

### An Assessment of the Demographic Characteristics of Patients with Benign Prostate Hypertrophy at Federal Medical Centre, Azare from January 2014 to December 2018

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#### Abstract

This research investigates the demographic characteristics of patients diagnosed with Benign Prostate Hypertrophy (BPH) at the Federal Medical Centre (FMC) Azare, Bauchi State, from 2014 to 2018. BPH, characterized by the non-cancerous enlargement of the prostate gland, is recognized as the most common urological condition affecting adult males globally. The study aims to determine the number of patients diagnosed and treated with BPH, identify the most affected age group, examine the family structure most commonly associated with the condition, and assess the parity of affected patients. A descriptive survey design was adopted, utilizing anecdotal records from 423 patients diagnosed with BPH during the study period representing a full enumeration of the target population. Data were analyzed using percentages and presented in frequency distribution tables. The findings revealed that the highest number of BPH cases occurred in 2018. The most affected age group was between 50 and 80 years (44%), with patients from polygamous families comprising the majority (79%). Furthermore, 54% of patients had five or more children. Based on these results, the study recommends that health professionals intensify educational efforts targeting men at risk of BPH,

focusing on its causes and prevention. Additionally, government support is urged, particularly in the provision of medical assistance such as medications for affected individuals.

**Keywords:** Benign Prostate Hypertrophy; Demographic Characteristics; Assessment; Parity; Urological Health

## INTRODUCTION

Benign prostate hypertrophy has been a health problem among male worldwide. Benign prostate hypertrophy is an enlargement of the prostate gland and it is the most common urologic problem in male adults (Lewis et al, 2013). The prevalence of benign prostate hypertrophy rises markedly with increased age. Autopsy studies have observed a histological prevalence of 8%, 50%, and 80% in the 4<sup>th</sup>, 6<sup>th</sup> and 9<sup>th</sup> decades of life respectively. Observational studies from Europe, US, Asia have also demonstrated older age to be a risk factor for clinical benign prostate hypertrophy onset and progression.

Furthermore, the prostate volume increases with age based on data from the Krimpen and Baltimore Longitudinal study of aging suggesting a prostate growth rate of 2.0% to 2.5% per year in older men. Continued prostate growth is a risk factor from Lower Urinary tract symptoms progression and larger prostates are associated with benign prostatic enlargement and increased risk for clinical benign prostate hypertrophy progression, urinary retention and need for prostate surgery.

Concerning race, no clear patterns have emerged with respect to benign prostate hypertrophy risk. Observational studies comparing black, Asian and White men have produced variable results. Studies of Black men in the US have observed an increase prostate transition zone and total volume compared with White men. Some data have suggested a decreased risk of benign prostate hypertrophy in Asian compared with white men.

Evidence suggests a strong genetic component to BPH. A case control analysis in which men below 64 years underwent surgery for BPH, noted that male relatives had a 4-fold and 6-fold increase respectively of age-specific risks for BPH surgery. These investigators further estimated that 50% of men below 60 years undergoing surgery for BPH had a heritable form of disease. In a subsequent study, they observed that heritable

disease was associated with larger prostate volume and younger onset compared with sporadic BPH. These and other findings suggested an autosomal dominant pattern of inheritance.

Increased physical activity and exercise have been consistently linked to decreased risk of BPH surgery, clinical BPH and lower urinary tract symptoms. A meta-analysis of 11 published studies indicated that moderate to vigorous physical activity reduced the risk of benign prostate hypertrophy as much as 25% relative to a sedentary lifestyle.

Studies have consistently observed that increased adiposity is positively associated with prostate volume, the greater the prostate volume. Body weight, body mass index and waist circumference have all been positively associated with prostate volume in multiple different populations. In Baltimore Longitudinal study of aging, each  $1\text{kg}/\text{m}^2$  increase in body mass index corresponded to a 0.41ml increase in prostate volume and obese participants ( $\text{Bml} > 35\text{kg}/\text{m}^2$ ) had a 3.5 fold increased risk of prostate enlargement compared to non-obese ( $\text{Bml} < 25\text{kg}/\text{m}^2$ ) participants.

The burden of clinical BPH is very high among Nigerian men and the prevalence increases with age. This is known through the registered victims in hospitals, clinics and surgical outpatient department. Benign prostate hypertrophy has physical, physiological, social and economic effects on the victims according to United Nations population fund (UNFPA 2015).

BPH is the most devastating of all men disabilities while Jaga (2013), stressed that more than two million men in developing nations of the world are suffering from this condition in the world and about fifty thousand to one hundred new cases are recorded yearly.

In Nigeria, it has been recorded that one in four men older than 40 years have symptoms suggestive of BPH (Ezeanyika et al, 2006).

## **METHODOLOGY**

### **Research Design**

The research design adopted for this study is descriptive survey research design. Descriptive survey was adopted because it is applied in the gathering of information about prevailing conditions or situations for the description and interpretation (Aggarwal, 2008).

### **Area of the Study**

The study was carried out at Federal Medical Centre (FMC Azare), Bauchi state. Specifically the study was conducted in Male Surgical Ward of the hospital in Azare, Bauchi State.

### **Population of the Study**

The target population used for this study was record of patients diagnosed and managed with benign prostate hypertrophy at Federal Medical Centre Azare, Bauchi state from January 2014 to December 2018. The total number of such patients was 423. This number was obtained from patient's record book at Federal Medical Centre Azare (2014 to 2018).

### **Sample Size and Formula**

The entire record of patients diagnosed and managed with benign prostate hypertrophy at Federal Medical Centre Azare from January 2014 to December 2018 was utilized for this study which is 423 patients. Hence, no sampling was conducted in this study.

### **Sampling Technique**

The entire record of patient diagnosed and managed with benign prostate hypertrophy at Federals Medical Center Azare from January 2014 to December 2018 was utilized for this study. Hence, no sampling technique was used.

### **Instrument for Data Collection**

The instrument used for this study was anecdotal record of both personal and yearly record of patient's diagnosed and managed with benign prostate hypertrophy at Federal Medical Centre Azare from January 2014 to December 2018.

### **Method of Data Collection**

The data was collected through formal protocol of obtaining permission for data collection where a written letter from the researcher's institution was taken to the hospital authority for approval. After the approval, data was collected by the researcher from male surgical ward patient's record about patients diagnosed and managed with benign prostate hypertrophy from January 2014 to December 2018 which was used for the study.

### Method of Data Analysis

Percentage was used to analyze data for answering research question 1,2,3 and 4 and where the data was presented using frequency distribution table.

### Ethical Consideration

Consent of this research work was obtained from the hospital management. All information obtained would be treated confidentially.

## RESULTS

This chapter deals with the analysis of data collected in relation to the assessment of the demographic characteristics of patients diagnosed and managed with benign prostate hypertrophy at Federal Medical Centre Azare from January 2014 to December 2018. The data was collected from patient's record book.

### Presentation of Results

**Research Question 1:** What is the number of patients diagnosed and treated with BPH in FMC Azare between 2014 to 2018?

**Number 1:** To find out the number of patients diagnosed and treated with benign prostate hypertrophy.

**Table 1:** Percentage of patients diagnosed and managed with benign prostate hypertrophy from 2014 to 2018.

Year	Frequency	Percentage
2014	68	16
2015	77	18
2016	89	21
2017	92	22
2018	97	23
<b>Total</b>	<b>423</b>	<b>100</b>

To answer the above stated research question, data was collected from patient's record book for this study. Table 1 above shows the greater percentage of patients diagnosed and managed with benign prostate hypertrophy was in 2018. Specifically, 23% in 2018 and the lowest in 2014 which is 16%.

**Research Question 2:** What is the age group of patients commonly affected with benign prostate hypertrophy at FMC Azare?

To determine the common age group affected with BPH in Federal Medical Centre Azare between 2014 to 2018.

**Table 2:** The age group of patient commonly diagnosed and managed with BPH.

Age	Frequency	Percentage
Less than 50	75	18
50 – 80 years	186	44
Greater than 80	162	38
<b>Total</b>	<b>423</b>	<b>100</b>

To answer the above stated question, data was obtained using record and percentage was calculated. Table 2 above shows that the greater percentage of age group of patients diagnosed and managed with benign prostate hypertrophy is between 50 – 80 years and the lower percentage is in patients less than 50 years.

**Research Question 3:** Which type of family are commonly affected with BPH in FMC Azare between 2014 to 2018?

Result for specific objective 3: To identify the type of family of patient most commonly affected with benign prostate hypertrophy.

**Table 3:** Type of family of patient commonly affected with benign prostate hypertrophy between 2014 to 2018 in FMC Azare.

Number of wives	Frequency	Percentage
Monogamy (1 wife)	87	21
Polygamy (2 and above)	336	79
<b>Total</b>	<b>423</b>	<b>100</b>

To answer the above stated question, data was obtained from patient’s record and percentage was calculated. Table 3 above shows that the greater percentage of the type of family most commonly affected with benign prostate hypertrophy was polygamous family. Specifically 79% for polygamy and 21% for monogamy.

**Research Question 4:** What is the parity of patients with benign prostate hypertrophy in FMC Azare?

Result for specific objective 4: To assess the parity of patients with benign prostate hypertrophy.

**Table 4:** Parity of patients diagnosed and managed with BPH in FMC Azare.

Number of children	Frequency	Percentage
Non	18	4
1 to 4	178	42
5 and above	227	54
<b>Total</b>	<b>423</b>	<b>100</b>

To answer the above stated question, data was obtained using record and percentage was calculated. Table 4 above shows that the greater percentage of parity was number of children between 5 and above with 54% and the lower percent is 4% in patients with no children.

## DISCUSSION

The study assessed the demographic characteristics of patients diagnosed and managed with benign prostate hypertrophy at Federal Medical Centre Azare from January 2014 to December 2018. In specific, the study sought to ascertain the number of patients diagnosed and treated with benign prostate hypertrophy, determine the common age group affected with benign prostate hypertrophy, and identify the type of family of patient most commonly affected with benign prostate hypertrophy and to assess the parity of patients with benign prostate hypertrophy. A cumulative record was used which was analyzed in chapter four of this research work. The result of the study provided answers to the research questions and are hereby discussed below:

Table 1 shows the result for annual record of benign prostate hypertrophy cases with the highest percentage in 2018 and the least in 2014. Meanwhile, over all there were a total of 423 cases of BPH recorded at the hospital (FMC Azare) during the period under the study. The finding of this study reveals that there is an increase in the number of cases of benign prostate hypertrophy yearly which is in consistent with the view of Jaga (2013) who stressed that more than two million men in developing nations are suffering from

benign prostate hypertrophy (BPH) and about fifty thousand to one hundred new cases are recorded yearly.

Table 2 shows that individual between 50 to 80 years are highly affected with benign prostate hypertrophy which accounted for 44%, greater than 80 years accounted for 38% with the least occurrence in patient below 50 years which is 18%. This is in conjunction with Ojewola (2017) who conducted a study on prevalence of benign prostate hypertrophy and found the highest prevalence to be among 50 years and above which account for 81.3%, 40 – 50 years with a prevalence of 18.7%.

Table 3 result shows that the types of family that are commonly affected with benign prostate hypertrophy are polygamy with 79% and the least are monogamy with 21%. This is not consistent with a study conducted by Innjoo (2015) that the type of family of patients affected with benign prostate hypertrophy are polygamy 48% and monogamy 52%.

Table 4 result shows that the greater percentage of patients with BPH condition parity, number of children between 5 and above which accounted for 54%, 1 to 4 number of children accounted for 42% and patients with no children accounted for 4%. This is similar to the study conducted by Shehu (2013) on the parity of patients with benign prostate hypertrophy and found out the highest percentage was in patients with number of children above 5.

## CONCLUSION

From the findings of the study, it is clear that number of patients diagnosed and managed with benign prostate hypertrophy was high in 2018, the common age group of patients diagnosed and managed with benign prostate hypertrophy were between 50 to 80 years, the type of family of patients commonly affected with benign prostate hypertrophy were polygamy and the parity of patient diagnosed and managed with benign prostate hypertrophy was high in patient with number of children between 5 and above.

## Recommendations

Based on the results obtained, the following recommendations were made;

1. Health workers should educate men who are at risk of developing benign prostate hypertrophy (40 years and above) on the causes/predisposing factors and ways to prevent them.
2. Government should provide assistance for patients suffering from benign prostate hypertrophy such as drugs.

### **Suggestion for Further Studies**

Since the result of the study reveals that individuals between 50 to 80 years are commonly affected with benign prostate hypertrophy. I therefore suggest that a study should be conducted in a different setting and the scope should be expanded in factors that trigger the occurrence of benign prostate hypertrophy in old age.

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