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Prostate cancer Program for Elderly Men Perception

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Abstract: **Prostate cancer was rated the second leading cause of cancer-related deaths among men in the world. Studies have identified low awareness and lack of knowledge, perceptions, and negative attitudes toward prostate cancer as a barriers for screening and early detection of the disease. Aim: This study was conducted to assess the effect of prostate cancer program on elderly men perception. Design: A Quasi-experimental research design was utilized to achieve the aim of the study. Setting: This study was conducted at the urologic department, in outpatient clinic in Fayoum university hospital, Fayoum Governorate, Egypt. Sample: A purposive sample was used in this study, the total number was 550 patients, 50 of them excluded based on a pilot study. The patients have been selected according to the following criteria: above age of 60 years, male gender, with urinary disease requiring screening and treatment, with different educational levels, fully oriented and with no prior exposure for any educational or learning experience. All patients agreed to participate in the study. Tools: (I): the demographic data included: age, level of education, occupation, and marital status, (II): Respondents of screening testing, and (III): Men perception about prostate cancer. Results: Elderly people showed higher scores regarding their knowledge and perception regarding prostate cancer screening/test after implementing the Prostate cancer program (64.34 ± 12.00 and 30.77 ± 10.82) compared to (51.82 ± 17. 94 and 15.21± 3.93) before implementing the Prostate cancer program Conclusion: Elderly people who received Prostate cancer program had high level of perception with prostate cancer screening/test. Recommendation: Specialized instructional program for Prostate cancer should be planned for elderly peoples and applied periodically.**

Keywords: **Prostate Cancer Screening, Perception, Elderly Men.**

1. INTRODUCTION

Cancer begins when cells in the body start to develop out of control. Cells in almost any part of the body can convert cancer cells and can expand to another area of the body. ***(Crawford, 2013)***. Prostate cancer starts while cells in the prostate gland begin to grow uncontrollably. The prostate is a gland located only in men. It does some of the fluid that is composed of semen ***(Jemal et al., 2017)***. Prostate cancer is the common malignancy amongst elderly men also it is the second chief malignancy in the Western world. The incidence rate of prostate cancer ought to steadily increase across the latest decade. Between 2000 and 2050, the number of men above 65 years is supposed to increase worldwide. By 2030, the percentage of men greater than 65 years will increase to 19.6% of the population opposed by 12.4% population in 2000. So, the percentage of men that will be diagnosed with prostate cancer and those that will require treatment for their malignancy will increase in the upcoming years ***(Ruchlin & Pellissier, 2018)***.

Prostate cancer remains a growing concern in Egypt also currently lists as the 4th most prevalent cancer in the country. According to GLOBOCAN data, around 65% of men they are diagnosed with prostate cancer in Egypt will be at risk of mortality. As full as 9.7% of the Egyptian male populations are above the age of 55 years old and within the age group at risk for prostate cancer ***(GLOBOCAN, 2018)***. The study through the Defense Center for Prostate Disease Research showed that the chance of developing prostate cancer rises from 0.005% in men younger than 39 years old to 2.2% in men among 40 to 59 years then 13.7% in men among 60 and 79 years old. The current lifetime risk of developing prostate cancer is 16.7% (1 in 6 men). The possibility of developing histological evidence of prostate cancer is even higher (***DCPR, 2018).***

Carter and colleagues showed that fifty of men between seventy and eighty years older showed histologic proof of malignancy. A period of time risk of forty second for developing histologic proof of prostate cancer in 50-year-old men has been calculated. In men at this age, however, the risk of developing the clinically significant disease is only 9.5%, and the risk of dying from prostate cancer is only 2.9*% **(Carter et al., 2018)***. In most cases, prostatic adenocarcinoma symptoms don't seem to be apparent within the early stages of the malady. The symptoms of prostate cancer may be different for each man and any one of these symptoms may be produced by different conditions. As a result, routine screenings in the form of digital rectal exams (DRE) and prostate specific androgen (PSA) tests are necessary ***(Desch et al., 2016)***.

The proximity of the prostate gland in relative to the bladder and urethra, prostate cancer might convoy by a variability of urinary symptoms. Depending on the size and place, a tumor may hold on and constrict the urethra, inhibiting the flow of urine. Some prostate cancer signs associated with urination include burning or pain during urination, difficulty urinating, or trouble starting and stopping while urinating, also frequent urges to urinate at night, lack of bladder control, limited flow or velocity of urine stream, blood in urine (hematuria), blood in semen, difficulty seeing an erection (erectile dysfunction), painful ejaculation, swelling in legs or pelvic region, numbness or pain in the hips, legs or feet also bone pain that doesn't go away, either leads to fractures ***(Harlan et al., 2011)***.

Cancer can be treated very well for several people. In fact, most people than ever before lead complete lives following cancer treatment. Treatments toward prostate cancer are usually used one at a time; although in some cases may be combining. Based on each case, treatment decisions for men with prostate cancer might involve careful waiting or active surveillance for prostate cancer, surgery for prostate cancer, radiation therapy for prostate cancer, cryotherapy for prostate cancer, hormone therapy for prostate cancer, chemotherapy for prostate cancer, vaccine therapy for prostate cancer and preventing and treating prostate cancer spread to bones ***(Klotz, 2016)***.

Generally, screening and management of cancers are often determined by local perceptions, and expectations and cultural norms, especially in developing countries. But, the deficit of knowledge on the disease and the low uptake of regular screening amongst men most at risk of developing prostate cancer aggregate the problem. Notwithstanding the various prostate cancer-related studies in other parts of the world, especially in developed countries, studies on the knowledge, attitude, and perception of PC. Improved awareness of prostate cancer may demystify poor perceptions and negative attitudes toward the early screening for this disease ***(Laryea, et al., 2014)***

Perception can be described as the capacity to see, hear, or become conscious of something within the senses and the method in which something is seen, understood or explained. Furthermore, it means our identification and understanding of sensory data. Perception too involves how we react to the data. We can think of perception as a process wherever we use in sensory data from our environment and use that data in order to interact with our environment. Perception enables us to use the sensory data in and get it into something ***(Ferlay,et al., 2018).*** Moreover, Lifestyle adjustments like smoking cessation, exercise and weight control offer possibilities to reduce the risk of developing prostate cancer. Early detection of prostate cancer by screening and the addition of other biomarkers have the potential to reduce over diagnosis ***(Krahn et al., 2012).***

Geriatric health nurse has in-depth knowledge of the physical, psychological, and social consequences of PC and perform an essential role in patient care. The International Council of Nurses (ICN) highlighted the described safety, effectiveness, and patient acceptance of advanced nursing tasks ***(ICN, 2018).*** A geriatric nurse that has acquired the proficient knowledge foundation, complex decision-making skills, and clinical competencies for extended practice, the characteristics of which are shaped by the circumstances and/or country in which s/he is credentialed to practice. Considering all of these aspects linked to prostate cancer, we conducted a sequential review to confirm the role of the clinical nurse professional in treating and controlling this disease, from the point of diagnosis within the post-discharge phase, including experiences from different countries ***(Santos et al., 2012).***

The significance of the study:

Prostate cancer, chief cancer among men, creates a dangerous public health problem. Its treatment and care need a multi-professional way ***(Arafa et al., 2012***). Egyptian male has 7% of populations are within the age 60 years at risk for prostate cancer ***(National Cancer Institute, 2017).*** Prostate cancer-related mortality by 2020, is expected to rise by 28% overall

MENA countries as compared with 2012 ***(Oladimeji,et al., 2017).*** There is a shortage of knowledge and experience of the disease in Egypt, and therefore, men are often diagnosed in the late stages of the disease. That is especially frustrating as prostate cancer becomes a high potential for a perfect cure if it is diagnosed early. We would like to recognize the level of awareness increase, among men within the risk group getting proactive visits to the doctor ***(Arafa, et al, 2012).***

The aim of the study:

The study was conducted to assess the effect of prostate cancer program on elderly men perception through the following:

1- Assessing perceptions' level about the screening of prostate cancer for elderly men regarding prostate cancer.

2- Developing and implement a prostate cancer program according to their needs.

3- Evaluating the effect of the application of the prostate cancer program on patients' outcome.

Research hypothesis:

Application of prostate cancer program will have a positive effect on level of elderly men perceptions and responding about screening regarding prostate cancer.

2. SUBJECTS AND METHODS

Research design:

The quasi-experimental research design was utilized to achieve the aim of the study.

Setting:

This study was conducted at the urologic department, in outpatient clinic in Al-Fayoum university hospital. This is a governmental educational hospital in Fayoum and the majority of cancer' patients treated there.

Sampling:

A purposive sample used in this study, the total number was 550 patients they represent about 20% from the total attending the hospital in the period of May to October 2018, 50 of them excluded according to a pilot study. The patients have been selected according to the following criteria: (age 60 years and above, male sex, with urinary disease requiring screening and treatment, were selected, with different educational levels, fully oriented, all of them did not expose for any educational or learning experience before and they agreed to participate in the study). The entire study subject had a prostate cancer program. The sample size was determined statistically by power analysis considering the total number of patients who had the urinary disease. The researcher considers type one error with significant level α=95%, and type 11 error by power test β=90%. The exclusion criteria include all patient did not agree to participate in the study and patient with a mental disorder.

Tools of Data Collection:

Tool (I): demographic data it was including age, level of education, occupation, and marital status.

Tool (II): Respondents of screening testing. This scale adapted from ***(Zare, et al., 2016);*** it consisted of 10 items with (2) (Likert scale) ranged from agreeing (1) & disagree (2). The researcher did some modification for this tool to consistent with the culture of participants. The tool scoring system of respondents of prostate screening testing were 20 points: low score 50% < 10, intermediate 60% >= 10-12 & good more than < 12.

Toll (III): Men's perception about prostate cancer; it consisted of five concepts (perceived susceptibility which includes lifestyle, diet, exercises, smoking, weight control, sexual habits, seriousness, motivation, barriers and benefit) it was developed by (Capik & Gozum, 2012).The researcher did some modification for this tool to consistent with the culture of participants. The total sub-items of each of these concepts are (41) items with 3 Likert scale ranged from; disagree (1), neither agree nor disagree (2); agree (3). The total scoring system of perception about prostate cancer scale was 123 points and had three levels: (low, intermediate and good).

- > 41 points considered low perception.
- >= 42 >= 82 point considered intermediate perception.
- More than 82 points considered good perception.

Content validity & Reliability:

For tools validation, the data were ascertained by a group of five experts, from faculty staff, urology consultant, and nursing supervisor in the urology unit. The tool was modified accordingly ***Gronpach Alpha, (1951)*** coefficient test was used to ascertain the ratability of the tool (0.087).

Pilot study:

A pilot study was conducted on 10 % (50 patients) of subjects to test the applicability and feasibility of the study tools. Obtained results were used as a guide to reconstruct the changes needed in the data collection tools and it was excluded from the total study sample.

Fieldwork:

Official permissions to conduct the study were obtained from the directors of EL Fayoum University, and director of Fayoum university hospital, before the study was conducted. For the purpose of assessment of the patient's perception about prostate cancer review of current and past available literature and theoretical knowledge was done, using books articles and magazines to develop the tools for data collection.

- Data collection started, and it took 6 months (from May to October 2018).
- The researcher interviewed the study sample individually to explain the purpose of the study and obtain the informed consent.
- As research ethics, the researchers assure anonymity and confidentiality of patient data. Patients were informed that they are allowed to choose to participate or not in the study and that they have the right to withdraw from the study at any time throughout the interventions.
- The patient filled in the structured questionnaire related to their demographic data which took from five to ten minutes. The questionnaire was filled by the investigator in the outpatient clinic.
- Then, the investigator started to assess the patient's perception level toward prostate cancer and perception about screening regarding prostate cancer using prepared pretest in the form of the questionnaire.
- The average time consumed in answering the perception level toward prostate cancer and perception about screening questionnaire about thirty mints duration, (the checklist filled by the investigator).
- The investigators started applying for prostate cancer program after finishing the pretest in the form of the questionnaire.

Program construction:

- Program development phase based on the results obtained from the interviewing questionnaire, literature review and following education principles.
- The general objective of the program to improve the knowledge and practices related to elderly men perception through assessing perceptions' level for elderly men with urinary disease pre and post-program, assessing perceptions' about the screening of PC for elderly men pre & post program and evaluating the effect of the application of program on patients' outcome.
- The researcher starts to implement the program for all the participants.

1. Assessment phase:

The program was designed by the researcher, based on the results of the assessment (pre-test and using the interviewing questionnaire).

2. Planning of the program:

This phase included analysis of the pre-test findings; the researcher designed the program section's content according to the patient's needs. Detected needs, requirements and deficiencies were translated into the aim and objectives of the program sections in the form of a booklet. The booklet included the basic knowledge about prostate cancer and kinds of screening must be done in prostate cancer, regarding high risk of prostate cancer, lifestyle, sexual relation and food regimen that reduce prostate cancer, Doing prostate cancer screening/test is embarrassing, If someone has prostate cancer you think it is already too late for treatment, when discovering and how to treat it.

The content of the program:

Section one:

Acquire basic knowledge about prostate cancer.

- The concept of cancer and prostate cancer.
- Types and clinical findings of PC.
- Complications of PC.
- Indications of the screening test.

Section two:

- The perceived sensitivity on the risk of one's developing prostate cancer.
- The perceived seriousness of thinking of how threatening the prostate cancer is.
- The perceived benefit on the prostate cancer screening.
- Importance of early treatment regimens.
- Sexual relations, and food regimen.

3. Implementation phase:

A program was designed based on analysis of the collected data. The objective of the program was guided by the previously determined patients' educational needs in order to improve patient perception' regarding PC. The application of program was carried at the previously mentioned setting in a special room for each section contained 20 patients in the study group in 2 separate main sections for all contents at morning shift two days /weeks. Every section discusses and answers questions to move to the second section. The Arabic language was used as real situation modified lecture, demonstration and re-demonstration an instructional media was used including booklet in Arabic language and audiovisual material.

4. Evaluation phase

Throughout these phases, the researchers were emphasized on evaluating the effective application of the prostate cancer program on elderly suffering from urinary disease, before discharge from the hospital.

Statistical Analysis:

The collected data were analyzed and presented in tables, graphs with suitable statistical tests to identify the significance of the results. Statistical significance was achieved if p was <0.05. All reported p-values were two-sides. All data were recorded, collected and analyzed by using the Statistical Package for the Social Sciences 18.0 for Microsoft (SPSS). Statistical analysis with numerical data was expressed as means ± standard deviations (SD). Categorical data were tested with Chi-square test ($\mathbf{X}^2$) for qualitative variables and paired t-test for quantitative variables. Statistical significance was considered at p-value <0.05.

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3. RESULTS

Table (1): Distribution of elderly men as regards to their demographic characteristics in outpatient clinics at Al-Fayoum university hospital, (no= 500)

Characteristics	No	%
Age group		
- 60-	346	69.2
- 71- & more.	154	30.8
Mean ± SD 68.7± 7.1		
Level of education		
- Illiterate.	162	32.4
- Read & write.	160	32
- Basic education.	122	24.4
- Secondary & university.	56	11.2
Occupation		
- Skilled government employee.	260	52
- Skilled private work employee.	210	42
- Do not work.	30	6
Marital status		
- Married.	218	43.6
- Widowed.	157	31.4
- Divorced.	125	25

Table (1) illustrated that the mean and SD of elderly men age was (68.7 ± 7.1). Also, 32% of them were read and write, but 11.2% had secondary & university education. According to an occupation, 52% of them were a governmental employee while 43.6% were married.

Table (2): Mean differences score perceptions' level for elderly men towards prostate cancer pre and post program in out-patient clinics at Al-Fayoum university hospital (no= 500)

Items	Group	Mean	SD	Mean difference	t	p-value
Knowledge	Pre	51.82	17.94	12.25	12.79	0.00000*
	Post	64.34	12.00			
Susceptibility perception	Pre	26.26	1.85	1.99	16.084	0.00000*
	Post	28.25	5.64			
Seriousness perception	Pre	25.92	3.83	-6.24	-4.906	0.00000*
	Post	19.68	10.97			
Health motivation	Pre	17.91	12.02	20.34	24.961	0.00000*
	Post	38.25	15.21			
Barriers perception	Pre	22.43	0.27	24.54	-35.596	0.00000*
	Post	46.97	19.43			
Benefits perception	Pre	15.21	3.93	15.56	32.153	0.00000*
	post	30.77	10.82			

Table (2) showed that there was highly significant difference in knowledge and perception subscales in post-program implementation than preprogram at p-value <0.001.

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Table (3): Distribution of the elderly men responding about the screening of prostate cancer pre and post-program implementation in outpatient clinics at Al-Fayoum university hospital (no= 500)

Perception about the screening of prostate cancer	pre				post				Test value	P-value
	Agree		Disagree		Agree		Disagree			
	NO	%	NO	%	NO	%	NO	%		
High risk of prostate cancer.	128	25.6	327	65.4	478	95.6	22	4.4	467.610	0.000**
There is nothing that can do to prevent prostate cancer.	119	23.8	387	76.2	420	84	80	16	369.886	0.000**
Kinds of food reduce prostate cancer.	117	23.4	383	76.6	466	93.2	40	8	487.033	0.000**
Doing prostate cancer screening/test is embarrassing.	119	22.8	381	76.2	470	94	30	6	508.929	0.000**
If someone has prostate cancer you think it is already too late for treatment.	123	24.6	377	75.4	458	91.6	42	8.4	460.998	0.000**
Prostate cancer is deadly regardless of when discover and how to treat it.	144	28.2	356	71.2	486	93.6	14	2.8	501.776	0.000**
Prostate cancer makes people afraid of having prostate cancer.	138	27.6	362	72.4	440	88	60	12	373.916	0.000**
People don't want know that they have a prostate cancer because they may die from it.	124	24.8	376	75.2	478	95.6	22	4.4	523.030	0.000**

Table (3) reveals that there were highly significance differences in the elderly men responding about the screening of prostate cancer pre and post program implementation at p-value <0.001.

Table (4): Relation between elderly men responding about the screening of prostate cancer and their demographic characteristics pre and post-program implementation in outpatient clinics at Al-Fayoum university hospital, (no= 500)

Socio-demographic characteristics	Pre						Post						X^2	p-value
	Good		Intermediate		Low		Good		Intermediate		Low			
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%		
Age group:														
- 61-	46	88.5%	97	65.1%	203	67.9%	168	56.0%	132	88.6%	46	90.2%	173.893	0.000**
- 71- & more.	6	11.5%	52	34.9%	96	32.1%	132	44.0%	17	11.4%	5	9.8%	214.787	0.000**
Educational level:														
- Illiterate.	19	36.5%	39	26.2%	104	34.8%	97	32.3%	41	27.5%	24	47.1%	102.498	0.000**
- Read & write.	26	50.0%	53	35.6%	81	27.1%	85	28.3%	69	46.3%	6	11.8%	98.114	0.000**
- Basic education.	4	7.7%	29	19.5%	89	29.8%	75	25.0%	26	17.4%	21	41.2%	106.01	0.000**
- Secondary & university.	3	5.8%	28	18.8%	25	8.4%	43	14.3%	13	8.7%	0	0.0%	65.27	0.000**
Occupation:														
-government employee.	38	73.1%	82	55.0%	140	46.8%	127	42.3%	112	75.2%	21	41.2%	140.602	0.000**
- Private work employee.	8	15.4%	47	31.5%	155	51.8%	155	51.7%	30	20.1%	25	49.0%	230.213	0.000**
- don't work.	6	11.5%	20	13.4%	4	1.3%	18	6.0%	7	4.7%	5	9.8%	12.37	0.002**
Marital status:														
- Married.	46	88.5%	72	48.3%	100	33.4%	130	43.3%	54	36.2%	34	66.7%	75.17	0.000**
- Widowed.	4	7.7%	56	37.6%	97	32.4%	88	29.3%	55	36.9%	14	27.5%	138.768	0.000**
- Divorced.	2	3.8%	21	14.1%	102	34.1%	82	27.3%	40	26.8%	3	5.9%	175.451	0.000**

Table (4) illustrated that there was a highly statistically significant relationship between participants responding about the screening of prostate cancer and their demographic characteristics pre and post-program implementation at p-value <0.001.

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Table (5): Relation between the perception of elderly men about prostate cancer and their demographic characteristics pre and post-program implementation in outpatient clinics at Al-Fayoum university hospital, (no= 500)

Socio-demographic characteristics	Pre						Post						X^2	p-value
	Good		Intermediate		Low		Good		Intermediate		Low			
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%		
Age group:														
- 61-	40	81.6%	109	52.7%	197	80.7%	166	74.8%	98	62.4%	82	67.8%	125.054	<0.001
- 71- & more.	9	18.4%	98	47.3%	47	19.3%	56	25.2%	59	37.6%	39	32.2%	44.417	<0.001
Educational level:														
- Illiterate.	6	12.2%	75	36.2%	81	33.2%	76	34.2%	53	33.8%	33	27.3%	83.748	<0.001
- Read & write.	30	61.2%	50	24.2%	80	32.8%	67	30.2%	51	32.5%	42	34.7%	25.959	<0.001
- Basic education.	6	12.2%	51	24.6%	65	26.6%	51	23.0%	36	22.9%	35	28.9%	47.113	<0.001
- Secondary & university.	7	14.3%	31	15.0%	18	7.4%	28	12.6%	17	10.8%	11	9.1%	18.373	<0.001
Occupation:														
-government employee.	17	34.7%	127	61.4%	116	47.5%	130	58.6%	76	48.4%	54	44.6%	122.289	<0.001
- Private work employee.	20	40.8%	70	33.8%	120	49.2%	80	36.0%	67	42.7%	63	52.1%	53.82	<0.001
- don't work.	12	24.5%	10	4.8%	8	3.3%	12	5.4%	14	8.9%	4	3.3%	2.000	0.367
Marital status:														
- Married.	30	61.2%	103	49.8%	85	34.8%	90	40.5%	78	49.7%	50	41.3%	42.527	<0.001
- Widowed.	9	18.4%	74	35.7%	74	30.3%	74	33.3%	44	28.0%	39	32.2%	69.371	<0.001
- Divorced.	10	20.4%	30	14.5%	85	34.8%	58	26.1%	35	22.3%	32	26.4%	58.276	<0.001

Table (5): clears that there was a significant relationship between the perception of participants about prostate cancer and their demographic characteristics pre and post-program implementation at p-value <0.001.

4. DISCUSSION

Prostate cancer is one kind of cancer that can be prevented and cured if discovered early enough. The Egyptian people deny their susceptibility to cancer prostate because of the expectations of cancer **(Munzhedzi, 2017)**.

The results of the current study showed that the mean age of elderly men was 68.7+_ 10.1 and more than two-thirds of candidate age' extended within 60>71 years. These results are contrary to **Makado et al., 2015** who studied an assessment of knowledge also attitudes towards prostate cancer screening amongst men" found that more than three-fifths of elderly men age' 60-71 years. Additionally, disagree with the study published by ***Akharizadeh et al., 2016*** who studied a survey of knowledge and perceived barriers to prostate cancer screening amongst medical staff" stated that mean age of men around 58.7+_10.1.

According to the level of education the findings of the present study illustrated that less than one quarter had basic education. These findings disagreement with a study by ***Mofolo et al., 2016*** who studied "Knowledge of prostate cancer amongst male's presence a urology clinic" who found that more than one-third of the participant had basic education. Also, disagree with the finding of a study conducted by ***Makado et al., 2015*** who studied "An assessment of knowledge and attitudes towards prostate cancer screening amongst men" noted that only 4% had a basic education.

Concerning occupation, the results of present study cleared that more than half of the men were a governmental employee and 6% didn't work. These findings are congruence with ***Akbrizadeh et al., 2016*** who studied a survey of knowledge and perceived barriers to prostate cancer screening between medical staff "discovered that more than half of the men's were a government employee. Unless, the finding of the current study incompatible with ***Mofolo, et al., 2015*** who studied "Knowledge of prostate cancer amongst males visiting a urology clinic "stated that fewer than one-third of the men were unemployed.

As regards to marital status, the findings of the current study revealed that less than one-half of the men were married. These findings are compatible with the prior study conducted by ***Makado et al., 2015*** who studied "the assessment of knowledge and attitudes towards prostate cancer screening amongst men showed that less than half of the studied sample was married. Whereas, the study about the study of the relationship between prevention, risk, and restrictions related to prostate cancer by ***Mcgriff, 2010*** who studied "A study on the relationship between prevention, risk and barriers associated to prostate cancer amongst African American men" which agrees with the current study, who indicted later, less than one half of the studied sample, were married. Also incongruous with ***Egbera, 2015*** who studied male university students' knowledge, opinions and attitude toward screening for prostate cancer" said that the majority of the studied sample was married. In the present study, men knowledge concerning PCs, there was significant difference increase in knowledge in post-program application than pre-program. These finding supported by ***(Ebuehi & Otumu., 2011)*** who studied" Prostate screening practices among male staff of the University of Lagos" they found high level of knowledge about prostate cancer were recorded.

In a study by ***Capi*k et al.,2012** who studied the effect of web-assisted education and reminders on health belief, level of knowledge and early diagnosis behaviors regarding prostate cancer screening they found that the level of knowledge remained very low despite all interventions. However, it is remarkable that the level of knowledge about screening tended to rise as a result of the education given to the individual.

The result of the present study founded that there was significant difference increase in susceptibility perception in post-program implementation than pre-program. In a study by ***Block et al., 2010*** who studies effects of educational materials concerning osteoporosis on women's knowledge, beliefs and behavior they found a significant change in the susceptibility perception at the end of their intervention by group education rather than self-learning methods.

In the present study, a significant change was found in the seriousness of PCs perception post-program implementation. The opposite of the results of the study by ***Capik et al., 2012*** who studied "The effect of Web-assisted education and reminders on health belief, level of knowledge and early diagnosis behaviors regarding prostate cancer screening" they found no significant change was determined in seriousness perception in both studied groups.

In this study, a significant difference was found in their barrier's perception in post-program implementation than pre-program. These findings supported by ***Gursoy et al., 2009*** who studied " Comparison of three educational interventions on breast self-examination knowledge and health beliefs" they found women's perceived benefits and confidence increased significantly in group education, whereas perceived barriers decreased in individually and pamphlet-trained groups. These findings opposite with study by ***Amin et al., 2014*** who studied comparing the effect of two different methods of education on breast self-examination: text messaging and lecturing "they found text message higher effect than on changed barrier regarding self-breast examination to detect breast cancer more than lecture methods. ***Demircelik, et al., 2016*** who studied "A community-educational resources for men about prostate cancer screening" reported that informative education would remove the barrier in men and lead to taking a step for early diagnosis. Beside educational activities can help to minimize anxiety for men of such a disease.

The study results founded a significant relation in the health motivation among men in post-program implementation than pre-program. These results supported by ***Menon, et al., 2015*** who studied "should we treat localized prostate cancer" they found improved in health motivation to be higher at the group post education compared to pre-education.

The present study reveals distribution of elderly men responding about screening of PC; it was found that the percentage of agrees were increased post-program among elderly men about their high risk of PC, there exposed to PC in the future, there is nothing that can do to prevent PC, kinds of food reduce PC, doing PC screening/test is embarrassing, if someone has PC you think it is already too late for treatment, PC is deadly regardless of when discovering and how to treat it, PC makes people afraid of having PC, and People won't know if they have a PC they may die from it.

Heydari et al., 2015 who studied "Comparison of two different educational methods for teachers' mammography based on the health belief model", found that the number of available studies on health beliefs prostate cancer screening in men is rare, and the components have generally been used separately in descriptive studies. This refers to the rate of participation in the screening increased prominently following the program. This finding indicates that reminders such as CD and the mobile message may be effective in promoting participation in PC screening. These results similar with ***Krist,***

et al., 2017 who studied "patient education on prostate cancer screening and involvement in decision making" found that the post-program evaluation was significantly higher compared to pre-program participated in PC screening. Also, in the study by ***Wakifield et al., 2018*** who studied "Development and pilot testing on an online screening decision aid for men with a family history of PC" reported that the individuals educated through the internet participated in the screening and stated that the information on the internet encouraged them to participate.

In the present study illustrated that there was a statistically significant relationship between participants responding about the screening of prostate cancer and their demographic characteristics post-program implementation. These findings agree with ***Lee et al., 2016*** who noticed that there was a statistically significant relation between perceptions of men about PC with age groups, education level, and marital state. Otherwise, these findings are disagreement with ***Pual, 2013*** who showed that there wasn't a statistically significant relation between perceptions of men about PC with age groups, educational level, and marital state.

In a study conducted by ***Oliver& Simon 2008*** who found that there was a high correlation between responding and perception of sample regarding PC. These results agree with the current study observed that there was a high correlation between responding and perception of elderly men regarding PC. Otherwise, these findings are disagreement with another study performed by ***Yeboah et al., 2017*** about responding, perceptions, toward PC screening among male teachers, who showed that there was no correlation between responding and perception of studied sample.

5. CONCLUSION

The finding of the study and the research hypothesis concluded that there was significant difference increase in knowledge and perception subscales in post-program than per program. Also, most of the elderly men agree with doing prostate cancer screening/test is embarrassing to post-program. The study cleared that there was a positive correlation between perceptions and responding screening and their demographic characteristics post-program.

6. RECOMMENDATIONS

1. Specialized instructional program for Prostate cancer should be planned for elderly peoples and applied periodically.
2. Dissemination of health awareness about the importance of lifestyle changes and reduces the risk factors that cause prostate cancer for the elderly through multimedia.
3. Further researches about perceptions of men are toward prostate cancer.

REFERENCES

[1] Amin. A., M. Lamyan and E. Hajizadeh. Comparing the effect of two different methods on breast self-examination: Text messaging and lecturing health education & health promotion.2014.1:p.59-71.

[2] Akbarizadeh, J., Gheibizadeh, M., Fereidoonimoghadam, M., Jahani, S., & Malehi, S. (2016): A survey of knowledge about and perceived barriers to prostate cancer screening among medical staff. Jundihapour Journal of chronic disease care, V 5(3), Pp 188-198.

[3] Albertsen PC, & Hanley JA, Competing risk analysis of men aged 55 to 74 years at diagnosis managed conservatively for clinically localized prostate cancer. JAMA. 2015;280:975–980.[PubMed]

[4] Arafa. M.A., D.M.Rabah and I.H. Wahdan, Awareness of general public towards cancer prostate and screening follow in Arabic communities: a comparative multi-center study. Asian Pacific journal of cancer prevention, 2012.13(9): p.4321-4326.

[5] Block. S.J., et al., effects of educational materials concerning osteoporosis on women's knowledge, beliefs, and behavior. American Journal of Health Promotion 2010.14(3):p.161-169.

[6] Capik, C. and S. Gozum, The effect of web-assisted education and reminders on health belief, level of knowledge and early diagnosis behaviors regarding prostate cancer screening. European Journal on oncology nursing. 2012.16(1):p.71-77.

[7] Carter HB, Piantadosi S, Isaacs JT. Clinical proof for and implications of the multistep development of glandular cancer. J Urol. 2018;143:742–746. [PubMed]

[8] Crawford ED. Epidemiology of prostate cancer. Urology. 2013;62(6 suppl 1):3–12. [PubMed].

[9] Defense Center for Prostate Disease Research (DCPCR), (2018): knowledge of prostate cancer and screening among elderly, V 10, issue (23).p 15-17.

[10] Demircelik, M. B., et al., (2016): A community-educational resources for men about prostate cancer screening". Applied Nursing Research, 2016.29:p.5-8.

[11] Desch CE, Penberthy L, Newschaffer CJ, et al. Factors that confirm the treatment for native and regional glandular cancer. Med Care. 2016;34:152–162. [PubMed].

[12] Ebuehi O, Otumu I. Prostate screening practices among male staff of the University of Lagos, Nigeria. African Journal of Urology. 2011; 17:122-134.

[13] Egbera, J.I., Male University Students' knowledge, beliefs and attitudes toward screening for prostate cancer in Benin City, Nigeria. 2015. The Cape Peninsula University of Technology.

[14] Ferlay J, Shin H, Bray F, Forman D, Mathers C, Parkin DM, et al. (2018): Cancer incidence and mortality worldwide in 2008. Lyon, France: International Agency for Research on Cancer. 2018.

[15] Globocan (2018) (http://globocan.iarc/fr) last accessed April 2018.

[16] Gursoy, A.A., et al., a comparison of three educational interventions on breast self-examination knowledge and health beliefs. Asian Pac J Cancer Prev.2009.10(5):p.765-772.

[17] Harlan LC, Potosky A, Gilliland FD, et al. Factors related to initial medical aid for clinically localized prostate cancer: glandular cancer Outcome Study.J Natl Cancer Inst. 2011;93:1864–1871.[PubMed]

[18] Heydari, E. and A. Noroozi, Comparison of 2 completely different instructional strategies for teachers' diagnostic procedure supported the health belief model. Asian Pacific journal of cancer prevention, 2015.16(16): p.6981-6986.

[19] Inter National Council of Nursing, (ICN) (2018): cancer screening knowledge and attitude. 13(2): p 94-101.

[20] Jemal A, Siegel R, Ward E, et al. Cancer statistics, 2007. CA Cancer J Clin. 2017;57:43–66. [PubMed].

[21] Klotz L. Active police investigation versus radical treatment for favorable-risk localized glandular carcinoma. Curr Treat Options Oncol. 2016;7:355–362. [PubMed]

[22] Krahn MD, Bremner KE, Asaria J, et al. The ten-year rule revisited: accuracy of clinicians' estimates of lifetime in patients with localized glandular carcinoma. Urology. 2012;60:258–263. [PubMed].

[23] Krist, E., Galbraith ME, Pedro LW, Jaffe AR, Allen TL. (2017): Patient education on prostate cancer screening and involvement in decision making. Oncol Nurs Forum. 2017;35(5):794–801.

[24] Laryea DO, Awuah B, Amoako YA, Osei-Bonsu E, Dogbe J, LarsenReindorf R, et al. Cancer incidence in Gold Coast, 2012: evidence from a population-based cancer registry. BMC cancer. 2014; 14: 1.

[25] Lee, E., Y. Park, Knowledge, health beliefs and screening standing of glandular carcinoma among old and old men. Open Journal of Nursing, 2016.6(09):p.672.

[26] Makado, E., Makado, K., & Rusere, T. (2015): An assessment of knowledge and attitudes toward prostate cancer screening among men aged 40-60 years at Chitungwiza Central Hospital in Zimbabwe. Of Urology, V 19(40, Pp 165-170.

[27] Mcgriff, L., (2010): A study of the relationship between prevention, risk, and barriers related to prostate cancer among African American men in Georgia. http://digitalcommons.auctr.edu/dissertations/170

[28] Menon M, & Parulkar BG, Should we treat localized prostate cancer? An opinion. Urology. 2015;46:607–616. [PubMed]

[29] Mofolo, N., Betshu, O., Kenna, O., Koroma, S., Lebeko, T., Classen, M., & Joubert, G. (2015): Knowledge of prostate cancer among males attending a urology clinic, South Africa study. Spring Plus, V 4(1), Pp 67-68.

[30] Munzhedzi, M. (2017): Identification of human papillomavirus, hepatitis B virus and human herpesvirus type 8 in plasma of benign prostatic hyperplasia and prostate cancer patients in South Africa (Doctoral dissertation).

[31] National Cancer Institute. Prostate Cancer Treatment. https://www.cancer.gov/types/prostate/patient/prostate-treatment-pdq Last accessed April 2017

[32] Oladimeji O, Bidemi YO, Olufisayo J-AY, Sola AO.(2017): Prostate cancer awareness, knowledge, and screening practices among older men in Oyo State, Nigeria. International quarterly of community health education. 2017; 30: 271-286.

[33] Oliver, J. & Simon, W. (2008): "prostate cancer screening patterns among African American men in the rural south" Dissertation, Georgia state university, http://scholarwork.gsu.edu/nursing_diss/7.

[34] Paul, W. (2013): Prostate cancer awareness, knowledge, the perception of self-vulnerability and uptake of screening among men in Nairobi Country, Kenya (Doctoral dissertation Kenyatta University) http://irlibrary.ku.ac.ke/handel/123456789/9005.

[35] Ruchlin HS, Pellissier JM. An economic overview of prostate carcinoma. Cancer. 2018;92:2796–2810.[PubMed]

[36] Santos DRF, Silva FBL, Saldanha EA, Lira ALBC, Vitor AF. Cuidados First State enfermagem ao paciente em pós-operatório First State prostatectomia: revisão integrativa. [Nursing care of surgical excision patients: associate degree integrative review.] Revista Eletrônica First State Enfermagem [serial on the Internet]. 2012;14(3):690–701.Available from: from: http://www.fen.ufg.br/fen_revista/v14/n3/pdf/v14n3a27.pdf. Accessed September 27, 2013. Portuguese.

[37] The Department of Defense Center for Prostate Disease Research, authors. Oncology (Williston Park) 2018;13:1336–1336. [PubMed].

[38] Wakifield et al., Newcomer L. M., Stanford J. L., Blumenstein B. A., (2018): Development and pilot testing on an online screening decision aid for men with a family history of PC". Temporal trends in rates of prostate cancer: declining incidence of advanced stage disease,158:1127–1130. [PubMed].

[39] Yaboah, N, Asiamah, B., Yirenya, D., Baafi, D., & Ackumey, M. M. (2017): perception and knowledge about prostate cancer and attitudes toward prostate cancer screening among male teachers in the Sunyani Municipality, Ghana, African journals of urology. African Journal of Urology, V 23, issue 3, Pp 184-189.

[40] Zare, M., Ghodsbin, F., Jahanbin, I., Ariafar, A., Keshavarizi, S., & Izadi, T.(2016): The effect of health belief model based education on knowledge and prostate cancer screening behaviors: a randomized controlled trial. International journal of community-based nursing and midwifery. InyJ Community based Nurse Midwifery. 2016 Jan; V4(1): Pp 57-68.