

A Descriptive Retrospective Study of PSA and IPSS Scores from Participants at a Men's Health Initiative

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Introduction

Within the Caribbean region, prostate cancer accounted for the most cancer related deaths in the region among males (18.4%- 47.4%). In addition to Prostate cancer, Benign Prostatic Hyperplasia (BPH) is also a prevalent condition (50-80%) that affects men over the age of 50 and tends to cause immense discomfort. Various screening measures have been put into place to detect these conditions, mainly through the use of Prostatic Serum Antigen (PSA) levels and International Prostatic Symptom Scores (IPSS) values as early detection is key to proper management of these diseases. Previous studies sought to investigate the relationship between PSA and IPSS and determine predictors of these two values. This study intends to build on that knowledge and aims at providing supplementary information such that rapid detection and management of prostate disorders can be promoted.

Objective

This study aims to:

1. To describe the characteristics of men attending a primary health care based screening initiative
2. To determine the proportion of men with elevated PSA and IPSS scores
3. To determine correlation between PSA and IPSS scoring
4. To determine the proportion of men at risk for developing BPH and prostate cancer (based on IPSS and PSA scores respectively)
5. To determine mean PSA and IPSS and describe factors associated with higher PSA and IPSS scores

Methodology

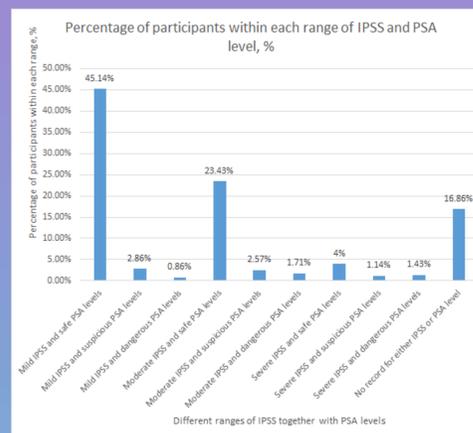
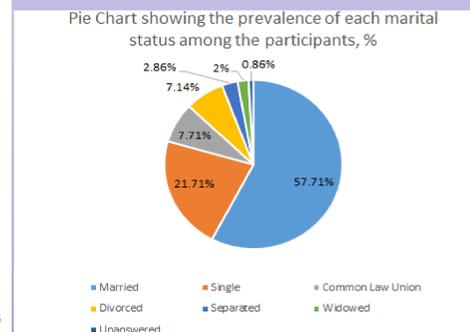
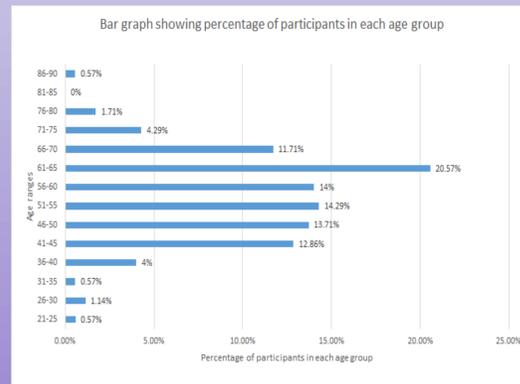
This study analysed data extracted from the medical records of men attending a men's health initiative provided by the NCRHA.

This study related the demographic data (age, weight, marital status, comorbidities) with the IPSS scores and PSA values to determine correlations and the proportion of men in the sample size that were potentially at risk for developing BPH and prostate cancer. Additionally, the study also determined the mean PSA and IPSS scores in order to investigate possible factors associated with higher PSA and IPSS scores.

Data was analysed using SPSS (version 27).

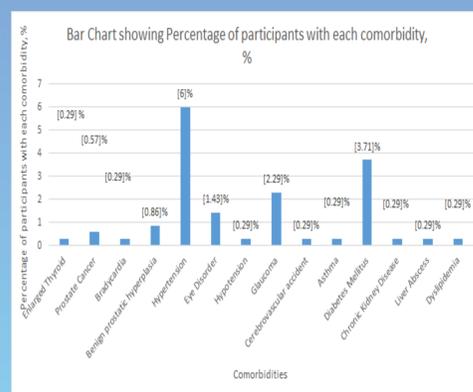
All data was stored on a computer with password protection, accessible only by the research team members. The confidentiality of the participants was maintained throughout this study as no identifiers were included in the stored data.

Results



Mild IPSS	0-7
Moderate IPSS	8-19
Severe IPSS	20-35
Safe PSA level	0-4 ng/ml
Suspicious PSA level	4-10 ng/ml
Dangerous PSA level	>10 ng/ml

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid IPSS Score less than or equal to 8 (Low)	198	56.6	67.1	67.1
Valid IPSS Score greater than 8 (High)	97	27.7	32.9	100.0
Total	295	84.3	100.0	
Missing System	55	15.7		
Total	350	100.0		



	Frequency	Percent	Valid Percent	Cumulative Percent
Valid less than or equal to 4.00 (Low)	300	85.7	88.5	88.5
Valid Greater than 4.00 (high)	39	11.1	11.5	100.0
Total	339	96.9	100.0	
Missing System	11	3.1		
Total	350	100.0		

Discussion

- Findings from this investigation are supported by those of Park, D. S. et al in which IPSS scores did not demonstrate a high correlation level with PSA. ($r=0.161$, $p=0.006$)
- A small but significant correlation between IPSS and diabetes was observed ($r=0.223$, $p<0.05$). However, no correlation was found between PSA levels and diabetes.
- Additionally, a small but significant correlation between PSA score and age ($r=0.192$, $p<0.05$) was observed in this study. This was also noted between IPSS and age ($r=0.214$, $p<0.05$). Previous studies also demonstrated a direct correlation between age and PSA level and between age and IPSS scores

Conclusion

Consistent with previous studies, PSA levels and IPSS were found to be significantly associated with age. There was a direct correlation between PSA and age. IPSS scores however, did not demonstrate a high correlation with PSA levels. Interestingly, there was a small but significant correlation between IPSS and Diabetes. Neither IPSS nor PSA levels were correlated with Hypertension.

References

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- From this study the mean IPSS was 7.62 ± 6.23 and mean PSA score was 2.94 ± 10.21 . 32.9% of men had an elevated IPSS (>8) and 11.5% had an elevated PSA level (>4.0 ng/ml).