

## **AN INTERVIEWER-ADMINISTERED QUESTIONNAIRE TO ASSESS STORAGE SYMPTOMS AND QUALITY OF LIFE IN MEN AND WOMEN – THE LEICESTER SYMPTOM AND IMPACT SCALES.**

### **Aims of Study**

The importance of measuring patient perceptions of symptoms and quality of life has been acknowledged in recent years. However, the assessment of patient-centred outcomes must utilise psychometrically robust instruments in order to be scientifically valid (1). A number of such instruments are available but many have been developed for specific groups characterised by gender and aetiology. They are often validated in secondary care settings thus focusing on patients with more severe symptoms (1). This study reports on the development and testing of a symptom severity interviewer-administered questionnaire and a condition-specific impact scale in a population sample of men and women with urinary storage symptoms.

### **Methods**

The questionnaires were developed and tested within a prevalence study (n=1594) of urinary symptoms of urgency, frequency, nocturia and incontinence, and an evaluation of a continence nurse practitioner trial (n=988) and included men and women aged 40 years and over. Symptom questions of incontinence, frequency and nocturia were compared to 24 hour pad test and 3 day urinary diaries. The construct validity of urgency questions were assessed by comparing the responses of different urodynamically diagnosed groups. A scale to measure the impact of symptoms on activities and feelings was developed using factor analysis and then compared to generic measures of distress, and single questions of impact. Construct validity was assessed in different patient groups. Test-retest of both symptom and impact questions were measured in a subset of 104 men and women at a 47 day interval, and inter-rater reliability was also assessed in a further subsample of 102. Responsiveness of the questionnaires to change were evaluated by assessing change in the scores after conservative treatments in the trial of the nursing intervention.

### **Results**

Symptom questions of incontinence, frequency and nocturia showed significant associations with pad test and diary measures. Those who had a diagnosis of detrusor instability on urodynamics were more likely to report 'overwhelming', 'very strong' or 'strong' urge ( $\chi^2_2=12.46$ ,  $p=0.002$ ) and more frequent urgency ( $\chi^2_3=11.25$ ,  $p=0.01$ ) Comparisons of the impact scale with measures of psychological distress were as hypothesized. The feelings subscale was moderately correlated with both the anxiety (0.26) and depression (0.30) subscales of the Hospital Anxiety and Depression subscale, and the Negative Affect Scale of the Bradburn Affect Balance Scale (0.25). Correlations between the subscales and ratings using single questions concerning impact on activities and feelings were statistically significant at  $p<.001$  (activities 0.56; feelings 0.54). The total impact score correlated significantly with a question rating impact on overall quality of life (0.54,  $p<.001$ ), and also a question asking how much of a problem their urinary pattern was (0.66,  $p<.001$ ). Evidence of construct validity was demonstrated in significant differences in scale scores between cases and non-cases and those with stress and urge symptoms.

For both the symptom and impact questionnaires Kappa statistics for test-retest and inter-rater reliability were moderate to excellent and there was evidence of sensitivity to change after treatment.

### **Conclusions**

This questionnaire proved to be valid, reliable, and responsive to change in both men and women with a wide range of symptom severities and underlying diagnoses. It is an appropriate tool for use in both primary and secondary care, and provides information concerning the validity of interview based measures, which is an important alternative in older

patient groups who are more likely to experience difficulty with self completion formats.

**References**

1. Donovan J. Badia X. Corcos J. et al. 2002. Symptom and Quality of Life Assessment. In Second International Consultation on Incontinence, July 2001. Eds Abrams P. et al. Plymbridge Distributors Ltd, UK