Research Article

Knowledge, Attitude and Perception of Prostate Cancer among Male Adults in the Kumasi Metropolis: A Descriptive Cross-Sectional Study

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Abstract

Introduction: Prostate cancer (PCa) is rated the second leading cause of cancer-related deaths among men in the world and in Ghana, the most frequently diagnosed cancer among men. Studies have identified low awareness and lack of knowledge, perceptions, and negative attitudes toward PCa as barriers to screening and thus early detection of the disease. This study therefore assessed the knowledge, attitude and perception of PCa among men in the Kumasi metropolis.

Methodology: This was a descriptive cross-sectional study, conducted at the central/Kejetia market in Kumasi, Ashanti region of Ghana. A well-structured questionnaire was used to collect data from a total of 394 respondents who were conveniently sampled for the study. Statistical analysis was done using SPSS. P-value less than 0.05 was considered statistically significant.

Results: The mean age (SD) of the participants was 44.04 (±12.2) years with higher proportions within the age range of 30-39 years (38.2%). Predominant of the study participants had heard of PCa (96.1%). The largest percentages of the participants (61.8%) had high knowledge of PCa and majority (47.4%) reported to have heard of PCa from the radio. Most of the respondent reported to know the symptoms of PCa (52.6%) and the highest frequency mentioned symptoms from participants was frequent urination (65.2%) followed by blood in urine (39.1%) waist pain (17.1%), loss of sex drive (14.5%) and weak urinary system (11.8%). There was a statistically significant association between level of knowledge and religion (p=0.009). Higher proportions of the participants had positive attitude towards prostate PCa (64.5%). Statistically significant association between the attitude of the respondents and religion (p=0.042) was observed. The majority of the participants had good perception about PCa seriousness, susceptibility and benefits (67.1%). Moreover, the level of education of respondents was significantly associated with perception of susceptibility, seriousness and benefits of PCa (p=0.0003).

Conclusion: There was generally high awareness and knowledge level of PCa among males in the Kumasi metropolis. However, knowledge on preventive measures for PCa was low. The high level of awareness and knowledge on PCa was reflected in the positive and good perception exhibited by the participants in this study. Therefore, creation of awareness of information on the signs and symptoms, treatment and preventive measures of PCa is required.

ABBREVIATIONS

PCa: Prostate Cancer; GLOBOCAN: Global Cancer Project

INTRODUCTION

Prostate cancer (PCa) is rated the second leading cause of cancer death among males in the USA, and the most commonly diagnosed non-cutaneous malignancy [1]. It is the number one cancer in both incidences and mortality in Africa, constituting 40,000 (13%) of all male cancer incidences and 28,000 (11.3%) of all male cancer-associated mortalities [2]. In Ghana, according to Global Cancer Project (GLOBOCAN) 2008, the Age Standardized incidence rate was estimated to be 11.8-20.4 per 100,000 population [3]. In 2012, PCa was one of the common cancers

seen among males at the Korle-Bu teaching hospital representing 26.5% of cancer cases[4]. In Kumasi, the Kumasi Cancer Registry has reported PCa incidence of 13.2% and as one of the common cancers among males [5].

PCa is often asymptomatic especially in the early stages, but if left untreated, may metastasize to nearby organs resulting in men experiencing aches and pains in the bones, pelvis, hips, ribs, and back [6]. Although the exact cause of PCa is unknown, it has been associated with a number of risk factors. Growing older increases a man's risk of prostate cancer [5]. One of the most effective intervention tools for PCa is screening and early diagnosis [7]. Generally, screening and management of cancers is often influenced by local perceptions, and beliefs and cultural norms [8] particularly in the developing countries. However, the lack of knowledge on the disease and the low uptake of routine screening among men most at risk of developing prostate cancer compound the problem. Despite the numerous prostate cancer-related studies in other parts of the world, particularly in developed countries, studies on the knowledge, attitude and perception of PCa especially in the Kumasi municipality in Ghana is limited. Increased awareness of prostate cancer may demystify poor perceptions and negative attitudes toward the early screening for the disease. Limited studies in Kumasi and Ghana in general, have led to over-dependence on research findings from elsewhere in the world, despite the fact that risks and factors influencing the outcomes of the disease are basically different. Therefore, this study sought to determine the knowledge, perceptions about prostate and the attitudes toward PCa screening among males in the Kumasi Municipality.

MATERIALS AND METHODS

Study design and setting

This study was a cross-sectional descriptive study among male respondents at the central market in the Kumasi Municipality. Quantitative approaches through structured questionnaires were used to collect data on demographic, socioeconomic, perception, attitude and knowledge on PCa and uptake of PCa screening. Kumasi is the capital city of the Ashanti region of Ghana.It is located in the south-central part of the country, about 250 km (by road) northwest of Accra. The Kumasi Central Market (also known as Kejetia market) is an open-air market in the city of Kumasi, the capital of Ashanti. The Kejetia market is the largest single market in Kumasi, Ashanti, in West Africa and on Continental Africa with over 45,000 stores and stalls. It is bordered to the North by the Kumasi Cultural Centre and to the North West by the Komfo Anokye Teaching Hospital. The southern part of the market forms a border with Adum, the commercial centre of the city. Virtually everything that one wants to purchase from a market can be found at Kumasi Central Market. Kejetia market ranges from gold jewelry and diamond by the Ashant is food, gorgeous Ashanti kente, clothing, fabrics and footwear (in the center of the market), spices, grains, and toiletries. People from far and near all come to the market to trade; hence it was an ideal place to sample people's knowledge, attitude and perception about PCa which is a major health concern.

Study population

The study population comprised of adult males living in Kumasi and aged at least thirty years. Although an age of forty

years has been reported as the age at risk for PCa (KEMRI, 2006), the age at risk for PCa is unknown, hence thirty years was the minimum age of entry into this study since at this age most men have at least high school education and therefore aware of PCa.

Sample size justification

A total of 394 male adults were recruited for the study using a assumed distribution response rate among the respondent 50%, a precision of 5% at 95% confidence interval (z-score = 1.96). Using the Cochran's formula;

$$n = \frac{z^2(1-p)p}{d^2}$$

Where n = minimum sample size; Z = standard normal variance (1.96) to obtain a power of 95% confidence interval and a type 1 error probability of 5%; Absolute standard error d = 0.05; P= distribution response rate (50%); 1- P = proportion of the non-response distribution rate. The minimum size required was 381; however, to accommodate for a non-response rate of 10.0% and stronger statistical power and effect size, the samples were projected to 394 patients.

Sampling technique

The study utilized a non-probability sampling technique (thus convenience sampling) for obtaining respondents for interviewing. The Kejetia Central market was purposely selected as the study area.

Validity and reliability

The questionnaire was pre-tested on a sample of 50 male adult in suburb in the Kumasi metropolis which is different from the study site. Data collection was done solely by the researcher. All questionnaires returned were checked for mistakes and completeness. Questionnaires with unclear responses or which had missing information that could not be clarified were excluded. The data was entered in an excel spreadsheet. Double data entry and cleaning was done to reduce data entry errors and validated**.** Reliability coefficients ranging from 0.00 to 1.00, with higher coefficients indicating higher levels of reliability was used to determine the validity and the reliability of the questionnaire. The reliability coefficients for all the questions were 0.903.

Data collection tool

A well-structured questionnaire was used to collect data from the respondent. The questionnaire was developed based on the objectives of the study and also based on the reviewed literature. For the target male population, a structured questionnaire with closed ended questions was used for data collection. The questions were simple and straight forward for ease of response by the respondents. The instrument captured information on demographic, socio-economic, religious affiliation, knowledge, attitude and perception on prostate cancer, and uptake of PCa screening.

Inclusion and exclusion criteria

The inclusion criteria was that the respondent must be a male, aged 30 years and above, and resides in the Kumasi municipality.

The study excluded male below the age of 30 and female of any age in the Kumasi municipality.

Ethical consideration

Approval for this study was obtained from the University of Cape Coast Ethical Review Board. Participation was voluntary and written informed consent was obtained from each participant. Respondents were assured that the information gathered was to be used strictly for research and academic purpose only. In addition, respondents were given the freedom to opt out any time they thought they couldn't continue with the study.

Data management

Knowledge on PCa was measured using 11 questions on the causes, signs and symptoms, and treatment. The questions were scored on two point likert scale of yes and no. The scale scores 1 as yes and 0 as no. The 11 items measuring knowledge on prostate cancer were added up to get sum index with a distribution ranging from 0 to 11 with mean 6.83 (SD =2.09), the median split was used (7.0), which was dichotomized into two groups i.e. 1 = those who have high knowledge level and 0 = low knowledge level which was 0-6 and 7-11.

Perception about PCa was assessed using 10 questions on causes, risk susceptibility factors, severity and treatment. The questions were scored on a 5 point Likert-like scale of strongly agree, agree, neutral disagree and strongly disagree. The scale was scored as strongly agree 1 agree 1, neutral 0, disagree 0, strongly disagree 0 for the positive questions, and strongly disagree 1, disagree 1, neutral 0, agree 0, strongly agree 0 for the negative statements. The 10 items measuring perception on prostate cancer were added up to get sum index with a distribution ranging from 4 to 10 with mean 7.26 (SD =1.46), the median split was used (7.0), which was dichotomized into two groups i.e. 1 = those who have good perception and 0 = bad perception which was 4-6 and 7-10.

Attitude towards PCa was assessed using 6 questions. The questions were scored on a 5 point Likert-like scale of strongly agree, agree, neutral, disagree and strongly disagree. The scale was scored as strongly agree 1 agree 1, neutral 0 disagree 0 strongly disagree 0 for the positive questions, and strongly disagree 1, disagree 1, neutral 0, agree 0, strongly agree 0 for the negative statements. The 10 items measuring perception on prostate cancer were added up to get sum index with a distribution ranging from 1 to 6 with mean 4.12 (SD =1.47), the median split was used (4.0), which was dichotomized into two groups i.e. 1 = those who have positive attitude and 0 = negative attitude which was 1-3 and 4-6.

Statistical analysis

Data was entered in Excel spread sheet for window and analysed using SPSS version 22. Data for continuous variables between two groups were presented as mean ± SD standard deviation. Categorical variable were presented as frequency (n) and percentage (%). Pearson's Chi square ($\chi2$) and Fisher's exact test analysis was used to examine the association between the variables; the associations between socio-demographic and perception, socio-demographic and level of knowledge, and

socio-demographic and attitude towards PCa. Significance was defined as a p-value of <0.05.

RESULTS

The mean age (SD) of the participants was 44.0(±12.2) years with higher proportions within the age range of 30-39 years (38.2%). The majority of the participants were traders (52.6%) followed by others (comprising of shoemakers, porters,) (27.6%) and teaching (11.8%). More than half of participants were married (71.1%) while 15.8% were single. Most of them have had education to the senior secondary school level (32.9%) followed by junior high school level (30.3%) and to the primary level (28.9%). Predominant of the participants did not have a family history of prostate cancer (81.6%) (Table 1).

The predominate of the study participants have heard of prostate cancer (96.1%) while only 3.9%) have not heard of it (Figure 1).

The majority (47.4%) reported to have heard of PCa from the radio, followed by doctors (13.2%), read about it (13.2%), friend (11.8%) nurse (2.6%) and relative 2.6% respectively (Figure 2).

The largest percentages of the participants (61.8%) had high knowledge of prostate cancer whiles 38.2% had low knowledge (Figure 3).

High knowledge was observed among higher proportions of the married participants (74.1%), aged 30-39 years (31.9%) those who had their education to the SHS level (34.0%), hospital needs sponsored by NHIS (48.9%) and have regular source of income (78.7%). There was a statistically significant different between level of knowledge and religion (p=0.009). However, the result did not find any significant difference in the prevalence of high and low knowledge in relation to other socio-demographics (Table 2).

Higher proportions of the participants had positive attitude towards prostate cancer (64.5%) while 35.5% had negative attitude (Figure 4).

The majority of the participants had good perception about prostate cancer seriousness, susceptibility and benefits (67.1%) whiles 32.9% did not had bad perception (Figure 5).

Positive attitude was high in participants within the age range of 30-39 years (38.8%). There was a statistically significant different between respondents' attitude and religion (p=0.042). However, the result did not find any significant difference in the prevalence of positive and negative attitude among the participants in relation age groups (p=0.663), occupational status (p=0.572), educational level (p=0.296), sponsor of hospital needs (p=0.191), regular income (p=0.453) and family history (p=0.172) (Table 3).

Higher proportion of the participants strongly disagreed that if participants were not aware of PCa they can't have it (50.0%). Most of them disagreed that PCa is an infection that can be transmitted sexually (47.4%), PCa has no cure (39.5%), PCa cannot make me infertile (35.5%), it affects only black people (53.9%) and it doesn't kill (39.5%). The majority of the participants strongly agreed that PCa is a deadly disease (44.7%), all men are at risk of having PCa (44.7%) and perceived great

Table 1: Socio-demographic characteristics of study participants.		
Variables	**Frequency (n=394)**	**Percentage (%)**
Age(mean ±SD)	44.04±12.2	
Age Groups		
30-39	151	38.2%
40-49	114	28.9%
50-59	72	18.4%
60+	57	14.5%
Occupation		
Farming	31	7.9%
Teaching	47	11.8%
Trading	207	52.6%
Others	109	27.6%
Marital Status		
Single	62	15.8%
Married	280	71.1%
Divorced	31	7.9%
Widowed	21	5.2%
Religion		
Christian	332	84.2%
Muslim	52	13.2%
Traditional	10	2.6%
Education level		
Primary	114	28.9%
JHS	119	30.3%
SHS	130	32.9%
Tertiary	31	7.9%
Sponsor of hospital needs		
NHIS	202	51.3%
Relatives	16	4.0%
Self	176	44.7%
Family History of PCa		
Yes	73	18.4%
No	321	81.6%

SD: Standard Deviation; PCa: Prostate Cancer; JHS: Junior High School; SHS: Senior High School; NHIS: National Health Insurance Scheme

Figure 1 Frequency distribution of awareness of prostate cancer.

benefits in going to the clinic regularly for medical check-ups (48.7%). Moreover, 36.8% of the participants agreed that any male of advancing age can have PCa (Table 4). As shown in Table 5, good perception was also observed among higher proportion the married participants (70.6%), those who had their education to the SHS (37.3%) and primary level (37.3%), hospital needs sponsored by NHIS (47.1%) and themselves (47.1%) and have regular source of income (86.3%). There was a statistically significant different between perception of susceptibility, seriousness and benefits and educational level (p=0.003).
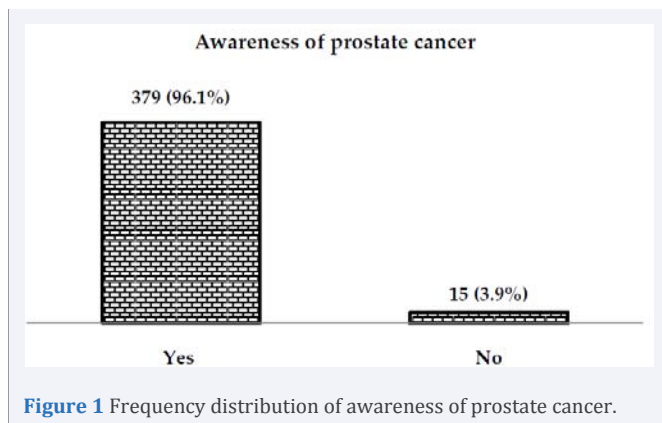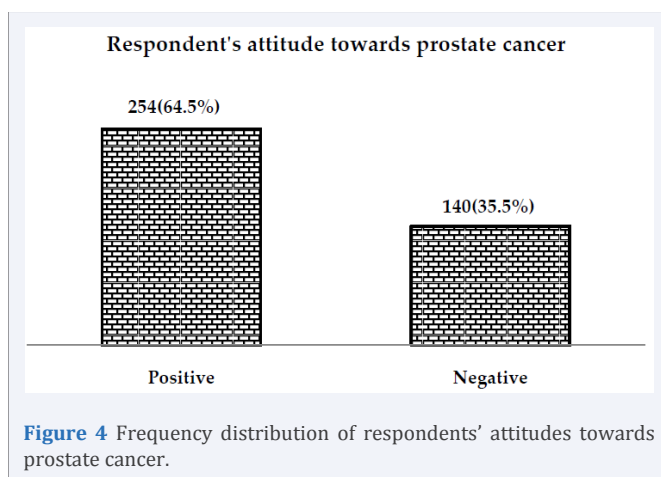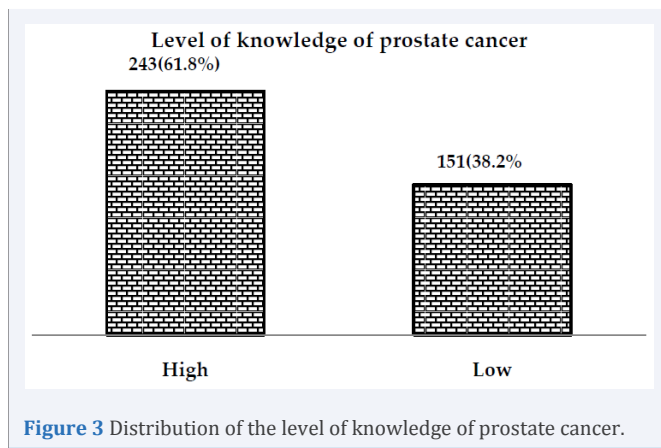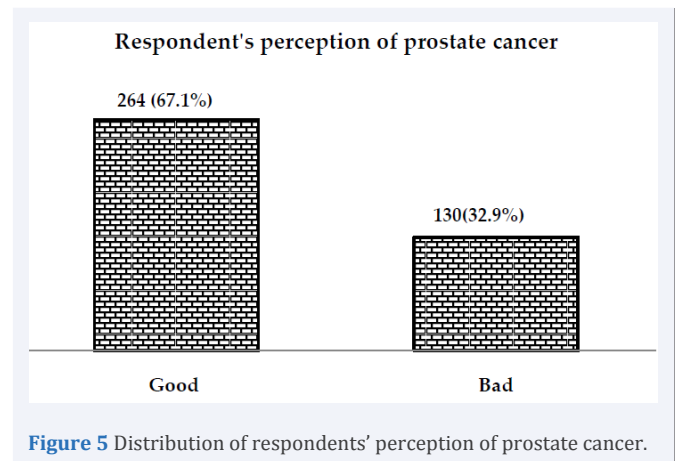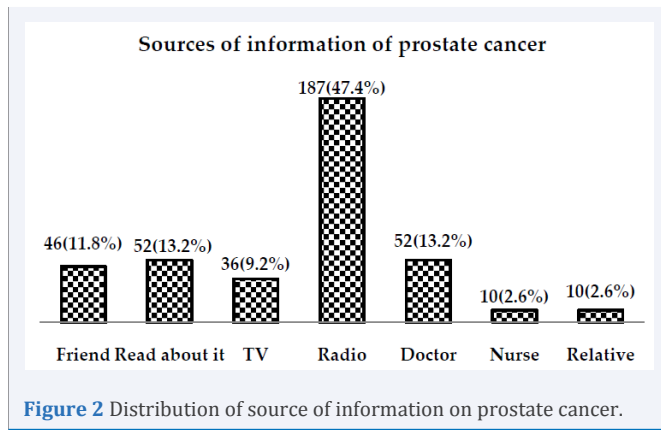
DISCUSSION

PCa is an important concern for all men since it poses a health threat especially to men over the age of 40 years. Inadequate literature exists on knowledge, attitude and perception of PCa and screening behavior particularly among males in Kumasi, Ghana. This study therefore assessed the knowledge, attitude and perception of prostate cancer among men in Kumasi, Ghana.

Findings from this study showed that, majority (96.1%) of the study participants have heard of PCa which indicates that the level of awareness about PCa among the study population was high. Similar high level of awareness was found among male university students in Ghana [9] and among older men in Oyo State of Nigeria [10]. The result from this study is however contrasted by a study among public servants in Nigeria where 94.2% of the study participants were completely uninformed of PCa [11]. The high level of awareness in our study could be due to the fact that most of the study participants have attained secondary and could therefore access information.

The source of information about PCa in this study showed that, the majority (47.4%) reported to have heard of PCa from the radio. As part of Ghana's strategy to reduce morbidities and mortality from PCa, the government has implemented strategies which involve increased public discussions and media coverage of PCa to increase awareness and early screening for the disease. And this can also account for the high awareness among the study participants. Our finding is also supported by a similar study in South Africa among males attending Urological Clinic [1] and a study among Filipino men in the Hawaii state of America [12] where radio and television were identified as source of information on prostate cancer. A study by Arafa et al. [13], reported that most of their study participants received information on PCa from their physician (a health professional), which was the second highest source of information in this present study. Another study also identified family and friends and health professionals as source of information on PCa [14]. These sources could also be important sources of information in carrying out PCa awareness campaigns.

The results of the study found high level of knowledge of PCa (61.8%). This is consistent with a study by Ebuehi and Otumu [15] in Nigeria and a study among Africa immigrants (63%) in the United State [16] where high level of knowledge about prostate cancer were recorded. However, low levels of knowledge about prostate cancer have been reported in Burkina Faso by Kabore et al. [17]. The study by Kabore et al. [17], was however among the general public and about 63% of the study participants had primary education or less as compared to this study group where

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Figure 2 Distribution of source of information on prostate cancer.

Figure 3 Distribution of the level of knowledge of prostate cancer.

Figure 4 Frequency distribution of respondents' attitudes towards prostate cancer.

Figure 5 Distribution of respondents' perception of prostate cancer.

majority have had a secondary or tertiary education and are more enlightened.

The results of this study found statistically significant difference between level of knowledge and religion. In a study by Yeboah-Asiamah [18] in Ghana, all the socio-demographics were found not to be associated with knowledge which is contrary to our current study. The significant association of religion to knowledge of PCa could be explained by the observation that most churches in Ghana also engage in health talks for their congregation which could account for the high level of knowledge among Christians. Other previous studies among uneducated and low income minority (Latino) men showed that increasing age, lack of good secondary or tertiary education and income was associated with lower knowledge of PCa [19].

In this study, more than half of the participants had positive attitude towards PCa. Similar to our current finding, Yeboah-Asiamah [18] reported a positive attitude towards PCa among study population. Most of the respondents recognized the fact that screening for PCa is important, helpful as it keeps one healthy, beneficial as early detection of PCa could result in better treatment outcomes. The positive attitude towards screening for PCa observed in this study is contrary to a study which reported negative attitude toward PCa screening among male university students [9]. This observed difference could be due to sampling difference as this current study involved somehow elderly male who appreciate the importance of PCa screening and also had attained the risk age.

Some socio-demographics factor such as religious status was significantly associated with the attitude of the respondents towards PCa. Moreover, positive attitude was observed among higher proportions of Christians compared to the other religious groups. This could be due that Christians are more concern about their health and hence obey health related advice.

Literature shows that respondents with good knowledge about prostate cancer are more likely to have positive attitude towards screening. Other studies have also identified level of knowledge on PCa as a predictor of attitude toward screening [13], but this association was not observed in our current study. Contrary to the assertion that acquiring the right knowledge could inform positive attitude and in turn prompt healthy practices [13]. Yeboah-Asiamahreported that positive attitude however did not translate into screening practices among the study participants, suggesting that knowledge alone may not be a motivational factor for translating favorable attitudes into screening practices [18].

In this present study, respondent had good perception of susceptibility, seriousness and benefits of PCa (Figure 5). This finding is in line with a similar cross-sectional study by Yeboah-Asiamah [18] who revealed that respondents held good perception about PCa. Moreover, majority of the respondents correctly perceived that PCa cannot be sexually transmitted, and believed that one is not certain to die when diagnosed with PCa,

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Table 2: Association between socio-demographics and knowledge level of prostate cancer among study participants.

Variable	Level of knowledge		X², df	p- value	
	High (n=243)	Low (n=151)			
Age Groups (years)	72(29.8)	78(51.7)	3.73, 3	0.292	
30-39	78(31.9)	36(24.2)			
40-49	52(21.3)	21(13.8)			
50-59	41(17.0)	16(10.3)			
60+					
Occupation					
Farming	15(6.4)	15(10.3)	0.68, 3	0.879	
Teaching	25(10.6)	21(13.8)			
Trading	134(55.3)	73(48.3)			
Others	67(27.7)	42(27.6)			
Marital Status			4.39, 3	0.222	
Single	32(12.8)	32(20.7)			
Married	181(74.5)	99(65.5)			
Divorced	25(10.6)	5(3.5)			
Widowed	5(2.1)	15(10.3)			
Religion			9.43, 2	**0.009**	
Christian	223(91.4)	109(72.4)			
Muslim	10(4.3)	42(27.6)			
Traditional	10(4.3)	0(0)			
Education level			2.11, 3	0.55	
Primary	78(31.9)	52(34.4)			
JHS	62(25.5)	57(37.9)			
SHS	83(34.1)	31(20.8)			
Tertiary	20(8.5)	11(6.9)			
Regular source of income				0.453	
No	52(21.3)	26(17.2)			
Yes	191(78.7)	125(82.8)			
Sponsor of hospital needs			0.28, 2	0.868	
NHIS	119(48.9)	83(55.2)			
Relatives	10(4.3)	5(3.4)			
Self	114(46.8)	63(41.4)			
Family History of PCa				0.130	
No	186(76.6)	123(81.7)			
Yes	57(23.4)	28(18.3)			

PCa: Prostate Cancer; JHS: Junior High School; SHS: Senior High School; NHIS: National Health Insurance Scheme, X²: Chi-Square; df: Degree of freedom
p<0.05 is statistically significant

Table 3: Association between socio-demographics and attitude towards prostate cancer.

Variables	Respondents' Attitude		X², df	p- value
	Positive Attitude (n=254)	Negative Attitude (140)		
Age Groups (years)			1.58, 3	0.663
30-39	99(38.8)	52(37.0)		
40-49	62(24.5)	52(37.0)		
50-59	52(20.4)	21(14.8)		
60+	41(16.3)	15(11.2)		
Occupation			2.00, 3	0.572
Farming	21(8.2)	10(7.4)		
Teaching	36(14.3)	10(7.4)		
Trading	119(46.9)	89(63.0)		
Others	78(30.6)	31(22.2)		
Marital Status			4.77, 3	0.189
Single	52(20.4)	10(7.4)		
Married	182(71.4)	99(70.4)		

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			X², df	p-value
Divorced	10(4.1)	21(14.8)		
Widowed	10(4.1)	10(7.4)		
Religion			6.32, 2	**0.042**
Christian	233(91.8)	99(70.4)		
Muslim	16(6.2)	36(25.9)		
Traditional	5(2.0)	5(3.7)		
Education level			3.70, 3	0.296
Primary	93(36.7)	36(26.0)		
JHS	84(32.7)	36(25.9)		
SHS	67(26.5)	47(33.3)		
Tertiary	10(4.1)	21(14.8)		
Regular source of income				0.134
No	62(24.5)	16(11.1)		
Yes	192(75.5)	124(88.9)		
Sponsor of hospital needs			3.32, 2	0.191
NHIS	114(44.9)	88(63.0)		
Relatives	15(6.1)	0(0)		
Self	125(49.0)	52(37.0)		
Family History of PCa				0.172
No	218(85.7)	104(74.1)		
Yes	36(14.3)	36(25.9)		
Knowledge				0.459
Low	86(33.7)	57(40.7)		
High	168(66.3)	83(59.3)		
Perception				0.204
Bad	73(28.6)	57(40.7)		
Good	181(71.4)	83(59.3)		

PCa: Prostate Cancer; JHS: Junior High School; SHS: Senior High School; NHIS: National Health Insurance Scheme; X²: Chi-Square; df: Degree of freedom p<0.05 is statistically significant

Table 4: Distribution of factors related to perception of benefits, seriousness and susceptibility of prostate cancer.

Variables	Strongly Agree n (%)	Agree n (%)	Neutral n (%)	Strongly Disagree n (%)	Disagree n (%)
If am not aware of PCa, I can't have it	36(9.2)	21(5.3)	0	197(50.0)	140(35.5)
PCA is a deadly disease	176(44.7)	140(35.5)	0	41(10.5)	36(9.2)
PCa is an infection	26(6.6)	31(7.9)	10(2.6)	140(35.5)	187(47.4)
PCa has no cure	83(21.1)	83(21.1)	10(2.6)	62(15.8)	156(39.5)
PCa cannot make me infertile	46(11.8)	93(23.7)	5(1.3)	109(27.6)	140(35.5)
Any male of advancing age can have PCa	140(35.5)	145(36.8)	10(2.6)	21(5.3)	78(19.7)
PCA affect only black people	10(2.6)	26(6.6)	0	106(26.8)	212(53.9)
All men are at risk of PCa	176(44.7)	114(28.9)	16(4.0)	26(6.6)	62(15.8)
PCa does not kill	36(9.2)	46(11.8)	5(1.3)	151(38.2)	156(39.5)
I perceived great benefit for regular medical check up	192(48.7)	127(32.9)	0	20(5.2)	52(13.2)

PCa: Prostate Cancer

Table 5: Relationship between socio-demographics and perception of prostate cancer among study participants.

Variables	Respondents' perception				
	Good (n=264)	Bad (n=130)	X², df	p- value	
Age Groups					
30-39	16(5.9)	15(12.0)	1.26. 3	0.739	
40-49	36(13.7)	11(8.0)			
50-59	140(52.9)	68(52.0)			
60+	72(27.4)	36(28.0)			
Marital Status			2.76, 3	0.43	
Single	41(15.7)	21(16.0)			
Married	186(70.6)	94(72.0)			

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Divorced	16(5.9)	15(12.0)			
Widowed	21(7.8)	0(0)			
Religion			0.57, 2	0.751	
Christian	228(86.3)	104(80.1)			
Muslim	31(11.8)	21(16.0)			
Traditional	5(2.0)	5(4.0)			
Occupation			1.26, 3	0.738	
Farming	16(5.9)	15(12.0)			
Teaching	36(13.7)	10(8.0)			
Trading	140(52.9)	68(52.0)			
Others	14(66.7)	37(28.0)			
Education level			18.55, 3	**0.0003**	
Primary	99(37.33.9)	21(4.0)			
JHS	56(21.4)	62(48.0)			
SHS	99(37.3)	15(12.0)			
Tertiary	10(3.937.3)	5(16.0)			
Regular source of income				0.06	
No	36(13.7)	42(32.0)			
Yes	228(86.3)	88(68.0)			
Sponsor of hospital needs			2.21, 2	0.332	
NHIS	124(47.1)	78(60.0)			
Relatives	16(5.9)	0(0)			
Self	124(47.1)	52(40.0)			
Family History of PCa				0.248	
No	207(78.4)	145(88.0)			
Yes	57(21.6)	15(12.0)			

PCa: Prostate Cancer; JHS: Junior High School; SHS: Senior High School; NHIS: National Health Insurance Scheme; X²: Chi-Square; df: Degree of freedom
p<0.05 is statistically significant

even though they correctly identified PCa to be fatal. Furthermore, the respondent correctly perceived that all men are at risk of having PCa and also perceived great benefits in going to the clinic regularly for medical check-ups (Table 4). The result from this study is consistent with the reports from a cross-sectional study by Binka et al. [9], among male university students in Ghana where the respondents held an accurate perception about prostate cancer. Another study by Atulomah et al. [20], also found level of perception to be slightly above normal in Nigeria. This finding could be a reflection of the high knowledge about PCa exhibited among the study respondents.

This study involved male who were aged 30 years and above, and being black Africans, Ghanaians for that matter, placed them at high risk of getting PCa. In line with this, majority of the respondents (61.8%)correctly perceived themselves as been at risk of getting PCa which is consistent with a study by Talcott et al. [21], where Africa American men involved in the study recognized they were at a greater chance of getting PCa. However, these findings differ from previous studies among Nigerian men showing that only 19.4% of the men perceived themselves at risk of developing PCa [10].

In this study, perception was found to be associated with educational level. Respondents who have attained high education to the SHS and tertiary level were more likely to have good perception about PCa. This is consistent with a study by Makori et al. [22], in Kenya who reported that perception levels were correlated positively with university, diploma or secondary education. Similar studies showed that US Nigerian immigrants men had better perception of susceptibility to PCa, attitude towards PCa screening and PCa knowledge compared to the indigenous Nigerian men [23]. Increase knowledge about cause, risk factors, treatment options and preventive measures about PCacan demystify negative perceptions and misconceptions about PCa. This also shows that education can increase knowledge about PCa which could allay negative perceptions and misconceptions which have been identified to influence screening behaviour. Thus, empowering men with knowledge, particularly through the school system, can lead to behavioral, perceptional and attitudinal change leading to prevention of the disease. Findings of this study cannot be generalized for the whole population of Ghana since the study was conducted in only one region of Ghana.

CONCLUSION

There was generally high level of awareness and knowledge level about PCa among males in the Kumasi Municipality. However knowledge on preventive measures for PCa was low. Knowledge level on PCa was significantly influenced by the type of religion in this study. Therefore, creation of awareness of information on the signs and symptoms, treatment and importantly the preventive measures of PCa is required.

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