Section: Pharmacology

Original Research Article

ASSESSING MEN'S KNOWLEDGE AND ATTITUDE ON PROSTATE CANCER AND ITS SCREENING: A HOSPITAL-BASED CROSS-SECTIONAL STUDY

M. Usha Rani[1], M. Sandhya Rani[2], T. Devika[3], Ramineni Varun[4]

[1]Associate Professor, Department of Pharmacology, Guntur Medical College, Guntur, Andhra Pradesh, India
[2]Associate Professor, Department of Community Medicine, Sri Pingali Venkaiah Government Medical College, Machilipatnam, Andhra Pradesh, India
[3]Assistant Professor, Department of Pharmacology, Guntur Medical College Guntur, Andhra Pradesh, India
[4]IIIrd Year MBBS Student, Guntur Medical College Guntur, Andhra Pradesh, India.

Received : 09/05/2025
Received in revised form : 05/07/2025
Accepted : 24/07/2025

Keywords:
Prostate cancer, knowledge, attitude, PSA screening, men's health, early detection, India.

Corresponding Author:
Dr. M. Sandhya Rani,
Email: sandhyaravigummalla@gmail.com

DOI: 10.47009/jamp.2025.7.4.281

Source of Support: Nil,
Conflict of Interest: None declared

Int J Acad Med Pharm
2025; 7 (4); 1484-1488

ABSTRACT

Background: Prostate cancer is a leading malignancy among men, yet awareness and screening practices remain suboptimal, particularly in low- and middle-income countries. Early detection through screening significantly improves outcomes. Objectives: To assess knowledge, attitudes, and screening practices related to prostate cancer among men aged over 40 years and to examine their association with educational level and age. **Materials and Methods:** A hospital-based cross-sectional study was conducted over two months (September–October 2024) at GGH, Guntur. A total of 100 male participants aged >40 years were enrolled using purposive sampling. A pre-validated structured questionnaire assessed demographics, knowledge, attitudes, and practices. Descriptive statistics were used for analysis. **Result:** The mean age of participants was 53.58 ± 9.69 years; 96% were married and 75% reported a family history of cancer. Only 17% had heard of prostate cancer, and 14% were aware of its symptoms. Knowledge levels were low in 62% of participants. While 91% believed men >50 should undergo PSA screening, only 17% had been screened, and none could identify the screening methods. Despite this, 98% perceived screening as beneficial, and 56% expressed willingness for future screening. **Conclusion:** There exists a significant knowledge gap regarding prostate cancer and its screening among adult men. Though attitudes were generally positive, actual screening practices were poor. Public health interventions focusing on awareness and access to screening are urgently needed.

INTRODUCTION

Prostate cancer is one of the most frequently diagnosed malignancies in men and poses a significant global public health burden. It ranks as the second most common cancer and the fifth leading cause of cancer-related mortality among men worldwide.[1] The incidence of prostate cancer has shown a consistent rise, particularly in aging populations and in low- and middle-income countries.[2] In the Indian context, although overall incidence remains comparatively lower than in Western nations, recent epidemiological data indicate a marked increase, especially in urban areas, with an estimated 33,000 to 42,000 new cases reported annually.[3]

A major challenge in managing prostate cancer lies in the lack of awareness and limited utilization of screening services. The disease often remains asymptomatic during its early stages and progresses insidiously, underscoring the importance of early detection through effective screening tools such as prostate-specific antigen (PSA) testing and digital rectal examination (DRE).[4] Despite their proven clinical utility, uptake of these modalities is notably poor in resource-limited settings, due in part to insufficient knowledge, cultural misconceptions, and fear of diagnosis.[5]

Moreover, the psychological burden of prostate cancer—including anxiety, depression, and stigma—further hinders proactive screening behaviors and treatment adherence.[6] Sociodemographic variables such as age, education level, and family history significantly influence awareness and attitudes toward prostate cancer, emphasizing the need for targeted educational interventions and accessible screening programs tailored to high-risk groups.[2,5]

ISSN (O): 2687-5365; ISSN (P): 2753-6556

This study aims to assess the level of knowledge and attitudes regarding prostate cancer and its screening among adult men attending a tertiary care hospital in Guntur, Andhra Pradesh. Additionally, it seeks to explore the relationship between these parameters and variables such as age and educational status.

MATERIALS AND METHODS

Study Design and Setting

A hospital-based, cross-sectional observational study was conducted in the Department of Pharmacology at Government General Hospital (GGH), Guntur, Andhra Pradesh, India. The study was carried out over a two-month period from September to October 2024.

Study Population

The study included male participants aged over 40 years attending outpatient or inpatient departments of GGH. Participants were recruited using purposive sampling based on eligibility criteria.

Inclusion and Exclusion Criteria

Inclusion Criteria

Male individuals aged >40 years

Willingness to participate and provide informed consent

Exclusion Criteria

Male individuals aged <40 years

Those unwilling to participate or unable to provide consent

Sample Size

A total of 100 participants were enrolled based on preliminary prevalence estimates and feasibility considerations within the study period.

Data Collection Tool

A pre-validated structured questionnaire was developed based on literature from Gift et al. and Morlando et al. [8,9]. The questionnaire comprised four sections:

Demographic characteristics

Knowledge about prostate cancer

Attitudes toward prostate cancer and its screening

Screening practices

Data Analysis

Data were entered into Microsoft Excel and analyzed using descriptive statistics. Frequencies and percentages were used to summarize categorical variables. Results were presented in tabular and graphical formats for clarity.

Ethical Considerations

The study protocol was approved by the Institutional Ethics Committee of Guntur Medical College and Hospital(GMC/IEC/006/2024 dated 22-08-2024). Written informed consent was obtained from all participants in their preferred language. Confidentiality and anonymity were strictly maintained throughout the data collection and analysis process.

RESULTS

A total of 100 male participants aged over 40 years were enrolled in this study, with a mean age of 53.58 ± 9.69 years. The majority were married (96%) and most had at least secondary-level education. Specifically, 35% had completed secondary school and 29% were graduates. Notably, 75% reported a family history of cancer, highlighting a substantial proportion with potentially increased cancer risk (Table 1).

Knowledge About Prostate Cancer

Despite the high prevalence of cancer history in families, awareness of prostate cancer remained limited. Only 17% of respondents had heard about prostate cancer. Among the participants, 32% believed the condition was preventable, and 73% thought it was curable. Awareness of symptoms was particularly low, with only 14% able to identify any symptoms correctly. When assessed for knowledge scores, a majority (62%) demonstrated low knowledge (1–3 correct responses), whereas only 11% showed high knowledge (7–9 correct responses) (Table 2).

Attitudes Toward Prostate Cancer and Screening

Attitudinal responses revealed a relatively favorable perception of prostate cancer screening. Over half (58%) believed that the likelihood of developing prostate cancer increases with age. While 91% supported PSA testing for asymptomatic men aged over 50, 35% perceived the PSA test to be invasive. When evaluated on a worry scale from 1 to 10, 54% scored 8–10, indicating substantial concern about developing the disease. Similarly, 78% believed the PSA test to be highly useful for early detection (Table 3).

Perceptions Toward Screening

Prostate cancer screening was viewed positively by the vast majority of participants. A total of 98% endorsed screening as beneficial, while only 5% considered it a waste of time. However, 67% expressed concerns regarding potential harmful side effects from screening procedures, suggesting a degree of apprehension that could influence screening uptake (Table 4).

Practices Related to Prostate Cancer Screening

When questioned about actual screening behaviors, only 17% reported having been screened within the past two years. Alarmingly, none of the participants were aware of the methods employed, such as the PSA test or digital rectal examination (DRE). Nevertheless, more than half (56%) expressed willingness to undergo screening in the near future, indicating a positive inclination toward future participation in preventive health practices if appropriately guided and informed (Table 5).

ISSN (O): 2687-5365; ISSN (P): 2753-6556

Table 1. Demographic Characteristics of the Study Participants (N = 100)

Variable	Frequency (n)	Percentage (%)
Marital Status		
Married	96	96%
Unmarried	4	4%
Educational Status		
No Formal Education	11	11%
Primary School (Std.1st–5th)	15	15%
Secondary School (Std.6th–10th)	35	35%
Intermediate	10	10%
Graduate/Degree	29	29%
Family History of Cancer		
Yes	75	75%
No	25	25%

Table 2. Knowledge about Prostate Cancer (N = 100)

Knowledge Parameters	Frequency (n)	Percentage (%)
Heard of Prostate Cancer	17	17%
Believed Prostate Cancer is Preventable	32	32%
Believed Prostate Cancer is Curable	73	73%
Awareness of Symptoms	14	14%
High Knowledge Score (7–9 correct answers)	11	11%
Moderate Knowledge Score (4–6 correct answers)	27	27%
Low Knowledge Score (1–3 correct answers)	62	62%

Table 3. Attitudes towards Prostate Cancer and Screening (N = 100)

Attitudinal Aspect	Frequency (n)	Percentage (%)
Believes cancer risk increases with age	58	58%
Considers PSA test to be invasive	35	35%
Believes asymptomatic men >50 should undergo PSA testing	91	91%
Worried about developing prostate cancer (Score 8–10)	54	54%
Not worried (Score 1–3)	21	21%
Believes PSA test is highly useful (Score 8–10)	78	78%

Table 4. Perceptions on Prostate Cancer Screening (N = 100)

Screening Opinion	Frequency (n)	Percentage (%)
Screening is beneficial	98	98%
Screening is a waste of time	5	5%
Screening has harmful side effects	67	67%

Table 5. Practices Followed Regarding Prostate Cancer (N = 100)

Practice Parameter	Frequency (n)	Percentage (%)
Screened for prostate cancer in the last 2 years	17	17%
Aware of screening methods (PSA/DRE)	0	0%
Willingness to undergo screening in the near future	56	56%

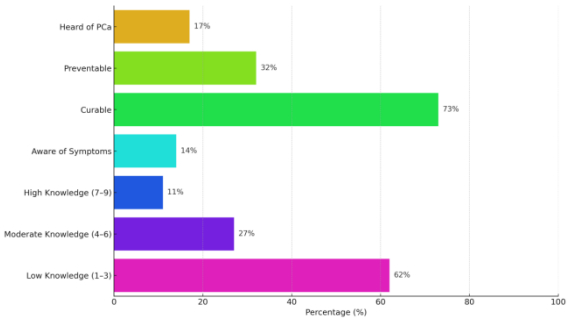

Figure 1. Knowledge about Prostate Cancer among Participants

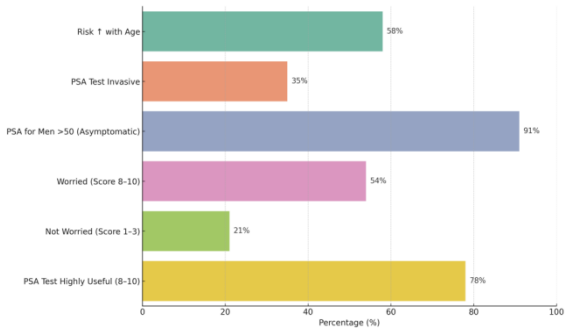

Figure 2. Attitudes towards Prostate Cancer and Screening

ISSN (O): 2687-5365; ISSN (P): 2753-6556

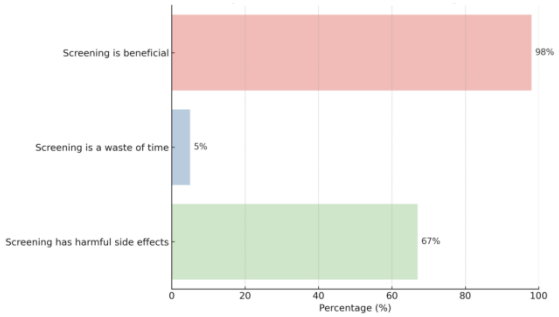

Figure 3.Perceptions on Prostate Cancer Screening

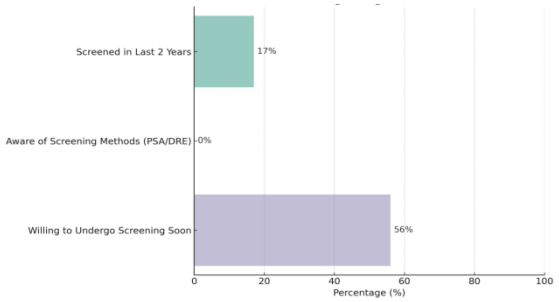

Figure 4.Practices Followed Regarding Prostate Cancer (N = 100)

DISCUSSION

This study aimed to assess the knowledge, attitudes, and screening practices related to prostate cancer among adult men attending a tertiary care hospital in Guntur, Andhra Pradesh. The findings indicate a significant gap in awareness, with only 17% of participants having heard of prostate cancer and just 14% identifying any symptoms. This level of awareness is substantially lower than findings reported by Mbugua et al. in Kenya and Ojewola et al. in Nigeria, where 84% and 47.5% of men, respectively, were aware of the disease.[10]

In our study, 62% of participants had low knowledge scores, while only 11% demonstrated high knowledge. Similar patterns were reported by Gift et al. in Zambia, where knowledge correlated positively with education and age.[8] Our data reflect the same trend participants with higher educational attainment and older age demonstrated comparatively better awareness, supporting the need for educational outreach targeting younger and less educated individuals.

While attitudes were largely favorable with 91% supporting PSA screening for asymptomatic men over 50 and 98% agreeing that screening is beneficial—actual screening uptake was low at 17%, and none of the participants were aware of the screening methods. This disconnect between awareness and behavior has been noted in studies by Morrison et al. in Jamaica and Ugochukwu et al. in Nigeria, where favorable attitudes did not translate into practice.[7,14]

Notably, 67% of respondents in our study expressed concern that screening might cause harmful side effects, revealing persistent misconceptions that could discourage participation. Such fears highlight the importance of culturally tailored health education and counseling. Similar misconceptions have been observed in other African studies, where fear of pain, stigma, or impotence limited screening behaviors.[12]

Our participants primarily cited friends and family as sources of information, whereas studies from Italy and the United States emphasize the critical role of physicians in promoting screening awareness.[9,13] This gap in professional guidance indicates a missed opportunity for primary care providers to engage in prostate health promotion. Steele et al. also found that a significant portion of men received screening advice from healthcare professionals, positively influencing behaviour.[11]

Strengths and Limitations

The strength of the study lies in its systematic assessment of both knowledge and attitude in a high-risk group. However, being single-centered with a small sample size limits generalizability. Furthermore, the study relied on self-reported practices, which may be subject to recall or social desirability bias.

Implications for Practice

Our results underscore the urgent need for public health interventions focused on prostate cancer awareness, particularly in primary care settings. Educational programs tailored to literacy levels, coupled with accessible screening services, are vital to bridge the gap between favorable attitudes and low screening uptake.

CONCLUSION

This study reveals a critical gap in awareness and understanding of prostate cancer among men aged over 40, despite generally positive attitudes toward screening. While the majority recognized the benefits of early detection and supported PSA testing for asymptomatic individuals above 50 years, actual screening practices were notably poor. Educational status and age were positively associated with knowledge levels, highlighting the need for targeted community-based interventions. Addressing misconceptions about screening-related harms and improving access to reliable health information through healthcare professionals is essential. Strengthening prostate cancer awareness can lead to improved participation in screening and potentially better clinical outcomes through early diagnosis.

REFERENCES

1. Alothman AM, Altamimi AF, Alhenaki AW, Almansour NM, Alhusaini AK, Alateeq F. The knowledge and attitude towards prostate cancer and screening practices among males in Saudi Arabia. J Family Med Prim Care. 2022 Jun;11(6):2637-2642. doi: 10.4103/jfmpc.jfmpc_1802_21. Epub 2022 Jun 30. PMID: 36119286; PMCID: PMC9480705.
2. Alqudah MAY, Al-Samman R, Matalgah O, Abu Farhah R. Early detection of prostate cancer: Self-reported knowledge and attitude of physicians in Jordan. Inquiry. 2022;59:469580221095822.

ISSN (O): 2687-5365; ISSN (P): 2753-6556

3. Sekhoacha M, Riet K, Motloung P, Gumenku L, Adegoke A, Mashele S. Prostate Cancer Review: Genetics, Diagnosis, Treatment Options, and Alternative Approaches. Molecules. 2022 Sep 5;27(17):5730. doi: 10.3390/molecules27175730. PMID: 36080493; PMCID: PMC9457814.
4. James ND, Tannock I, N'Dow J, Feng F, Gillessen S, Ali SA, et al. The Lancet Commission on prostate cancer: planning for the surge in cases. Lancet. 2024 Apr 27;403(10437):1683-1722. doi: 10.1016/S0140-6736(24)00651-2. Epub 2024 Apr 4. Erratum in: Lancet. 2024 Apr 27;403(10437):1634. doi: 10.1016/S0140-6736(24)00748-7. PMID: 38583453; PMCID: PMC7617369.
5. Di H, Wen Y, Wang J, Wang J, Wang Y, Li Y,et al. The impact of obesity and sexual behavior on prostate cancer risk is mediated by testosterone levels: a mendelian randomization study and mediation analysis. Prostate Int. 2024 Jun;12(2):96-103. doi: 10.1016/j.prnil.2024.03.003. Epub 2024 Mar 26. PMID: 39036754; PMCID: PMC11255935.
6. De Sousa A, Sonavane S, Mehta J. Psychological aspects of prostate cancer: a clinical review. Prostate Cancer Prostatic Dis. 2012 Jun;15(2):120-7. doi: 10.1038/pcan.2011.66. Epub 2012 Jan 3. PMID: 22212706.
7. Ugochukwu UV, Odukoya OO, Ajogwu A, Ojewola RW. Prostate cancer screening: what do men know, think and do about their risk? exploring the opinions of men in an urban area in Lagos State, Nigeria: a mixed methods survey. Pan Afr Med J. 2019 Nov 29;34:168. doi: 10.11604/pamj.2019.34.168.20921. PMID: 32153708; PMCID: PMC7046128.
8. Gift S, Nancy K, Victor M. Assessment of knowledge, practice and attitude towards prostate cancer screening among male patients aged 40 years and above at Kitwe Teaching Hospital, Zambia. Afr J Urol. 2020;26:70.
9. Morlando M, Pelullo CP, Di Giuseppe G. Prostate cancer screening: Knowledge, attitudes and practices in a sample of men in Italy. A survey. PLoS One. 2017 Oct 12;12(10):e0186332. doi: 10.1371/journal.pone.0186332. PMID: 29023514; PMCID: PMC5638517.
10. Ojewola RW, Oridota ES, Balogun OS, Ogundare EO, Alabi TO, Banjo OO, Laoye A, Adetunmbi B, Adebayo BO, Oluyombo R. Knowledge, attitudes and screening practices regarding prostatic diseases among men older than 40 years: a population-based study in Southwest Nigeria. Pan Afr Med J. 2017 Jun 30;27:151. doi: 10.11604/pamj.2017.27.151.10605. PMID: 28904679; PMCID: PMC5567951.
11. Steele CB, Miller DS, Maylahn C, Uhler RJ, Baker CT. Knowledge, attitudes, and screening practices among older men regarding prostate cancer. Am J Public Health. 2000 Oct;90(10):1595-600. doi: 10.2105/ajph.90.10.1595. PMID: 11029994; PMCID: PMC1446381.
12. Adibe MO, Aluh DO, Isah A, Anosike C. Knowledge, Attitudes and Perceptions of Prostate Cancer among Male Staff of the University of Nigeria. Asian Pac J Cancer Prev. 2017 Jul 27;18(7):1961-1966. doi: 10.22034/APJCP.2017.18.7.1961. PMID: 28749629; PMCID: PMC5648405.
13. Tasian GE, Cooperberg MR, Cowan JE, Keyashian K, Greene KL, Daniels NA, Carroll PR, Chan JM. Prostate specific antigen screening for prostate cancer: knowledge of, attitudes towards, and utilization among primary care physicians. Urol Oncol. 2012 Mar-Apr;30(2):155-60. doi: 10.1016/j.urolonc.2009.12.019. Epub 2010 Aug 25. PMID: 20800514.
14. Morrison BF, Aiken WD, Mayhew R, Gordon Y, Odedina FT. Prostate Cancer Knowledge, Prevention, and Screening Behaviors in Jamaican Men. J Cancer Educ. 2017 Jun;32(2):352-356. doi: 10.1007/s13187-016-0991-8. PMID: 26842816; PMCID: PMC5553046

ISSN (O): 2687-5365; ISSN (P): 2753-6556