Does IPSS Questionnaire Used for LUTS Screening Need Explanation?

Angeline Jeya Rani[1], Beulah Premkumar[2], Emily Daniel[2], Chandrasingh[3]

Abstract:

In advanced age, manifestation of Lower Urinary Tract Symptoms (LUTS) can be bothersome and also seriously affect the day-to-day activities leading to benign prostatic hyperplasia (BPH). In this descriptive study, 150 subjects with symptoms for more than six months were assessed using International Prostate Symptom Score (IPSS) questionnaire for their severity of symptoms. Data was collected using IPSS questionnaire before and after explanation in their own languages for literate population. The description on additional explanation of IPSS tool was assessed. Descriptive statistics and paired t test were used for statistical analysis. The study showed that 12 percent of the subjects had mild symptoms, 52 percent with moderate and 36 percent with severe symptoms. Storage symptoms were more severe than voiding symptoms. There was a significant difference in explanation of symptoms such as frequency, urgency and quality of life. Identifying LUTS is the most important challenge for the health care personnel. A simple screening can provide adequate information to determine further steps in assessment. Hence it is necessary to explain the tool for proper assessment in subjects with LUTS thereby preventing errors in judging their treatment modality.

Staying healthy is the ultimate aim of an individual. Hence every individual strives to achieve contentment in their physical and mental health. A major concern of health for men is the diseases of the prostate and urinary tract that are often clinically silent.

Men very often do not approach health care facilities for such bothersome symptoms as it is a sensitive issue for many. This research is the highlight for the hidden areas of care in the health care setting (Fukuta et al, 2012).

It is suggested that primary prevention strategies should be aimed at providing education regarding normal lower urinary tract structures and functioning to the public, including patients and healthcare providers. Such education may promote the achievement of optimal bladder health by increasing healthy bladder habits and behaviours, awareness of risk factors, seeking healthcare, reducing stigma and other barriers to treatment (Joseph et al, 2003). Promoting optimal bladder health may reduce the personal, societal and economic impact of bladder conditions, including anxiety and depression and costs associated with conditions or diseases and their treatment (Ganpute et al, 2004).

The nurse can relatively do a better assessment, diagnostic work-up and stratify the patient who present with LUTS. This assessment includes a complete patient history, a focused physical examination, the IPSS questionnaire, and a urinalysis and prostate specific antigen (Barry et al, 1992). Nurses have better skills in assessing patients with urinary symptoms and manage based on those symptoms. It is the primary duty of urology nurses to take care of patients with LUTS. It is more of a preventive measure creating an awareness among the nursing personnel in evaluating LUTS.

Hypothesis: There will be a significant difference in ability to use the study instrument by understanding symptoms, severity with explanations among patients with lower urinary tract symptoms suggestive of benign prostrate hyperplasia (BPH).

The aim was to compare the adequacy of data collected on symptoms severity without and with explanations of the tool used by the investigator.

Review of Literature

The manifestations of BPH (known as lower urinary tract symptoms) affect 40 – 50 percent of men over the age of 70. The disorders of the prostate are a major source of discomfort and disease in

The authors are: Junior Lecturer, Community Health Nursing Department, College of Nursing, Christian Medical College, Vellore (TN).

middle aged men. LUTS are rarely life threatening but in few men, if not treated, it can lead to most serious conditions such as acute urinary retention, urinary tract infections, bladder stones and bladder decompensation. Patients with mild to moderate LUTS may find relief from their symptoms by modifying their behaviour and lifestyles such as avoiding caffeine and alcohol, fluid management, double voiding and bladder retraining. Nurses can assess men with LUTS and provide reassurance by promoting fluid management, caffeine avoidance and preventing constipation before starting medical therapy or referring from primary to secondary care. Nurses role is to carry out an comprehensive, effective and holistic assessment of men with LUTS (Jessica & Green wood, 2003).

A study in Netherlands (Wolters & Wensing, 2004) on shared care and management of LUTS helped in improving public awareness and increases the life expectancy by identifying it earlier. It also supports that general practitioners can manage the uncomplicated LUTS.

A study published in The Nursing Journal of India (Malathi, 2009) revealed that the knowledge level on management of BPH among patients was inadequate. The author recommended for health education programmes in those patients and had tested their knowledge after a structured teaching programme which showed the significance of the study .

Storage symptoms: Storage symptoms include urinary frequency, urgency, nocturia. According to the NICE guidelines (2010), men with storage LUTS need supervised bladder training, advice on fluid intake, lifestyle advice and containment products if needed. The guidelines recommend supervised pelvic floor muscle training.

Methodology

A descriptive study design was undertaken to assess the symptom severity and Quality of Life among Urology patients with lower urinary tract symptoms suggestive of benign prostatic hyperplasia in a tertiary level multi-speciality hospital. The instrument used to assess the severity of symptoms was International Prostate Symptom Score Questionnaire created by American Urological Association which is a six-point Likert scale, consists of seven questions on symptom assessment such as incomplete emptying, frequency, intermittency, urgency, weak stream, straining and nocturia which is related to symptoms of BPH in terms of mild, moderate and severe symptoms as scoring response and one question on quality of life is a 7-point Likert scale in terms of delighted, pleased, mostly satisfied, mixed, mostly dissatisfied, unhappy and terrible (Greenwood (2003). Instrument reliability for IPSS scale is of good stability (0.95).

Setting of the study: The study was conducted in the Department of Urology which caters to the health needs of patients all around the world. The average of 7,500 patients with urological problems are seen in the outpatient department everyday or hospitalised for various treatments.

Study population: The study included all Urology patients with lower urinary tract symptoms suggestive of BPH pre-operatively from hospitalised patients and those visiting urology OPD in tertiary level hospital.

Study instrument: The instrument used to assess LUTS suggestive of BPH was International Prostate Symptom Score (IPSS) given by American Urological Association (AUA) as recommended by International Scientific Committee (SCI). It is a 6-point Likert scale with 7 questions on symptom assessment such as incomplete emptying, frequency, intermittency, urgency, weak stream, straining and nocturia, related to symptoms of BPH in terms of mild (0-7), moderate (8-19) and severe (20-25) symptoms as scoring response and one question on quality of life is a 7-point Likert scale in terms of delighted, pleased, mostly satisfied, mixed, mostly dissatisfied, unhappy and terrible.

Sample: The samples consisted of Urological patients with lower urinary tract symptoms for more than six months. A sample of 150 subjects with LUTS participated in the study. Sample size was calculated based on the pilot study. Data was collected over a period of six weeks in June 2013. The investigator regularly visited Inpatients and Outpatients as per the schedule and data was collected from the subjects after getting their written informed consent. For patients who speak in Hindi and Bengali, services of translator were used for collecting data.

Data analysis was done using statistical package SPSS 17.0 version. The level of significance was set at 0.05 for the study. Descriptive statistics were used to summarise the demographic and clinical data. Paired t test was used to describe the pre- and post-explanation score of symptom severity.

The study was conducted after approval by the

Table 1: Distribution of subjects based on their perception regarding severity of symptoms as per IPSS Questionnaire (N =150)

S.No	Symptoms for a month	Not at all		< 1 time in 5		< Half the time		Half the time		More than half the time		Almost always	
		No	%	No	%	No	%	No	%	No	%	No	%
1.	Incomplete emptying	45	30.0	12	8.0	15	10.0	15	10.0	12	8.0	51	34.0
2.	Frequency	24	16.0	16	10.7	24	16.0	16	10.7	17	11.3	53	35.3
3.	Intermittency	42	28.0	9	6.0	21	14.0	15	10.0	14	9.3	49	32.7
4.	Urgency	70	46.7	6	4.0	14	9.3	16	10.7	11	7.3	33	22.0
5.	Weak stream	51	34.0	11	7.3	18	12.0	19	12.7	11	7.3	40	26.7
6.	Straining	80	53.3	5	3.3	16	10.7	14	9.3	5	3.3	30	20.0
		None		1 time		2 times		3 times		4 times		5 or more	
7.	Nocturia	8	5.3	18	12.0	49	32.7	30	20.0	26	17.3	19	12.7

College of Nursing Research Committee. Permission to conduct the study was obtained from Head of the Urology Department, the Nursing Superintendent and Head of Medical Surgical Nursing Speciality Department. Written consent was obtained from participants in their respective language after explaining the purpose of the study. Confidentiality was maintained throughout the study.

Results and Discussion

In the present study, analysis of the severity of symptoms was based on IPSS, which included the components such as incomplete emptying, frequency, intermittency, urgency, weak stream, straining and nocturia. Thirty-four percent of the subjects were with incomplete emptying and increased frequency symptoms; 32.7 percent of the subjects were with intermittent urination, symptoms of urgency (22%), weak stream urination (26.7%) and straining while urination was seen in 20 percent of the subjects in most of the days in a month who were above 50 years of age (Table 1). The overall symptom severity showed that 12 percent had mild symptoms, 52 percent had moderate symptoms and 36 percent had severe symptoms.

The severity of symptoms using IPSS especially storage symptoms such as frequency and urgency needs more explanation for the subjects (Fig 1). Also, there is a necessity for explanation about Quality of Life item in IPSS questionnaire. The educational status of the subjects was: 18.1 percent primary, 39.3 percent secondary, 29.3 percent graduate and 13.3 percent post-graduate.

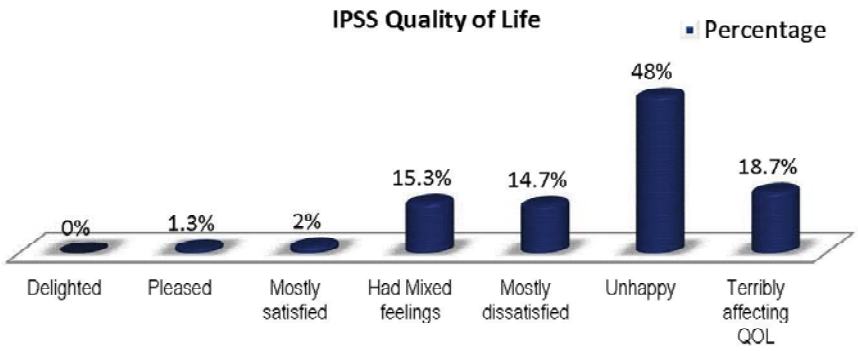
The subjects were assessed without and with explanation of the entire tool to identify whether explanation significantly gives a higher or lower score. This emphasises that explanation is mandatory. The subjects were finding difficult to answer certain questions such as weak stream and incomplete emptying (Table 2). The score difference on the overall scoring were decreased from mild 15.3 percent to 12 percent, moderate symptoms from 58 percent to 52 percent whereas with proper explanation in their own languages helped the subjects to have an increase in severe symptoms from 26 percent to 36 percent. Hence explanation is required in order to understand their severity of symptoms and intervene based on the symptoms better (Fig 2).

Table 2: Comparison of subjects based on the perception of IPSS Questionnaire without and with explanation (N=150)

S.No	Symptoms	Without explanation	With explanation	Difference	CI	Paired t test p value
		Mean (SD)	Mean (SD)			
1.	Incomplete emptying	2.48 (2.075)	2.60 (2.105)	-0.151	-0.403 to 0.102	0.240
2.	Frequency	2.30 (1.576)	2.97 (1.891)	-0.651	-0.926 to -0.376	0.000
3.	Urgency	2.27 (1.786)	2.65 (2.050)	-0.425	-0.691 to -0.158	0.002
4.	Intermittency	1.78 (1.884)	1.94 (2.076)	-0.176	-0.425 to 0.073	0.165
5.	Weak stream	2.13 (1.826	2.32 (2.044)	-0.201	-0.493 to 0.091	0.175
6.	Straining	1.54 (1.780)	1.66 (2.036)	-0.128	-0.369 to 0.114	0.299
7.	Nocturia	2.65 (1.315)	2.70 (1.375)	-0.040	-0.161 to -0.661	0.509
8.	Quality of life	4.39 (1.344)	4.62 (1.097)	-0.248	-0.400 to -0.097	0.001

The IPSS was compared

Figure 1: Distribution of subjects based on their perception according to IPSS Questionnaire regarding Quality of Life (N=150)



in each component to identify whether explanation of those concepts to subjects made a difference in the score (Table 2). It was certainly a change in scores in symptoms such as frequency and urgency. There is a need for explanation in these aspects. Also the Quality of Life perception after explanation in IPSS scoring made a significant difference.

It is imperative that the health care personnel need to make a proper assessment of their urinary symptoms. It is also been suggested that the IPSS scores along with their quality of life answers provide comprehensive assessment (Stacy, 2002).

A similar study done in Brazil to identify the influence of patient education level on the IPSS with self administered or administered by professional medical personnel suggested that illiterate subjects were unable to answer the questionnaire but with the help of professional medical personnel (Netto Jr & Lima, 1995). The literates did not show statistical significance with explanation.

Inference: The severity symptoms scoring done by the subject themselves reveals that 23 subjects (15.3%) with mild symptoms and 87 (58%) of them with moderate symptoms and 39 (26%) of them with severe symptoms. One of them (0.7%) left unanswered.

After explanation: The score 18(12%) differs with mild symptoms and 78(52%) with moderate symptoms and 54(36.0%) with severe Lower Urinary Tract Symptoms. There was a difference in the score of mild symptoms from 15.3% to 12% and reduction in subjects with moderate symptoms from 87 (58%) to 78 (52%) and severe symptoms from 39 (26%) to 54 (36%).

Quality of life based on the subjects' perception in IPSS Questionnaire were analysed (Fig 2). Majority 72 (48%) were unhappy about their quality of life. Few 28 (18.7%) and 22 (14.7%) of them perceived that their symptoms affect quality of life terribly and mostly dissatisfied irrespectively. Very few 3 (2%) and 2 (1.3%) perceived that they were mostly satisfied and pleased with symptoms. None (0%) had delighted perception about their quality of life.

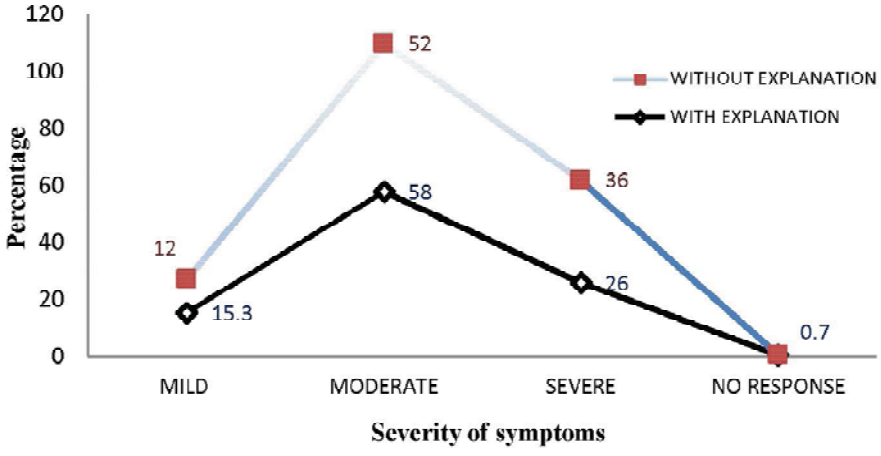
The severity of symptoms in subjects with increase in symptoms for almost all the days in a month such as incomplete emptying 51 (34%), frequency 53 (35.3%), intermittency 49 (32.7%) and nocturia 19 (12.7%). The other symptoms were not experienced by subjects for a month such as urgency 70 (46.7%), weak stream of urine 51 (34%), and straining while passing urine 80 (53.3%).

Conclusion

Subjects with lower urinary tract symptoms need more explanation on their symptom assessment in their own language. IPSS can be worded differently to make it more understandable by patients, and even have cultural elements to enable patients describe their symptoms better.

Hence IPSS can be modified to make it more understandable for the Indian men with LUTS. The study highlights that there were statistical significance in ability to use the study instrument by understanding symptom severity with explanations among patients with LUTS suggestive of BPH and thus the hypothesis is accepted.

Figure 2: Difference in expanation of IPSS tool



References

1. Fukuta F, Masumori N, Mori M, Tsukamoto T. Natural history of lower urinary tract symptoms in Japanese men from a 15-year longitudinal community-based study. *BJU International* 2012; 110(7): 1023-29
2. Joseph MA, Harlow SD, Wei JT, Sarma AV, Dunn RL, Taylor JMG, Schottenfeld D. Risk factors for lower urinary tract symptoms in a population-based sample of African-American men. *American Journal of Epidemiology* 2003: 157(10): 906-14
3. Ganpule AP, Desai MR, Desai MM, Wani KD, Bapat SD. Natural history of lower urinary tract symptoms: preliminary report from a community-based Indian study. *BJU International* 2004; 94(3): 332-34
4. Barry MJ, Fowler FJ, O'Leary MP, Bruskewitz RC, Holtgrewe HL, Mebust WK, Cockett AT. The American Urological Association symptom index for benign prostatic hyperplasia, The Measurement Committee of the American Urological Association, *Journal of Urology*; 1992
5. Greenwood J. Nurse-led clinics for assessing men with lower urinary tract symptoms. *Professional Nurse* (London, England) 2003; 19(4): 228-32
6. Cesario Stacy. Lower urinary tract symptoms in men. *Advance Healthcare Network for NPs & PAs* 2002; 10(4): 57
7. Netto Júnior NR, de Lima ML. The influence of patient education level on the International Prostatic Symptom Score. *The Journal of Urology* 1995; 154(1): 97-99

■

Information about Non-Receipt of Copies of NJI

We take utmost care to ensure that subscribers receive the copies of *The Nursing Journal of India* in time. The copies are dispatched in first week of every alternate month i.e. in February, April, June, August, October and December. However, in the event of a subscriber not having received the copy of a particular issue, intimation to this effect, together with request (addressed to the **Chief Editor, *The Nursing Journal of India***) for another copy may be submitted by 15th day of the month so that we can consider sending another copy of the issue, if possible.

Subscribers may note that late complaints i.e. those reported after 15th day of the ongoing month shall not be entertained.

– Editor

A landmark publication of TNAI

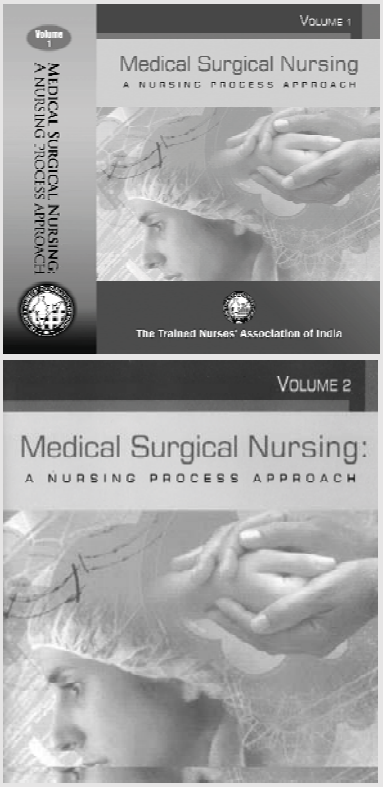
Medical Surgical Nursing: A Nursing Process Approach

Advances in medicine and nursing have led to emergence of medical-surgical nursing as a specialty of choice among nursing students, attracting them in large numbers. It is also being increasingly opted by as career. Considering the importance of the subject, TNAI took up the elaborate project of drafting and publishing a textbook on it.

Highly valuable publication for students of Nursing, this 2-volume text book has 15 units further divided into 47 chapters in both. Unit I dwells on concept of wellness and maintenance of Health including care of the elderly, Unit II, III and IV cover nursing processes, quality management, common problems of nursing practitioners and peri-operative nursing; Units V to XV describe various health disorders in surgical nursing and their management.

The anatomical and physiological aspects essential for grasp of health disorders as well as methods of assessment have been well covered in the book. The chapters of the book have been contributed by different experts acknowledged in their field, so that the information being conveyed through text and illustrations is authentic and relevant to the students.

As the entire book is in multi-colour, the illustrations come out clearly for easy understanding of the students. It is a 'must' book for nursing students on all counts: contents, coverage, treatment of subject, clarity of expression and price.



Price: Rs. 2,400/-
(for 2 Volumes)