

The Questionnaire for Urinary Incontinence Diagnosis (QUID): Validity and Responsiveness to Change in Women Undergoing Non-Surgical Therapies for Treatment of Stress Predominant Urinary Incontinence

Introduction and Objectives: The Questionnaire for Urinary Incontinence Diagnosis (QUID), a 6-item urinary incontinence (UI) symptom questionnaire, was developed and validated to distinguish stress vs. urge UI. This study's objective was to evaluate QUID validity and responsiveness when used as a clinical trial screening and outcome measure.

Methods: An ancillary study to a multi-center trial of non-surgical therapy for stress and mixed (stress-predominant) UI. Women with ≥ 2 stress UI leaks/wk were randomized to treatment with continence pessary, pelvic floor muscle training or combined therapy. Baseline and 3-month (mo) diaries and questionnaires (Urinary Distress Inventory (UDI), Urinary Impact Questionnaire, Incontinence Severity Index and QUID) were collected. All 3-mo data were pooled in this analysis. QUID internal consistency (Cronbach's α) and convergent and discriminant validity (Pearson correlations) were evaluated. Responsiveness to change was assessed with 3-mo score outcomes and distribution-based measurements (effect size (ES) and standardized response mean (SRM)).

Results: 444 women were enrolled with stress (200) and mixed (244) UI. 3-mo data were available for 345 (78%). Mean \pm SD age was 49 ± 12 y; 86% were white. 8% had prior UI/prolapse surgery. Baseline QUID Stress and Urge scores (both scaled 0-15, larger values indicating worse UI) were 8.2 ± 3.3 and 4.7 ± 3.4 , respectively. <1% responses for each QUID item were missing. QUID internal consistency was moderate to good (Cronbach's α (lower 95% confidence bound) 0.75 (0.72), 0.64 (0.59) and 0.87 (0.85) for QUID total, Stress and Urge scores, respectively). QUID Stress scores correlated moderately with UDI-Stress scores ($r=0.68$) and diary stress UI episodes ($r=0.41$) but weakly with UDI-Irritative scores ($r=0.28$). QUID Urge scores correlated moderately with UDI-Irritative scores ($r=0.68$) and diary urge UI episodes ($r=0.45$) but weakly with UDI-Stress scores ($r=0.29$). All 3-mo UI outcomes significantly improved, including QUID Stress and Urge scores (decreased to 4.2 ± 3.4 and 2.2 ± 2.7 , respectively; $p<0.001$ each). QUID Stress score ES (1.3) and SRM (1.2) suggested a large change after therapy.

Conclusion: The QUID demonstrated acceptable internal consistency, convergent/discriminant validity and responsiveness in women undergoing non-surgical therapy for stress-predominant UI and may be used as a screening and outcome measure in clinical trials.