Determinants of beliefs and perception Intentions for Screen Prostate Cancer among Men in Anbar Government

Omer Ahmed Abed
Haider Mohammed Majeed

[1]BSN, Ministry of Health**,** Directorate of Health of Anbar /Fallujah Teaching Hospital for Maternity and Children, Anbar *Iraq. Email:*omer.abd2202m@conursing.uobaghdad.edu.iq

[2] *PhD Nursing, assistant professor, Department of Adult Nursing, College of Nursing, University of Baghdad, Baghdad, Iraq. Email: haidermm@conursing.uobaghdad.edu.iq, ORCID: 0000-0003-3351-0974*

Corresponding Author:

Haider Mohammed Majeed [2]**,** *PhD Nursing, assistant professor, Department of Adult Nursing, College of Nursing, University of Baghdad, Baghdad, Iraq. Email: haidermm@conursing.uobaghdad.edu.iq, ORCID: 0000-0003-3351-0974*.

Phone number: +96407702667831.

Omer Ahmed Abed
Haider Mohammed Majeed

Abstract

Background: Prostate cancer is topmost in terms of incidence and mortality among men. Poor perceptions and attitudes about prostate cancer screening are some reasons for late reporting for PC screening and treatment.This study aims to determinants of beliefs and perception intentions for screen prostate cancer among men in Al-Anbar Government. A across sectional design study was carried out in uolology outpatient at Anbar teaching hospitals. Study period extended from .Non-probability purposive sampling was used include 150 patients who visit outpatient clinic of urology consultation. Data were collected using a questionnaire. Study instruments consist from two parts. First, the demographic sheet included socio demographics information about the participants. The second part include Patients' beliefs and perception intentions for screen prostate cancer. The data collected was analyzed SPSS version 26. The restless study showed most of them were between 40 and 49 years old with average age of 48.48±9.402 years. The marital status shows that 90.0% of them were married. In regard to the educational level approximately one third of study participants hold bachelor degree. (37. 3%).The occupational status refers that 44.0 % of participants are working as governmental employees while 38.0% are working free works. Regarding Family history related to PCa, 95.3% of participants are not Family history related to PCa, 4.7% of participants are Family history related to PCa. Regarding residency, most of Participants are resident in urban areas (72.7%). The vast majority of participants had positive beliefs and perception in most items of questionnaire toward contributing factors and early detection of prostate cancer based on their total mean of scores (3.185).

Keywords: Patients, Beliefs, Perception, Screening, Prostate Cancer.

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المستخلص:

الخلفية: يعتبر سرطان البروستات هو الأعلى من حيث الاصابة والوفيات بين الرجال . التصورات السيئة والمواقف حول فحص سرطان البروستات هي بعض الأسباب الشائعة التي تؤخر علاج سرطان البروستات .تهدف هذه الدراسة إلى تحديد النوايا المرتبطة بالمعتقدات و التصورات لاجراء فحص سرطان البروستات بين الرجال في محافظة الأنبار. تم إجراء تصميم وصفي كمي في العيادات الخارجية في مستشفيات الأنبار التعليمية. امتدت فترة الدراسة من ١٨ سبتمبر ٢٠٢٣ إلى ٢٠ يناير ٢٠٢٤. تم اختيار لاعينة غير احتمالية هادفة تكونت من ١٥٠ مريض الوافدين الى العيادة الخارجية استشارية امراض المسالك البولية) في مستشفيات الأنبار التعليمية، العراق. تم جمع البيانات باستخدام الاستبيان. تكونت أداة الدراسة من جزأين. أولاً، شمل المعلومات الديموغرافية للمشاركين. أما الجزء الثاني فيشمل معتقدات المرضى ونواياهم الإدراكية باتجاه فحص سرطان البروستات. تم تحليل البيانات التي تم جمعها باستخدام برنامج SPSS . أظهرت نتائج الدراسة أن معظم المشاركين تتراوح أعمارهم بين ٤٠ و٤٩ عامًا بمتوسط عمر ٤٨,٤٨ ± ٩,٤٠٢ سنة. و أن ٩٠,٠% منهم متزوجون. وفيما يتعلق بالمستوى التعليمي فإن حوالي ثلث المشاركين في الدراسة حاصلين على شهادة البكالوريوس. (٣٧,٣%). أن ٤٤,٠% من المشاركين يعملون كموظفين حكوميين في حين أن ٣٨,٠% يعملون بأعمال حرة. فيما يتعلق بتاريخ العائلة المتعلق بـPCa، فإن ٩٥,٣% من المشاركين ليس لديهم تاريخ عائلي متعلق بـ سرطان البروستات ٤,٧% من المشاركين لديهم تاريخ عائلي متعلق بـ بسرطان البروستات،وفيما يتعلق بمكان السكن، فإن معظم المشاركين يقيمون في المناطق الحضرية (٧٢,٧%)،كان لدى الغالبية العظمى من المشاركين معتقدات وتصورات إيجابية تجاه النية على اجراء الفحوصات لكشف المبكر عن سرطان البروستات بناءً على متوسط مجموع درجاتهم (٣,١٨٥).

Introduction:

Prostate cancer (PC) is a disease of public health importance worldwide. It is the second most common cancer in men with 70% of the cases occurring in more developed countries (Ferlay et al., 2021). Possible causes of PC are unclear although increasing age, race and previous family history of the disease are known risk factors (Rawla et al., 2019). Prostate cancer screening with prostate-specific antigen (PSA) is controversial because of the associated over diagnosis and overtreatment. However, more recent studies reveal that the net benefit of PSA screening may be beneficial to black men compared with the

general population (Basourakos et al., 2022).Various perceptions of PC have been documented in the literature and this may influence screening and treatment for PC in both developed and developing countries, besides the disparities in the availability of tests for PC. A study revealed that African-American men perceived a diagnosis of cancer as a death sentence and avoided treatment (Hinata & Fujisawa, 2022). In another study among African-American men, embarrassment and the fear of a positive diagnosis were barriers to screening (Lin et al., 2021). Finnish participants in a randomized population-based screening trial stated previous screening, forgetfulness and not wanting to think about PC as reasons for not being screened (Taitt, 2018). A study in Uganda reports that many participants failed to undergo PC screening because they did not consider PC as serious as HIV; HIV testing was considered more important than PC screening (Siegel et al., 2023).There are conflicting findings on the benefits of early PC screening to reduce mortality, one study conducted in Europe reported a 20% reduction in PC-related mortality. However, a US study failed to show any reduction in PC-related deaths (Lillard et al., 2022). Nevertheless, the benefits of early screening to ascertain cancer status to initiate early treatment and reduce PC-related deaths cannot be overemphasized. Despite the high morbidity of PC in Ghana, about 75% of PC cases are reported late at health centers in advanced stages (Capece et al., 2020). It is argued that poor perceptions and knowledge about PC and the availability of alternative therapies are the reasons for late reporting for PC screening and treatment (Yeboah-Asiamah et al., 2017). Despite good knowledge of PCa among men in Central America, they had a poor perception of screening for the disease owing to the fear of the procedure and of receiving positive PCa result (Husaini et al., 2021). Strong beliefs in the benefits of PCa screening, notwithstanding, some Kenyan men do not perceive men over 40 years at risk of getting PCa. Furthermore, they had relatively high fatalistic beliefs, a high degree of fear and a high level of influence of family members towards PCa screening (Mutua et al., 2017).

In a Tanzanian study, despite the respondents' knowledge about PCa screening and their perception of being at risk of the disease, less than 8% had ever been screened (Bugoye et al., 2019). Likewise, a low PCa screening rate (5%) was found among Kenyan men in a study, although their intention to screen was high; the main barrier to PCa screening was their belief that they were well (Mbugua et al., 2021). Other possible barriers to PCa screening, as found in a Nigerian study, were ignorance of the disease, fear of a positive result and

financial constraints (Ugochukwu et al., 2019). In this study, we examined the beliefs and perception of male patients attending at the outpatient urology clinic of a Tertiary Health Institution in south-east, Al-Anbar.

Materials and Methods

The study was a cross-sectional descriptive study conducted among men aged ≥40 years in outpatient Clinics of Urology Consultation at Anbar teaching hospitals. Non-probability purposive sampling technique was used to select 150participants, study extend period from September 1,2023, to January1, 2024. The sample was selected based on the specific criteria such as men age 40 years old and above, the men with diseases of the reproductive and urinary system), The men without prostatic cancer, exclusion criteria the men who had undergone prostatectomy, the men who already have prostate cancer, the men age under 40 years old. Study instruments consist from two parts. First part related demographic information of participants. The second part include patients' beliefs and perception intentions for screen prostate cancer was developed by Majeed and Atiyah (2021), Consists of (20) items for patients' beliefs and perception intentions for screen prostate cancer. Each item was evaluated at the four-point Likert scale (i.e., 1 = strongly disagree, 2 = sort of disagree, 3 = sort of agree, 4 = strongly agree). This gave possible minimum and maximum sum total scores of 20 and 80 for beliefs and perception. The ethical approval for this study was obtained from the scientific and research committee at the college of Nursing- university of Baghdad (issueNo.2410/ 10/11/2023), while verbal consent was obtained from the participants and they were assured of the confidentiality of their information. Descriptive and inferential statistical procedures were conducted. The descriptive analysis was presented with frequency and percentage and mean and standard deviation. The Chi square test was patients to determine the association between Socio-Demographic Characteristics and perceptions of Patients Toward Prostate Cancer. Statistically significant when the p-value ≤ 0.05. All the data were analyzed with SPSS Statistics (version 26).

Results:

The results of the study revealed that the age group (40-49) constituted the majority of the study participants (54.7%) with an average age of 48.48±9.402 years, where the minimum age was 40 years. most of them were between 40

and 49 years old with average age of 48.48±9.402 years. The marital status shows that 90.0% of them were married. In regard to the educational level, the participants were grouped into eight categories, approximately one third of study participants hold bachelor degree. (37.3%), intermediate school (16. 0%), Secondary (12%), primary (14.7%), diploma (14%) and post-graduate (4. 7%).The occupational status refers that 44.0 % of participants are working as governmental employees while 38.0% are working free works. Regarding monthly income, indicates that 53.3% of participants have a monthly income of (300000-600000) Iraqi dinars, while 13.3% have a monthly income of (900.1000& Above) Iraqi dinars. Regarding Family history related to PCa, 95.3% of participants are not Family history related to PCa, 4.7% of participants are Family history related to PCa. Regarding residency, most of Participants are resident in urban areas (72.7%) (Table 1). Table **(2)** showed that the vast majority of participants had positive beliefs and perception in most items toward contributing factors and early detection of prostate cancer based on their total mean of scores (3.185). This table also showed that some patients had negative beliefs and perception towards early detection of prostate cancer in items (5,20). Also, this table showed most patients recognize the potential benefits of early detection, based on their mean of scores. for items like (early detection tests make me more cautious of the disease) and (Early detection of the disease leads to a better recovery and treatment). While the participants' beliefs and perception were negative toward contributing factors and early detection of prostate cancer in the fifth paragraphs (I intend to have digital rectal examination in the next months) and the twentieth paragraph (prostate cancer does not affect my marital relationship) based on their average scores. Table (3) showed high significant association between patient perceptions and their sociodemographic characteristics in all variables except in marital status and family history   there is no significant relationship with the level knowledge at p value ≤ 0.05.

Table (1): Distribution of Sample According to their Socio-Demographic Characteristics

Demographic Variables	Study Participants (N=150)		
	Groups	Frequency	Percentage
Age Group	40-49 Years	82	54.7
	50-59 Years	35	23.3

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	60 Years & above	33	22.0
	MS±SD = 48.48±9.402		
Marital status	Single	10	6.7
	Married	135	90.0
	Widowed	2	1.3
	Divorced	2	1.3
	Separated	1	0.7
Educational level	Illiterate	1	0.7
	Read &write	1	0.7
	Primary	22	14.7
	Intermediate	24	16.0
	Secondary	18	12.0
	Diploma	21	14.0
	College	56	37.3
	Post-graduate	7	4.7
Occupation	Employee	66	44.0
	Free work	57	38.0
	Retired	19	12.7
	No working	8	5.3
Monthly Income	300.000-600.000	80	53.3
	601.0000-900.0000	50	33.3
	900.1000& Above	20	13.3
Family history related to PCa	No	143	95.3
	Yes	7	4.7
Residence	Urban	109	72.7
	Rural	41	27.3

F= Frequency, %= Percentage

Table (2) Descriptive Analysis of Patients' beliefs and perception Toward Early detection of Prostate Cancer for Study

beliefs and perception items	M.S	SD	Ass.
1. Prostate cancer is disease may be treated	3.49	.576	SP
2. I feel comfortable and calm when conducting screening for PCa	3.59	.569	SP

3. I intend to have a prostate cancer screening examination in the next months	3.09	.915	P
4. Arranging my schedule to go through prostate cancer screening would be an easy thing for me to do	3.03	.763	P
5. I intend to have digital rectal examination in the next months	2.29	1.04	N
6. Conduct prostate screening I have more important than any other work	3.13	.791	P
7. conducting prostate screening tests to detect as disease early	3.66	.633	SP
8. Early detection tests make me more cautious of the disease	3.73	.487	SP
9. Early detection tests are an effective way to detect the disease	3.69	.555	SP
10. Early detection tests protect me from prostate cancer	3.50	.693	SP
11. I think the disease can be avoided if take necessary precautions	3.35	.685	SP
12. I think early detection tests are free of any difficulties	3.33	.642	SP
13. family history of PCa is more likely to develop disease than others	3.29	.816	SP
14. Performing tests in order to satisfy my family	2.51	1.03	P
15. performing PCa screening are not be embarrassing	3.10	.784	P
16. I think prostate screening will be not painful	3.02	.719	P
17. Detected my has cancer during an examination is not frightening	2.67	1.02	P
18. Early detection of the disease leads to a better recovery and treatment	3.65	.545	SP
19. Early treatment increase my chances of living a longer life	3.45	.799	SP
20. Prostate cancer does not affect my marital relationship	2.14	1.08	N
Total mean of score	**3.185**		**P**

*M.S. = Mean of score, SD=Standard deviation, *Ass. = the level of assessment, 1- 1.74 = Strong negative perception and beliefs (Sn), 1.75-2.49= Negative perception and beliefs (N), 2.50-3.24= Positive perception and beliefs (P), 3.25-4= Strong positive perception and beliefs (SP)

Table (3) Association between Socio-Demographic Characteristics and beliefs and perception of Patients Toward Prostate Cancer

Socio-demographic variables	beliefs and perception level		
	Chi-Square	P value	Sig.
Age groups	**.273**	**.014**	**H.S**
Marital status	**.798**	**.058**	**N.S**
Educational level	**.445**	**.000**	**H.S**
Occupation	**.310**	**.002**	**H.S**

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Monthly Income	**.810**	**.000**	**H.S**
Family history	**.404**	**.174**	**N.S**
Residence	**.465**	**.016**	**H.S**

* Sig. = significance level ≤ 0.05= significant

Discussion:

Regarding socio-demographic characteristics which are presented in table (1) showed the eligible sample for this study consisted of (150) adult men, the age group (40-49) constituted the majority of the study participants (54.7%) with an average age of 48.48±9.402 years, where the minimum age was 40 years. And this don't agree with the findings from other studies (Majeed et al. 2023; Hassan et al. 2020). but concurs with the findings from other studies (Majeed & Atiyah 2021; Atiyah and Majeed 2020). The marital status shows that 90% of them were married and this concurs with the findings from other studies (Majeed et al. 2023; Majeed & Atiyah 2021; Majeed 2017). In regard to the educational level, the participants were grouped into eight categories, approximately one third of study participants hold bachelor degree (37. 3%) and this concurs with the findings from other studies (Majeed & Atiyah 2021; Atiyah and Majeed 2020). The occupational status refers that 44 % of participants are working as governmental employees and this concurs with the findings from other studies (Majeed et al 2020). Regarding residency, most of participants are resident in urban areas (72. 7%) and this concurs with the findings from other studies (Majeed, et al 2021; Atiyah, et al 2020; Jasim et al 2020; Abed , et al 2024; Majeed , et al 2017). Regarding family history related to PCa, 95.3% of participants are not family history related to PCa, 4.7% of participants are Family history related to PCa and this concurs with the findings from other studies (Atiyah, et al 2020; Jasim et al 2020). Regarding patient's beliefs and perception, the findings of this study that have had findings indicated that (49.3%) of the participants had strong positive beliefs and perception towards and early detection of prostate cancer, in addition, (48%) of the participants had positive beliefs and perception towards early detection of prostate cancer. While (2.7%) of the participants had negative beliefs and perception towards early detection of prostate cancer and no one had strong negative beliefs and perception towards early detection of prostate cancer. and this concurs with the findings from other studies (Adams et al. 2020; Gift et al. 2020; Choi and Wan 2021; Musalli et al. 2021; Alqudah et al. 2022; Onyeodi et al. 2022). This is in

consistence with the fact that, prostate cancer is considered to be one of the leading causes of death in men worldwide. With regard to participants' perception of prostate cancer, it was found that the majority perceive that they can still get prostate cancer even if they are not awareness of it. Indeed, even though prostate cancer is prevalent with increasing age, all men are at risk for prostate cancer. The participants also perceive that prostate cancer is a fatal disease (Binka et al.,2014). The study further found that the majority of the participants perceive that going for regular screening for prostate cancer would be of great benefit to them in the future. The participants therefore recognized the value of regular prostate cancer screening in their lives. Indeed, screening for prostate cancer can help find cancers at an early stage, when they are more easily cured and help people live healthier and longer lives. Unawareness of screening opportunities implies that the participants will have low screening rate and will therefore be unaware of their status. This is consistent with a similar study in which (Olaoye et al.,2022) observed that a large proportion of the participants in the study were unaware of prostate cancer screening services. This finding is at variance with the findings of (Olaoye et al.,2022;Adibe et al.,2017)that most of the participants had a high perception of prostate cancer. The majority of the respondents reported a high perceived benefit of prostate cancer. This is consistent with the findings of studies conducted in Ghana and Iran (Yeboah-Asiamah et al.,2017). The similarities in findings may be because of their level of knowledge of prostate cancer which enables them to know the benefit of prostate cancer screening. These participants showed high perceived seriousness towards prostate cancer. However, this study is at variance with the findings of (Enemugwem et al.,2019), where the majority of the respondents showed moderate perceived seriousness towards prostate cancer. This is similar to the findings of a study in Ghana (Yeboah-Asiamah et al.,2017). Regarding association between socio-demographic variables and beliefs and perception the showed that demonstrated high significant association between patient beliefs and perception and their sociodemographic characteristics in all variables except in marital status and family history   there is no significant relationship with the level knowledge at p value ≤ 0.05. and this concurs with the findings from other studies (Hassan et al. 2020; . Saeed et al. 2023; Saeed et al. 2023; Al-Alreda et al. 2023; Al-Reda et al. 2023). This is in variance with the findings in (Ogundele et al., 2017), where they reported that there was a significant relationship between educational level (p=0.008) and willingness to screen for prostate cancer. The result also showed that the Age (X2=6.39, p=0.094) was

not significant in their screening of prostate cancer. This is at variance with a study conducted in Uganda where they reported that there was a statistically significant association between the age of respondents (p=0.010) and the practice of prostate cancer screening (Morlando et al.,2017).

Conclusions:

Men in Al- Anbar Government they had moderate perception perceived susceptibility, high perceived seriousness, barrier, benefit. The utilization of prostate cancer screening services among the population is also low as there are misconceptions about prostate cancer screening. It is recommended that there should be mass sensitization, awareness creation, and education of men in Al-Anbar local Government area on prostate cancer in the media to increase their level of knowledge of prostate cancer and to change some of the misconceptions they had. Also, health outreach programs on prostate cancer screening can be organized to encourage the utilization of the screening service.

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Author contribution

All authors contributed to the study conception and design and material preparation. All authors have agreed on the final version by drafting the article and revising it critically for important intellectual content.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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