The Revised Urinary Incontinence Scale: A Comparison with Other Short Urinary Incontinence Measures

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Comparison of Measures at Baseline

The mean RUIS scores were significantly higher ($p < 0.01$) for those that were receiving surgical vs. conservative treatments. Generally surgery is used with patients with more severe incontinence, or for whom conservative treatment has failed. This was also true for the ICIQ-SF ($p = 0.02$) and for the ISI ($p = 0.05$) but not the UDI-6 ($p > 0.05$).

With regard to double incontinence the UDI-6, the ISI and RUIS showed a significant difference between those with both urinary and faecal incontinence as against those with only urinary incontinence but this difference was not significant for the ICIQ-SF ($p = 0.17$). All instruments discriminated significantly ($p < 0.01$) by levels of pad use and the ICIQ-SF and the RUIS had the highest $t$ values for this comparison.

Correlation Between Measures

In clinical settings at pre-treatment the internal consistency reliability of the RUIS was Cronbach’s alpha = 0.73 whereas alpha levels of 0.65 were reported for the UDI-6 and the ICIQ-SF scales and 0.54 for the ISI. Test-retest reliability alpha levels were 0.77, 0.66 and 0.76, respectively.

Sensitivity to Change with Treatment

In the clinical sample the RUIS had adequate internal consistency reliability ($r = 0.70$) whereas all the other measures would be assessed as having marginal or inadequate reliability. Studies have indicated higher alphas (0.78-0.91) for all instruments in population settings where there are more homogenous samples. However, it is important that instruments have adequate reliability in clinical settings if they are also to be used for assessment and outcomes evaluation. The test-retest reliability of the RUIS, the UDI-6 and the ISI were adequate.

The correlations between the RUIS and other urinary incontinence measures were significant and in the expected directions providing validation for this measure. With regard to health status the RUIS has a low negative correlation with Physical Function Index of the SF-36V2 which is consistent with findings in the literature. At post-treatment there was an association between higher RUIS scores (reflecting greater incontinence) and lower patient satisfaction scores.

Conclusions

The RUIS possessed evaluative discrimination between different levels of incontinence severity and performed well compared with other measures. It had superior reliability and was equivalent or superior to detecting change in incontinence status following treatment. It is a short, reliable and valid scale which could be considered by researchers, epidemiologists and clinicians.

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