

Effect of Nocturia on Quality of Life among Clients with Benign Prostatic Hyperplasia

Sir,

Benign Prostatic Hyperplasia (BPH) and its associated symptom nocturia have a significant impact on quality of life (QoL). It occurs predominantly in men as age increases. Zhang *et al.*^[1] observed that nocturia significantly impacted the QoL when the patient had 2 or more episodes each night. Despite its negative impact on the QoL, the middle adulthood group has rarely been considered. Therefore the aim of this study was to assess the QoL among adult clients with BPH based on the severity of nocturia.

An exploratory descriptive design was used in this study to assess the QoL among clients with BPH. Institutional ethical clearance and permission to conduct the study were obtained from the concerned authority. The study was conducted among 155 male adults aged between 35 and 65 years and having nocturia. They were recruited by purposive sampling technique from the department of Urology of the selected hospital at Mangaluru. Written consent was obtained from the subjects for their participation in the study. The data were collected by structured interview technique with the help of severity of nocturia score and a self-reported questionnaire on QoL with BPH. The reliability of the tool was found to be 0.78 using Cronbach Alpha method. The data were analyzed using descriptive and inferential statistics. Clients on urinary catheter were excluded from the study.

First, the baseline characteristics of adult clients with BPH were evaluated. Of the subjects, 103 (66.5%) were in the age group of 56–65 years with mean age (\pm standard deviation [SD]) of 60.7 years (\pm 7.34). Among the subjects, 141 (91.0%) had severe botheration of sleep. Seventy-eight subjects (50.3%) had primary education and only 6 (3.9%) of them were graduates. Eighty-six subjects (55.5%) were skilled workers. Ninety-three subjects (60.0%) had income between INR 5001 and 10,000 with mean (\pm SD) income of 10716.12 (\pm 5574.47). One hundred and thirty-four subjects (84.5%) consumed a mixed diet. Seventy-one subjects (45.8%) had a toilet attached to the room and 35 (22.6%) of them had a toilet outside the house. Eighty-two subjects (52.9%) consumed alcohol regularly and 73 (47.1%) of them were smokers. Eighty-two subjects (52.9%) consumed coffee and 111 (71.6%) of them consumed spicy food regularly.

Next, the severity of nocturia among adult clients with BPH was assessed. Most of the subjects, i.e., 116 (74.8%) had severe nocturia, 38 (24.5%) had moderate nocturia, and only one (0.6%) had mild nocturia.

Then, the grading of QoL among adults with BPH was carried out which shows more than half of them, i.e., 92 (59.4%) had low QoL, 57 (36.8%) subjects had moderate, and only

Table 1: Overall and component wise mean, standard deviation, mean percentage, standard error of mean and confidence interval of quality of life (n=155)

Components of QoL	Mean \pm SD	Mean (%)	SEM	95% CI	
				Lower	Upper
Physical	16.1 \pm 5.9	67.1	0.5	15.2	17.0
Functional	20.6 \pm 4.6	85.7	0.4	19.8	21.3
Social and family	16.5 \pm 5.5	68.7	0.4	15.6	17.4
Financial	5.5 \pm 2.3	68.9	0.2	5.2	5.9
Emotional	20.1 \pm 6.9	71.9	0.6	19.1	21.3
Spiritual	8.1 \pm 3.6	67.8	0.3	7.6	8.7
Sleep	21.5 \pm 2.9	89.8	0.2	21.1	21.9
Overall	108.5 \pm 31.7	66.1	2.5	103.5	113.5

QoL: Quality of life, SD: Standard deviation, SEM: Standard error of mean, CI: Confidence interval

6 (3.9%) subjects had high QoL. The association between the QoL among adult clients with BPH and selected demographic variables was then calculated. It was observed that the calculated *P* values were <0.05 in some areas such as age in years ($P \leq 0.001$), botheration of sleep ($P \leq 0.001$), and occupation ($P \leq 0.019$). Therefore, there was a significant association between QoL in adult clients with BPH and selected demographic variables.

Finally, the correlation between the severity of nocturia and QoL among adult clients with BPH was noted. The calculated Karl Pearson correlation value was 1 and the *P* values was 0.001. Hence, there was a perfect positive correlation between the severity of nocturia and QoL among adult clients with BPH. The R square linear value is 0.217, indicating that out of 1000 subjects, 217 subjects have good correlation for the same.

The demographic data indicate that BPH has become an increasing health burden among men in their adulthood. The QoL analysis on adults with BPH reveals that 66.5% were in the age group of 56–65 years with mean age of 60.7 years. This findings agree with the research on QoL in patients with lower urinary tract symptoms (LUTS) associated with BPH by Alcaraz *et al.*^[2] where the mean age was 64.0 years.

In this study, the majority reported botheration of sleep are in line with a study by Chapple *et al.*^[3] on the impact of nocturia in patients with LUTS/BPH and observed that 83% of the subjects agreed that sleep disturbance was a major factor for poor QoL.

Most subjects had severe nocturia, a few had moderate nocturia, and only one had mild nocturia. These results agree with the findings of a research by Chartier-Kastler *et al.*^[4] in

which 95% of patients were seen to present with five or more episodes of nocturia.

The study reveals that most subjects had low QoL, some had moderate QoL, and a very few had high QoL. These findings are supported with a study by Chapple *et al.*^[3] in which most respondents (83%) agreed that sleep disturbance due to nocturia is the dominant factor affecting QoL.

Among component-wise QoL [Table 1], the highest mean percentage score was for the sleep component. The least mean percentage was found in the physical component. These findings were consistent with the results of a study by Pinto *et al.*^[5] conducted to assess the health-related QoL among BPH patients which showed that the physical and mental health components were the lowest.

The present study data reveal the association between the quality of life among patients with BPH and selected demographic variables such as age in years, botheration of sleep, and occupation. A study by Özcan *et al.*^[6] assessed that QoL in BPH patients and showed a significant association between age, micturition problem, and IPSS score, too, supports the findings of this study.

There was a perfect positive correlation found in this study between the severity of nocturia and quality of life among patients with BPH. The findings were consistent with the previous study Özcan *et al.*^[6] showed a strong positive correlation between IPSS score and quality of life.

In this study, it was seen that patients with BPH had low QoL, and the severity of nocturia had a significant perfect correlation with their QoL. Interrupted sleep associated with night-time voiding could lead to tiredness during the day, reduced cognitive performance, and increased susceptibility for other ailments. Patients with LUTS/BPH view nocturia as a very bothersome affliction, thus impairing their QoL. Therefore, an appropriate treatment for LUTS/BPH that minimizes these symptoms is necessary. Enhancing sleep quality by alleviating the symptoms of nocturia can result in a better QoL for the patient

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Conflicts of interest

There are no conflicts of interest.

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