Original Article

Knowledge, Attitude, Perception, And Awareness Regarding Benign Prostatic Hyperplasia And Prostate Cancer Among Men Older Than 40 Years - An Online Cross Sectional Study

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Abstract

Aim: The purpose of this study is to assess the knowledge, attitude, perception and to create awareness regarding Benign prostatic hyperplasia and prostate cancer among men older than 40 years.

Objectives: To determine the perception and understanding regarding benign prostatic hyperplasia and prostate cancer among men older than 40 years of age. To provide information regarding benign prostatic hyperplasia and prostate cancer.

Study design: This study is design as a online cross sectional study.

Study Duration: The study will be carried from the month of August (2021) to April (2022) – 9 months.

Study Instruments: The study instrument is developed and carried out with the use of self-developed questionnaire after a thorough literature analysis which will be assessed and validated by Physicians.

Statistical Analysis: Microsoft sheet and SPSS software version 24 will be used for statistical analysis of the data. Descriptive analysis of quantitative variables will be done by using mean, standard deviation, and Chi-square test.

Conclusion: The results of this study suggest that the men population in Chennai lack knowledge regarding prostate disease. This study recommends widespread public health campaigns using the mass media, hospitals, and religious centres to improve knowledge, attitude and screening practices regarding prostatic diseases.

Keywords: Benign Prostatic Hyperplasia, Prostate Cancer, Knowledge, Practices, Quality of Life.

INTRODUCTION

The prostate is a small fibromuscular accessory gland of male reproductive system weighing about 20 g. It is located posterior to the pubic symphysis, superior to the perineal membrane, inferior to the bladder and anterior to the rectum. It produces and secretes proteolytic enzymes into semen, to facilitate fertilization (Gift et al., 2020) (Ojewola et al., 2017). The imbalance between free radical generation and anti-oxidant defence plays a pivotal role in the pathogenesis of cancer, fertilization, and other severe health hazards (Subramanian, 2018) (Subramanian, 2019) (Singh et al., 2020).

Prostate cancer is characterized by both physical and psychological symptoms (Tanveer et al., 2019). Early-stage prostate cancer is usually asymptomatic (Wang et al., 2015). More advanced disease has similar symptoms with benign prostate conditions such as weak or interrupted urine flow, hesitancy, frequency, nocturia, haematuria or dysuria. Late-stage prostate cancer commonly spreads to bones and cause pain in the hips, spine or ribs (Wong et al., 2019). The 2 commonly used screening methods for prostate cancer are digital rectal examination (DRE) and prostate-specific antigen (PSA) test (Brawer et al., 1992) (Brawer, 1999).

Prostate cancer is a leading cause of cancer death in men. Evaluating knowledge, practice and attitudes towards the condition is important to identify key areas where interventions can be instituted. Despite the global increase in awareness of prostatic diseases resulting from widespread availability of screening tools, there is no evidence that the knowledge, attitudes and screening practices of Men have improved regarding prostatic diseases (Nirenjen et al., 2020)(Wilt, 2003).

AIM

The purpose of this study is to assess the knowledge, attitude, perception and to create awareness regarding Benign prostatic hyperplasia and prostate cancer among men older than 40 years

OBJECTIVES

1. To determine the perception and understanding regarding benign prostatic hyperplasia and prostate cancer among men older than 40 years of age
2. To provide information regarding benign prostatic hyperplasia and prostate cancer.

PLAN OF THE STUDY

The entire study was planned to be carried out for a period of 6 months (September 2021 – March 2022). The proposed study was designed as given below:

Table 1: Plan of work

Task	Duration in months			
	1-2	3	4-5	6
Review of Literature	✓			
Designing Questionnaire	✓			
Ethical Approval		✓		
Participant inclusion and Data collection		✓	✓	
Statistical Analysis				✓
Publication of the work				✓
Dissertation of Thesis				✓

Sample size:

The following formula is used to calculate the sample size

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

Where, n = sample size
z = level of confidence according to the standard normal distribution (for a level of confidence of 5%, z = 1.96, for a level of confidence of 1%, z = 2.575)
Here, we use the standard variate Z = 1.96
p = estimated proportion of the population that presents the characteristic (we use p = 0.01 after investigating many research articles)
hence, p = 0.01
d = tolerated margin of error (5%)

$$n = (1.96)^2 \times (0.01)\,(1-0.01) / (0.05)^2$$

$$n = 152$$

New sample size (S.S): when POP= 1500

$$\text{New S.S} = \frac{S.S}{1 + (S.S-1)/\,POP}$$

New SS = 152/1+ (152-1)/1500
= 138

2. Study design:

This study is design as a online cross sectional study

3. Study Duration:

The study will be carried from the month of August (2021) to April (2022) – 9 months

4. Study Instruments:

The study instrument is developed and carried out with the use of self-developed questionnaire after a thorough literature analysis which will be assessed and validated by Physicians.

5. Complete Study Procedure:

The foremost procedure is to get the ethical approval of the protocol from the IEC board to conduct this study among the general public. The study will be explained to the general public and the individual consent form will be obtained from the participants.

For the purpose of this study the questionnaire is used from self-developed questionnaire. The questionnaire is divided into 4 categories: demographic details, knowledge, attitude, and perception.
Data collection is to be carried out among the general public in the study site based on the inclusion and exclusion criteria. The data will be collected and compiled for interpretation. The obtained data is to be analyzed statistically and will be reported.

6. Patient Selection:

Inclusion Criteria:

- People above the age of 40 years are included.
- People who are in social media platform are included

Exclusion criteria:

- People less than age of 40 years are excluded
- People who are not in social media platform are excluded
- People who are not willing to participate are excluded

7. Statistical Analysis

i. Microsoft sheet and SPSS software version 24 will be used for statistical analysis of the data.
ii. Descriptive analysis of quantitative variables will be done by using mean, standard deviation, and Chi-square test.

RESULTS

Table 2: Demographic characteristics of men older than 40 years of age

Characteristics	Frequency	Percentage
Age		
40-50 years	48	34.7%
50-80 years	63	45.6%
Above 80 years	27	19.5%
Marital Status		
Single	22	15.9%
Married	116	84.0%
Occupation		
Daily worker	53	38.4%
Farmer	21	15.2%
Pensioner	19	13.7%
Business man	20	14.4%
Others	25	18.1%
Educational Status		
Nil	21	15.2%
School level	79	57.2%
College level	38	27.5%

From the study the demographics characteristics of the participants were included in the table1. Table 2 shows that 34.7% of the participants were between the age group of year 40-50. Sixty three participants were between the ages of 50-80 years followed by 27 participants in the age group above 80 which is 19.5%. 15.9% of the participants in the study were single and 84% of the participants were married. Daily workers were higher in number (53) 38.4% when compared with other occupation. Out of 138 participants 21 participants have nil education status, 79 participants have school level education and 38 participants have college level education.

Table 3: Knowledge and understanding of men older than 40 years of age regarding benign prostate hyperplasia and prostate cancer

Questions	Correct Responses (N)	Percentage (%)
1. Prostate gland is found only in male?	42	30.4%
2. Prostate disease can cause difficulty in urination?	47	34.0%
3. Prostate problem mostly affects elderly population?	64	46.3%
4. Prostate disease can progress to kidney problem?	29	21.0%
5. Prostate disease are hereditary they run in families?	54	39.1%
6. Prostate gland is a part of reproductive system?	39	28.2%
7. Prostate disease are not curable?	49	35.5%

Table 3 shows that most of the participants have poor knowledge regarding prostate disease. The Highest positive knowledge was seen in k_3 with 46.3% and the least one was with K_4 (21.0%)

Table 4: Attitude of men older than 40 years towards benign prostate hyperplasia and prostate cancer

Questions	Correct Responses	Percentage
1. All men above the age of 40 has to undergo screening for prostate cancer?	57	41.3%
2. Treatment with drugs works well for BPH?	47	34.0%
3. We consult a doctor after home remedies fail?	58	42.0%
4. Prostate cancer is one of the most common cancer among men?	49	35.5%
5. Clinical outcome of prostate cancer patient can be improved with early diagnosis of cancer?	56	40.5%
6. Surgical treatment are available for prostate disease?	76	55.0%
7. Bacterial infection can cause enlargement of prostate gland?	69	50%

Table 4 depicts the Attitude of participants towards prostate disease. The Highest positive Attitude was seen with A_5 62.3% and the least one was with A_2 with 34.0%.

Table 5: Perception of men older than 40 years of age regarding Benign prostatic hyperplasia and prostate cancer

Questions	Correct Responses	Percentage
1. Were you advised to do any Prostate diseases diagnosing test before?	29	21.0%
2. Do you undergo any screening test for prostate diseases regularly?	37	26.8%
3. Have you undergone rectal examination before?	87	63.0%
4. Do you take any home remedies for your urinary problems?	34	24.6%
5. Are you aware of the drugs prescribed by the physician if you are suffering from any of the prostate disease?	21	15.2%
6. Do you think BPH requires immediate treatment?	76	55.07%
7. Benign Prostatic Hyperplasia requires therapy for longer duration of time?	32	23.1%

Table 5 depicts the perception of participants towards prostate disease. It is found that most of the sports persons had a negative perception regarding prostate disease. P_6 had the highest positive perception with 55.07% and the least one was with P_5 i.e 15.2%.

Table 6: Assessment of Knowledge after distribution of pamphlet

Questions	Correct Responses (N)	Percentage (%)
1. Prostate gland is found only in male?	86	62.3%
2. Prostate disease can cause difficulty in urination?	97	70.2%
3. Prostate problem mostly affects elderly population?	101	73.1%
4. Prostate disease can progress to kidney problem?	85	61.5%
5. Prostate disease are hereditary they run in families?	94	68.1%
6. Prostate gland is a part of reproductive system?	79	57.2%
7. Prostate disease are not curable?	83	60.1%

The knowledge was assessed after circulating the pamphlet and the frequency is noted in table 6. When comparing **Table 3** and **Table 6**, there is a lot of difference in the understanding of the prostate diseases. There is improvement in knowledge in all questions.

Table 7: Assessment of Attitude after distribution of pamphlet

Questions	Correct Responses	Percentage
1. All men above the age of 40 has to undergo screening for prostate cancer?	93	67.3%
2. Treatment with drugs works well for BPH?	84	60.8%
3. We consult a doctor after home remedies fail?	78	56.5%
4. Prostate cancer is one of the most common cancer among men?	87	63.0%
5. Clinical outcome of prostate cancer patient can be improved with early diagnosis of cancer?	92	66.7%
6. Surgical treatment are available for prostate disease?	104	75.3%
7. Bacterial infection can cause enlargement of prostate gland?	84	60.8%

When analysing the attitude section after distribution of the pamphlet showed in **Table 7**, it was found that there was increase in positive attitude among the participants, which again signifies the importance of pamphlet in the study.

Table 8: Assessment of Perception after distribution of pamphlet

Questions	Correct Responses	Percentage
1. Were you advised to do any Prostate diseases diagnosing test before?	87	63.0%
2. Do you undergo any screening test for prostate diseases regularly?	91	65.9%
3. Have you undergone rectal examination before?	124	89.8%
4. Do you take any home remedies for your urinary problems?	96	69.5%
5. Are you aware of the drugs prescribed by the physician if you are suffering from any of the prostate disease?	74	53.6%
6. Do you think BPH requires immediate treatment?	110	79.7%
7. Benign Prostatic Hyperplasia requires therapy for longer duration of time?	98	71.0%

Although most of the participants showed a negative perception before the distribution of pamphlet shown in **Table 8.** We could see a drastic improvement after the distribution of pamphlet among the participants which is seen in table 9.

Table 9: Comparison of KNOWLEDGE ATTITUDE AND PERCEPTION before and after distribution of Pamphlet

Q.NO	KNOWLEDGE BEFORE AND AFTER DISTRIBUTION OF PAMPHLET			ATTITUDE BEFORE AND AFTER DISTRIBUTION OF PAMPHLET			PERCEPTION BEFORE AND AFTER DISTRIBUTION OF PAMPHLET		
	BEFORE	AFTER	P VALUE	BEFORE	AFTER	P VALUE	BEFORE	AFTER	P VALUE
1	42	86	**0.001**	57	93	**0.017**	29	87	**0.0001**
2	47	97	**0.006**	47	84	**0.007**	37	91	**0.0006**
3	64	101	**0.022**	58	78	0.157	87	124	0.054
4	29	85	**0.0001**	49	87	**0.007**	34	96	**0.0001**
5	54	94	**0.007**	56	92	**0.016**	21	74	**0.0001**
6	39	79	**0.002**	76	104	0.103	76	110	0.053
7	49	83	**0.014**	69	84	0.330	32	98	**0.0001**

When comparing the Knowledge, Attitude and Perception of the participants before and after distribution of pamphlet shown in **Table 9**. With the results we found that there is significant difference between participants before and after distribution of pamphlets except a few in attitude and perception section.

DISCUSSION

BPH and PCa, the two most prevalent prostate diseases are the most common illnesses affecting the elderly and are a major factor in urologic referral in this age range (Greenlee et al., 2000). Lower urinary tract symptoms (LUTS) together with its complications had impact on quality of life of the patients. Two significant technological developments have made a significant contribution to the alarming rise in knowledge and detection of prostate illnesses (Ojewola et al., 2012). These include assays based on serum that have been developed to measure prostate-specific antigen (PSA), as well as the affordability and wide availability of ultrasound scanning, which typically offers the best imaging possible of a prostate gland. However, measurement of PSA has had the most substantial impact of these two advancements.

In our study we found that understanding regarding prostate diseases were poor among the participants, the mean positive knowledge was only 35 % , the highest positive knowledge was seen in K 3 with 46.3 % and the least one was with K4 with 21 % which readily correlate with a present clinical trial conducted upon the urban population of American – African Men survey The participants attitude towards the disease was average with the mean average of 44% , they showed a least attitude towards A2 with 34% and the highest attitude was with A6 with 55% . Which showed that they were aware of surgical options available for BPH. The perception of the participants was also not up to the mark, the highest positive perception was seen with P 3 i.e 63.0 % and the least one was with P5 with 15.2%. Which showed that their perception towards the medication they are using is poor. Hence the idea was to distribute pamphlet to the participants to overcome the knowledge gap of the participants. While we compared the KAP of the participants before and after distribution of pamphlets, we could see a clear and significant difference.

The socio-economic status of the participants had significant impact on the KAP of the participants. In this study, most of participants had not undergone prostate screening the most common reason for this was lack of awareness and they were not advised by anyone to do it. More than half of the of participants had not undergone prostate screening so far. Interestingly, almost all (80%) of the men in this study are willing to undergo prostate screening. Therefore, it is important aspect of a health care professional to emphasis on the screening of prostate glands. Yet another reason for not undergoing prostate screening was poverty. This is in keeping with other studies, which demonstrated a strong link between poverty and mortality from non-communicable diseases.

CONCLUSION

In conclusion, the results of this study suggest that the men population in chennai lack knowledge regarding prostate disease. This study recommends widespread public health campaigns using the mass media, hospitals and religious centres to improve knowledge, attitude and screening practices regarding prostatic diseases.

Prostate cancer screening in at-risk men provides early identification and treatment because prostate cancer is the most prevalent cancer in men over middle age and has a higher prevalence and fatality rate. Studies have revealed that the majority of patients present with advanced illnesses since there was not a systematic screening programme in place • There is often poor awareness of prostate cancer and screening procedures, which may contribute to the late presentation. This study adds to the body of information showing that screening procedures and prostate cancer awareness are still lacking. It also proves that awareness of benign prostatic hyperplasia and prostatitis, two other prostatic disorders, is much lower than that of prostate cancer; Additionally, it was found that medical staff rarely provide information about prostate illnesses. The most frequent reason why men have not been checked for prostate cancer is that medical professionals have not advised it. This study demonstrates several misconceptions regarding the aetiology of prostatic disorders and the necessity for public education to dispel men's preconceptions.

CONFLICT OF INTEREST

None

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