

## **PREDICTORS OF GENERAL HEALTH-RELATED QUALITY OF LIFE IN OLDER ADULTS WITH URINARY INCONTINENCE**

### **Aims of Study**

Urinary incontinence (UI) is a prevalent chronic condition that impacts community-dwelling, older adults. Research studies have shown the UI can have a negative impact on quality of life (QOL). However, it is not clear what factors may impact QOL in persons with UI. The purpose of this secondary analysis was to describe general health-related QOL and to identify predictors (demographic, incontinence characteristics, functional status, and comorbidity) of general health-related QOL in older adults with UI.

### **Methods**

A secondary data analysis was performed using baseline data from a larger, ongoing, randomized controlled trial investigating the effectiveness of a relapse prevention intervention based on self-efficacy theory and Marlatt's relapse prevention model to sustain continence levels following six weeks of individualized behavioral therapy (biofeedback-assisted pelvic floor muscle training and strategies to prevent urinary loss). The sample for this secondary study consisted of 237 adults with mixed urge and stress incontinence (57.8%, n=137) of 7.6 years duration (SD=10.1, Range=0.3-64.0), reporting a mean number of 2.73 urinary accidents (SD=2.77, Range=0.15-19.43) and 9.62 voids (SD=4.37, Range=2.00-41.57) per day. Subjects were predominantly white (96.2%, n=228), female (83.1%, n=197), cognitively intact (MMSE  $\geq$  24) older adults, aged 60.0 to 94.7 years (Mean=77.0, SD=8.3). Most had completed at least a high school education (86.9%, n=206; Mean=13.1 years, SD=3.0, Range=5-23), were retired (90.3%, n=214), widowed (47.4%, n=113), living alone (51.5%, n=122), and had neither a paid nor informal (friend or family member) caregiver (64.1%, n=152). Subjects reported on average 4.8 co-existing conditions (SD=2.6, Range=0-13) and were prescribed a mean 4.5 medications (SD=3.2, Range=0-18).

General health-related QOL was assessed using the MOS SF-36, yielding indices measuring health status on global physical and emotion domains as well as over eight individual areas. The Continence Program Assessment Form II was used to acquire information on continence history (year of UI onset) and medical history (number of prescribed medications). A one-week bladder diary provided a self-reported record of urinary voiding and accidents. Functional status was assessed across several domains: activities of daily living (ADLs), cognitive function, mobility, and affective function. Performance of ADLs was assessed using the OARS Physical and Instrumental Activities of Daily Living scales. Folstein's Mini Mental State Examination (MMSE) and the Clock Drawing Test (CDT) were used to measure cognitive function. Mobility was evaluated using a Performance Based Toileting Assessment, which considers the need for assistance during ambulation and the time to walk or propel a wheelchair 15 feet and prepare to toilet. The Geriatric Depression Scale (GDS) was used to characterize the subject's affective function. Comorbidity was assessed as the self-reported number of co-existing medical conditions from a modified version of the Charlson Comorbidity Index. Subject sociodemographic and socioeconomic characteristics were collected using a research center-developed sociodemographic profile.

Data were collected as part of a comprehensive baseline assessment conducted over two visits to the subject's home by a project nurse and nurse practitioner. Subjects kept one-week bladder diaries between baseline assessment visits.

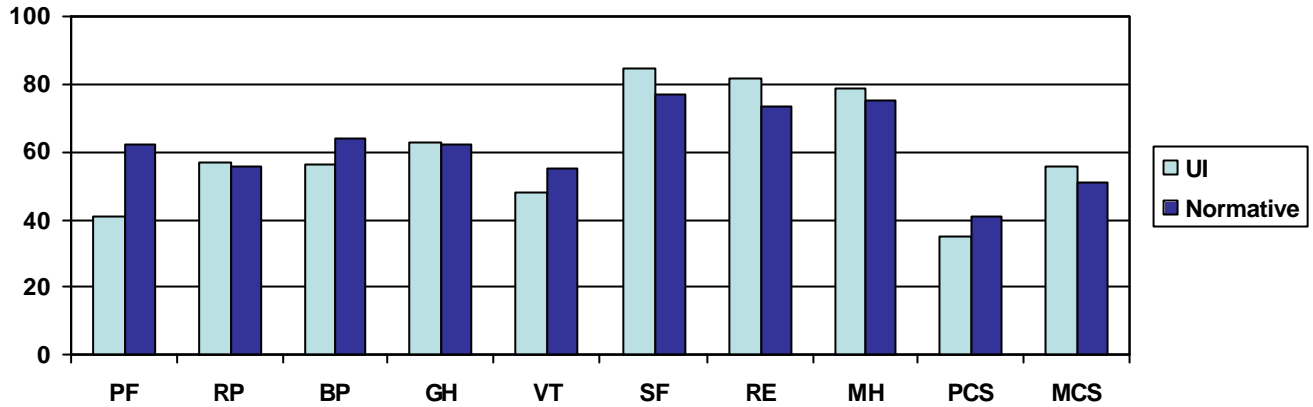
Appropriate descriptive statistics were calculated to characterize the sample and general health-related QOL. General health-related QOL means from this sample were compared with published normative data for general health-related QOL using one-sample t-tests. Stepwise linear regression analyses were used to identify predictor variables using p-values for entry and removal of .05 and .10, respectively when determining the final set of predictor variables.

### **Results**

Compared to normative data on the MOS SF-36, subjects with UI reported significantly lower scores on the physical component scale ( $p < .001$ ) and significantly higher scores on the

mental component scale ( $p < .001$ ). Examination of the eight individual areas showed scores significantly lower for UI subjects compared to published norms on physical functioning (PF), bodily pain (BP), and vitality (VT), while scores for UI patients were significantly higher than norms on social functioning (SF), role-emotional (RE), and mental health (MH). No significant differences were found for role-physical (RP) and general health (GH). (See Figure 1.)

**Figure 1: MOS SF-36 Health Status Profile**



Stepwise regression analyses identified poorer performance of instrumental ADLs, higher number of comorbid conditions, more depressive symptomatology, having a paid or informal caregiver, living alone, using assistive devices, and having a higher voiding frequency as negatively impacting physical health-related QOL ( $R\text{-squared}=.44$ ,  $p < .001$ ). For mental health-related QOL, less depressive symptomatology, lower accident frequency, using assistive devices, having a caregiver, and considering religion or spirituality as important were identified as significant predictors of higher levels of mental health-related QOL ( $R\text{-squared}=.37$ ,  $p < .001$ ).

### **Conclusions**

This study illustrates the negative impact that lower urinary tract symptoms may have on the general health-related QOL. Patients with UI tended to have lower levels of QOL associated with physical health compared to age-matched normative data, specifically in the areas of physical functioning, bodily pain, and vitality. UI and urinary frequency, potentially modifiable health problems, were identified as predictors of poorer mental health and physical health QOL.