Knowledge of Prostate Cancer Screening among Jordanian Men in Amman

Ahmad M. Saleh [1*] • Wasileh Petro-Nustas [2] • Marjaneh Fooladi [2]

[1] Nursing Department, Mouwasat Hospital, Dammam, Kingdom of Saudi Arabia
[2] Department of Community Health Nursing, Faculty of Nursing, The University of Jordan, Amman, Jordan
al_raminy@yahoo.com

ABSTRACT

Background: Prostate cancer has become a major public health concern for primarily affecting older men. It is the most commonly diagnosed cancer in men and ranked second as the cause of cancer-related death. The main aim of the current study is to evaluate the awareness of Jordanian men age 40 and older regarding screening of prostate cancer.

Methods: It is a cross-sectional study involving 154 participants. A structured questionnaire detailing the biography, the knowledge of prostate cancer, the practice of screening by prostate specific antigen (PSA) and digital rectal examination (DRE).

Results: Findings showed that mean age of the participants is 53.1 (±9.52) years. 93.5% and 99.3% of Jordanian men had no experience with either of digital rectal examination (DRE) and prostatic-specific-antigen (PSA) testing to detect cancer. Also, 68.2% of Jordanian men had no knowledge of such screening, while 12.7% had a good knowledge score. Among the participants, 97.4% had low to intermediate knowledge scores.

Conclusion: Authors conclude that there was a remarkable lack of knowledge of prostate cancer among Jordanian men aged 40 year and above. Prostate cancer screening and serum PSA test for screening is mostly unknown among them. Therefore, developing a prostate cancer educational plan seems to be essential to cover the knowledge gap.

1. Introduction:

In recent years, Prostate Cancer (PC) has gained the spotlight as a public health concern affecting older men and being the second common cause of cancer death in the Western world (Jemal et al., 2011). Published statistics in Jordan, have shown that PC is the third most frequently occurring type of cancer among men, wherein 2010 alone, there were 218 newly reported cases (9.4%) and the third most common cause of death (6.2%) in total (Al-Tarawneh et al., 2010). Overall, 32.4% of new prostate cancer cases in 2010, were elderly men (≥65 years) who accounted for 3.3% of the Jordanian population. Distribution of new cancer cases by age group revealed that 4% were under the age 15 years, 25% were between 15–44 years and 38.4% were 45–64 years(Al-Tarawneh et al., 2010).

The American Cancer Society (ACS) has reported that men receiving a timely PSA screening test were at a lower risk for premature death from PC. Furthermore, increasing age, African ancestry, and a family history of PC were the only non-modifiable risk factors, whereas, adherence to a healthy lifestyle and early screening were listed as modifiable factors for reducing PC and its progression (ACS, 2015). To participate in health screening programs and consider preventative measures more seriously, men would benefit from knowledge increase regarding PC as a disease and several studies have reported that men with higher levels of knowledge show a higher tendency towards screening (Ackley, 2008; Rezaeian et al., 2014; Saleh et al., 2015; Saleh et al., 2016a). Counseling and education can lead to promote changes in human cognitions (Abedi et al., 2011).

The main aim of the current study is to evaluate the awareness of Jordanian men age 40 and older regarding screening of prostate cancer.

2. Materials and Methods:

The current cross-sectional study was approved by the Ethics Committee at the University of Jordan. The sample size of 128, was determined using G* power statistical software (Faul et al., 2007) (power: 0.08, α: 0.05, effect size: 0.5, two-tailed) by enrolling 154 men between the ages of 40-70 years, from June to August 2015. Participants were recruited through a convenience sampling technique as they visited a selected number of Mosques (Masjid Beiat AL-Radwan, Masjid AL-Salam, Masjid AL-Fadel bin Abbas and Masjid AL-Taqwa). Others were recruited from a pool of administrative employees (student affair and admission and registration departments) at the University of Jordan (UJ) in Amman. Data were collated and analyzed using SPSS version 11 software (SPSS, 2012).

Inclusion criteria consisted of willingness to participate in the study; completing a written informed consent; having no history of prostate cancer or benign prostatic hyperplasia (BPH); to be age 40 and above. The exclusion criterion included an unwillingness to participate in the study and having a previous diagnosis of PC.

After explaining the study objective, written informed consent was obtained guaranteeing participants' anonymity and confidentiality. Researcher and a trained research assistant used two questionnaires for demographic and the knowledge of PC screening.

A 12-item demographic questionnaire obtained data on the participants' personal characteristics such as age, marital status, educational level, monthly income; health history regarding PC screening by DRE and/or PSA testing; family history of cancer; the knowledge level about PC and methods of acquiring knowledge about PC screening.

The Knowledge about Prostate Cancer Screening Questionnaire was developed by Weinrich and colleagues to measure the level of knowledge about prostate cancer and its screening. It consisted of 12 questions to be answered with the options of "true", "false" and "I don't know". "I don't know" responses were scored as incorrect. The scores ranged from 0 to 12 with higher scores reflecting a higher level of knowledge and scores lower than 7, (8-10), and (11-12) were considered as low, intermediate and good, respectively (Weinrich, 2004).

3. Results:

A total of 209 questionnaires were distributed to consecutive volunteers aged 40-years and above; only 154 respondents, representing a response rate of 74%, completed and returned the questionnaire and formed the basis of further analysis.

Participants' age range was between 40-75 years (mean ± SD =53.1±9.52), with 88.3% who had no family history of prostate cancer, 93.5% having no previous DRE, and 99.3% with no PSA testing for PC screening. Among the participants 68.2% had no knowledge of PC screening;

however, some have heard about it from television/ radio (17.5%), magazines and newspapers (11%), a family member with PC (14.9%), radio (7.5%), internet (12.3%), health care providers (6.5%), and friends (14.9%). Table 1 presents demographic characteristics of all participants.

Table 1. *Frequency distribution of participants' personal characteristics (N=154)*

Personal Characteristics (Mean, SD*)		Frequency (N)	Percentage (%)
Age (53.1, 9.52)			
Family Hx of PC	Yes	18	11.7
	No	136	88.3
Participation in PCS	PSA	10	6.5
	No previous PSA	144	93.5
	DRE	1	0.6
	No previous DRE	153	99.3
Heard or read about PCS	Yes	49	31.8
	No	105	68.2
Source of Information	Family	23	14.9
	member/friends	10	6.5
	Doctor or nurse	27	17.5
	TV**/Radio	17	11
	Newspaper or magazine	19	12.3
	Internet	14	9.1
	Other sources		

*SD = Standard Deviation; **TV = Television.

There were 97.4% of respondents showing low and intermediate knowledge scores, where 2.6% had good knowledge regarding prostate cancer (table 2).

Table 2. *Shows the mean and standard deviation for the knowledge scores in three levels as good, intermediate and low (N=154)*

Variable	Mean±SD	Levels of Variable					
		Low		Intermediate		High	
Knowledge	4.83±5.9	124	80.4	28	17	2	2.6

4. Discussion:

Among the participants, 40.8 % mentioned mass media such as television, radio, and journals as their source of obtaining knowledge about PC screening. In fact, Nakandi et al. urged using the mass media for improving participants' knowledge (Nakandi et al., 2013; Ahmad et al., 2014).

The percentage of participants who had any experience with DRE and PSA testing was reported as 6.4% and 0.6%, respectively, which indicates increased acceptability for PSA testing compared to DRE among men, similar to the findings by Oliver et al., 2011 and Ghodsbin et al., 2014.

In this study, only 2.6% of the respondents reported a good level of knowledge regarding PC screening, which was consistent with those of Gozum and Capik who reported a low level of knowledge among the Turkish men (Çapık & Gözüm, 2013). Just the same, Ghodsbin et al. (2014), found poor knowledge level regarding PC screening among the men ages 50-70.

Rezaeian et al., investigated the knowledge of prisoners towards the prevention of prostate cancer and found that 55% had a good level of knowledge; however, researchers believed such rate was not acceptable and there was a need for developing educational programs to improve men's knowledge on early diagnosis and treatment of prostate cancer as a treatable disease is its early stages (Rezaeian et al., 2007). Therefore, educational interventions to raise awareness and improve knowledge of PC screening were highly suggested as a necessary step for early diagnosis and treatment (Conde et al., 2011; Çapık & Gözüm, 2013)

Researchers recognize the fact that men in this study were selected from a limited congregate group and a larger sample size with a random selection of all parts of the society could generate a generalizable result (Saleh et al., 2013; Saleh, 2016) and lead to a more effective macroplanning within the healthcare sector.

5. Conclusion:

Public knowledge of prostate cancer and access to preventative screening for early detection and timely treatment should be the top priority of any healthcare system worldwide (Saleh et al., 2016b; Muhsein et al., 2017).

6. Acknowledgement

7. Conflict of Interest

No conflict of interest is declared.

Corresponding Author:
Ahmad M. Saleh, Ph.D.
Nursing Department, Mouwasat Hospital, Dammam, Kingdom of Saudi Arabia.
E-mail: al_raminy@yahoo.com

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