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Title (type in CAPITAL LETTERS, leave one blank line before the text) THE DUTCH TRANSLATION OF THE INCONTINENCE IMPACT QUESTIONNAIRE CONSTRUCT VALIDITY AND INTERNAL CONSISTENCY

## Aim of the study

Female urinary incontinence is a common problem with an estimated prevalence between the 20 and 57%. It is known that quality of life (QOL) can be negatively affected by urinary incontinence. It is therefore strongly recommended to include a QOL measurement as an outcome variable in clinical trials on treatment protocols for urinary incontinence. To do so a disease-specific QOL questionnaire has to be used. The Incontinence Impact Questionnaire (IIQ) is such a questionnaire. (1) To compare international data it is necessary to translate the questionnaire into different languages. This study was designed to test the construct validity and internal consistency of the Dutch translation of the IIQ.

## Method

A random sample of 1905 women, aged 45 to 70 years old was taken from the population registration office. A total of 1079 women (60%) responded 546 women reported urinary incontinence and 353 answered the questions of the IIQ Besides the IIQ the questionnaire contained the RAND-36 as a generic QOL measurement and the CES-D to measure depressive symptomatology. Principal axis factoring with varimax rotation was used to test the construct validity of the IIQ. Cronbach's alpha was used as a measure for internal consistency of the domains. Pearsons' correlation coefficient between the domains of the IIQ and the RAND-36 and CES-D was calculated. Results

Factor analysis of the IIQ showed five factors. Besides the original physical activity, emotional, social and travel/mobility domains we identified a fifth domain with four items closely related to embarrassment (fear of odor, fear of embarrassment, embarrassment and the way one dresses). Cronbach's alpha for these five domains ranged from 0.83 (embarrassment) to 0.93 (travel/mobility). The correlation coefficients between the original domains and ours were high and ranged from 0.84 (physical activity) to 0.96 (travel/mobility and emotional). The embarrassment domain showed the highest correlation with the original emotional (0.71) and social (0.76) domains. Pearsons' correlations between the CES-D score and the IIQ domains were significant for all domains (p<0.01). Entering the IIQ domains into a stepwise linear regression model showed that only the emotional and embarrassment domains explained a significant proportion of the variance in the CES-D score. Correlation coefficients between the five IIQ domains and the eight domains of the RAND-36 ranged between 0.16 and 0.43. The IIQ physical functioning and IIQ travel/mobility domains both showed the highest correlation with the RAND-36 physical functioning domain. The IIQ emotional domain correlated best with the RAND-36 mental health domain, the IIQ social domain with the RAND-36 social functioning domain and the IIQ embarrassment domain with the Rand-36 mental health and social functioning domains.

## Conclusion

The Dutch translation of the IIQ showed a good correlation with the original version. However, our factor analysis identified a fifth (embarrassment) domain. We believe that this embarrassment scale is important because women with urinary incontinence often report factors like fear of odour and fear of embarrassing situations as bothersome. Although the IIQ domains showed a significant correlation with the corresponding RAND-36 domains and the CES-D score the correlation coefficients were not high. This suggests that the IIQ measures aspects of QOL in women with urinary incontinence beyond the scope of a generic QOL measure.

## Reference

1 Quality Life Res 1994,3 291-306

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