaire was translated in Bahasa Malaysia version. The researcher did a back-translation of the questions and subjected the instrument to scrutiny by a panel of experts in this field to remove all seemingly ambiguous questions. The questionnaire was validated by the language experts in Centre for Language and Translation, Universiti Sains Malaysia in Kubang Kerian. The process of this translation is to maintain the original meaning of the questionnaire. This pattern of back-translation method provides reliability of the questions (Adam et al., 2013). The questionnaire consisted three sections. Section A consists of socio-demographic characteristics of the participants such as age, marital status, highest education qualification attained, and occupation. Section B contained eight items about general knowledge and awareness regarding prostate issues evaluated with “Yes” and “No” The knowledge and awareness was categorized as high when scores 5 point and low when scores 4 point and below, based on the total number of correct answers (Atulomah, Olanrewaju, Amosu, & Adedeji, 2010). Section C contained ten items about the perception of susceptibility, seriousness, and benefits of prostate screening and assessed with four-point Likert scale (Strongly Disagree, Disagree, Agree, Strongly Agree). A low value in the perception domain represented little or no perceived susceptibility, the seriousness of the disease and benefits of the screening. The perception items were aggregated to create a scale of measurement on a 30-point scale where scores below 15 were considered to reflect a low level of perception while scores 15 and above indicated a high level of perception regarding prostate cancer (Atulomah, Olanrewaju, Amosu & Adedeji 2010). For perceptions sub-variables such as perceived susceptibility and seriousness of prostate cancer, the mean score was measured on a 15-point and 12-point scales respectively, whereas the perception of the benefits of screening was measured on a three-point scale.

The validity and reliability of the research instrument was reviewed by two experts in the field of urology and language and translation expert. The test re-test reliability of the tool was assessed by administering it to 30 male security staffs working at the Security Department of the study setting prior to the commencement of the study and Cronbach’s alpha of 0.688 for

knowledge and perception was obtained. Cronbach alpha value of 0.60 is desirable for basic research, and therefore, this questionnaire is reliable to assess knowledge, awareness and perception on prostate cancer (Gliem and Gliem, 2003).

Data collection was conducted from December 2014 to January 2015 using a self-administered questionnaire. The questionnaire was distributed and collected by the researchers. The instrument took the participant's duration of approximately fifteen minutes to complete the survey.

Data were entered and analyzed using the Statistical Package for Social Sciences (SPSS) software (v.20.0). Descriptive statistics was used to summarize socio-demographic characteristics, knowledge, awareness and perception of prostate cancer among male public staffs. For comparing the association between socio-demographic characteristics with knowledge, awareness and practice among male public staffs, Pearson chi-square test and Fisher's exact Test were performed. A *p*-value of equal or less than 0.05 was considered significant.

3.0 Results

3.1 Socio-demographic Data of the Participants

A total of 80 male staffs were recruited and completed the questionnaire. The majority of the participants in this study was aged above 50 years old (62.5%, n=50). Most of them have at least secondary education (77.5%) and were married (97.5%). The majority of the male staffs worked as a general worker (58.8%, n=47). Further details of the socio-demographic characteristics of the participants in this study are illustrated in Table 1.

3.2 Knowledge and Awareness of Prostate Cancer

Table 2 shows the knowledge and awareness scores on prostate cancer among the participants. The majority of them (65.0%) mentioned that they had heard about prostate cancer before while 35% said they never heard of prostate cancer. In addition, 35.0%, (n=28) of them reported that they know someone who had been diagnosed with prostate cancer. In response to the question that required them to identify the location of the prostate gland, 32.5%, (n=26) were able to provide the correct answers. Only 12.5% (n=10) participants in the study reported that they had received information from their health care professional regarding prostate cancer. There was 6.3% (n=5) of the male staffs indicated that their physicians have told them that they have a prostate condition. Table 3 illustrates that the majority of the male public staffs in this study have a low level of knowledge and awareness of prostate cancer.

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Table 1: Socio-demographic Characteristics of Participants (n=80)

Variables	n	(%)
Age		
40-49	30	37.5
>50	50	62.5
Educational level		
Primary	5	6.3
Secondary	62	77.5
College	9	11.3
University	4	5.0
Marital Status		
Single	1	1.3
Married	78	97.5
Divorced	0	0.0
Widowed	1	1.3
Occupation		
General Worker	47	58.8
Driver	16	20.0
Administration	3	3.8
Assistant Engineer	11	13.8
Engineer	1	1.3
Plant Operator	1	1.3
Architectural Draft man	1	1.3

Table 2: Knowledge and Awareness on Prostate Cancer among Male Public Staffs (n=80)

Knowledge and Awareness of Prostate Cancer	(n, %)	
	Yes	No
Have you ever heard about prostate cancer	52 (65.0%)	28 (35.0%)
Do you know anyone that has had prostate cancer before	28 (35.0%)	52 (65.0%)
Knows the location of the prostate gland	26 (32.5%)	54 (67.5%)
Knows prostate cancer affects which gender	62 (77.5%)	18 (22.5%)
Knows factors could make a person more likely to develop prostate cancer	17 (21.3%)	63 (78.8%)
Have you ever received information from your health care professionals about prostate cancer	10 (12.5%)	70 (87.5%)
Are you familiar with symptoms of prostate cancer	14 (17.5%)	66 (82.5%)
Have you been told that you have a prostate condition	5 (6.3%)	75 (93.8%)
The prostate condition is prostate cancer	1 (1.3%)	79 (98.8%)

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Table 3: Level of Knowledge and Awareness on Prostate Cancer among Male Public Staffs (n=80)

Knowledge and Awareness of Prostate Cancer	
Low	55 (68.8%)
High	25 (31.3%)

3.3 Perception on Prostate Cancer

Although the participant has low knowledge on prostate cancer, the majority of them have a good perception on prostate cancer (95%, n=76) (Table 4). On the perception on susceptibility, a majority of them disagree that not be aware of prostate cancer can prevent them from having it (58.8%, n=47), prostate cancer is a sexually transmitted disease (62.5%, n=50) and it only affect white people (68.8%, n=56). On the perception of seriousness, a majority of them agree that prostate cancer is a deadly disease (76.3%, n=61). The majority of the men in this study disagree that prostate cancer has no cure (65%, n=52) and prostate cancer does not kill (53.8%, n=43). For the perception of benefit, most of the participant (93.8%, n=75) agreed that they would have benefit if they undertake medical check-up regularly. Further details on male public staffs perception of prostate cancer was illustrated in Table 5.

Table 4: Level of Perception on Prostate Cancer among Male Public Staffs (n=80)

Perception of Prostate Cancer	
Poor	4 (5%)
Good	76 (95%)

Table 5: Perception on Prostate Cancer among Male Public Staffs (n=80)

No.	Statement on Perception of Prostate Cancer	(n, %)			
		Strongly Disagree	Disagree	Agree	Strongly Agree
	Perception on Susceptibility:				
1	If I am not aware of prostate cancer, I can't have it.	14(17.5%)	47(58.8%)	16(20%)	3(3.8%)
2	Any male of advancing age can have prostate cancer.	1(1.3%)	21(26.3%)	56(70%)	2(2.5%)
3	Prostate cancer is an infection that can be transmitted sexually.	14(17.5%)	50(62.5%)	16(20%)	0
4	All men are at risk of having prostate cancer.	2(2.5%)	17(21.3%)	58(72.5%)	3(3.8%)
5	Prostate cancer affects only white people.	21(26.9%)	56(68.8%)	4(5%)	0
	Perception on Seriousness:				
6	Prostate cancer is a deadly disease.	1(1.3%)	13(16.3%)	61(76.3%)	5(6.3%)
7	Prostate cancer has no cure.	11(13.8%)	52(65%)	16(20%)	1(1.3%)
8	Prostate cancer cannot make me infertile.	6(7.5%)	34(42.5%)	38(47.5%)	2(2.5%)
9	Prostate cancer does not kill.	8(10%)	43(53.8%)	29(36.3%)	0
	Perception on Benefit:				
10	I perceive a great benefit in going to the clinic regularly for a medical check-up.	1(1.3%)	4(5%)	55(68.8%)	20(25%)

4.0 Discussion

The present study found that the male public staffs in this tertiary teaching hospitals have a low level of knowledge and awareness on prostate cancer. This finding is concurrent with previous studies finding although in the different study population (Arnold-Reed, 2008; Atulomah et al., 2010; Oladimeji et al., 2010). However, male public staffs in Anambra State, Nigeria have a high level of knowledge (74.1%) of prostate cancer as compared to the current study (Oranusi, Mbieri, Oranusi, & Nwofor, 2012). These findings could be attributed to the different educational background as most of the participants in the current study were only at the secondary level. It is well documented that high educational level will lead to greater access to various health information, hence promote sound knowledge (Suzuki, Wallace, & Small, 2015; Winterich et al., 2009).

The majority of the participants (65.0%) reported that they have heard about prostate cancer. This finding is similar to previous study done by Agbugui et al. (2013) that reported majority (71.0%) of the participants in their study heard about of prostate cancer. Symptoms

familiarity, the location of the prostate gland and possible factors most likely to cause the disease were used to test the knowledge and awareness of the participants regarding prostate cancer. Surprisingly, only 35.0% of the participants in this study were able to identify the location of the prostate gland and 21.3% were able to correctly identify which factors that would make an individual more likely to develop prostate cancer. In addition, only 6.3% have knowledge about the prostate condition, and 17.5% were familiar with the symptoms of prostate cancer. These findings are similar to previous studies finding that showed low levels of knowledge and awareness on prostate cancer among Nigerian and Australian (Oladimeji et al., 2010; Arnold-Reed et al., 2008). The low level of knowledge could be explained by the educational backgrounds of the participants as the majority of the participant in this study only have secondary school education. Magnus (2004) also indicates a similar reason for low knowledge and awareness of prostate cancer among their multiethnic black men. The results of this study, therefore, suggest that education is an important determinant of prostate cancer knowledge, awareness and perception. Hence, this suggests requisite for improving knowledge and awareness information through the delivery of tailored health promotion message to capture a wider target male audience to enhance the knowledge and awareness about prostate cancer.

In this study, the majority (95.0%) of the participants have a good level of perception towards prostate cancer. This finding contradicts from the previous study done among Nigerian men showing that only 19.4% of them perceived themselves at risk for developing prostate cancer (Oladimeji, Bidemi, Olufisayo, & Sola, 2010). Although this study revealed that level of knowledge is low, they have higher perception towards prostate cancer. It could be because the participants are hospital staffs and therefore have high perception towards prostate cancer. A study by Ebuehi and Otumu (2011) proved that a high level of perception influenced the increased screening uptake among male staff at the University of Lagos. However, the findings on perception and screening uptake is still not clear as Sothilingam, Sundram, Malek, and Sahabuddin (2010) reported a high level of perception could lead to lower screening uptake of prostate cancer. The low perception could be attributed to the fear and anxiety of the procedures, including cultural issue of the community (Sothilingam et al., 2010). However, the current study did not investigate on screening uptake. Therefore, future study should assess the association between awareness and screening behavior.

5.0 Conclusion and recommendation

This study revealed that male public staffs in the tertiary teaching hospital have a low level of knowledge and awareness of prostate cancer despite having heard about it. While this study has contributed to a preliminary understanding on knowledge, awareness and perception on prostate cancer among public male staffs in the general population, it has some limitation. The present study used a cross-sectional design using purposive, non-probability sampling method with self-reported data. Hence, it imposed a certain constraint upon the generalization of the findings. We, therefore, recommend further studies with a larger group of men at different geographical areas, which could include more cultural factors.

Knowledge, awareness, and perception have a great impact, at every stage of cancer continuum, from prevention and early detection to access and response to treatment, rehabilitation, and survivorship. These attitudes depend mainly on the level of knowledge and

quantity of information provided to enhance and empower attitudes towards prostate cancer screening behavior. The findings of the present study indicate a need for health promotion on prostate cancer and screening program to improve public understanding about prostate cancer. Health promotion campaign needs to educate on sign and symptom of prostate cancer with the aim of early detection when treatment would be more efficient. This program should be targeted especially for high-risk group such as men aged above 55 years. In addition, health promotion program could be promoted in the community and workplace based program.

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Declaration

Author(s) declare that the information above is correct, and manuscript submitted by us is original. We have no conflict of interest to declare and certify that no funding has been received for the conduct of this study and or preparation of this manuscript.

Author(s) contribution

Author 1: Mohammad Fadhil Hafiz M.S. involved with study conception and design, acquisition of data, interpretation of data and drafting of manuscript

Author 2: Soon L.K. involved with study conception and design, drafting the manuscript and critical revision of the manuscript

Author 3: Azlina Y. involved with study conception and design, analysis and interpretation of data, drafting the manuscript and critical revision of the manuscript

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