

DEVELOPING A MAPPING MODEL BETWEEN TWO COMMONLY USED PATIENT-REPORTED OUTCOME INSTRUMENTS: THE IPSS AND OAB-V8

Hypothesis / aims of study

Overactive bladder (OAB) is a common condition with a prevalence that increases with age. However, OAB is rarely identified as a primary diagnosis, particularly with men. Rather, it is a diagnosis that is often arrived at after ruling-out other, potentially more severe, diagnoses. For example in men, clinicians may first consider prostate-related symptoms such as benign prostate enlargement or prostate cancer. Consequently, these patients are more likely to be given a prostate-specific patient-reported outcome (PRO) instrument rather than one for OAB. If, after further testing and evaluation, the patient is found to have OAB, the scores generated from the prostate-specific PRO are usually irrelevant, rendering the data and its collection effort, wasted. Given the prevalence of both OAB and prostate-related diseases, we suspect that the administration of irrelevant PROs happens quite frequently.

Thus, the aim of this study was to develop a statistical model for mapping the responses of a commonly used prostate-specific PRO to OAB-specific PRO.

Study design, materials and methods

This study was a secondary analysis of data that was collected prospectively from men with lower urinary tract symptoms. Participants completed both the IPSS and the OAB-V8 while waiting for their appointment with a urologist. Ordinary least squares was used for three models that estimated the OAB-V8 global score as a function of the responses to IPSS items: Model 1 used just the IPSS global score, Model 2 used the response values to IPSS' individual items, and Model 3 used the IPSS's individual items and the patients' demographic characteristics.

Results

A total of 441 participants completed both the IPSS and the OAB-V8. As expected, there was a strong positive relationship between the IPSS and OAB-V8 global scores. Adjusted R-squared for the three models ranged from 0.42 – 0.50, and root mean squared errors between 6.37 and 6.96. A non-parametric bootstrap analysis demonstrated robustness of the findings.

Interpretation of results

This study successfully developed a mapping model to associate responses to the IPSS with OAB-V8 global scores. The results from this study are within the range of other mapping studies. Comparatively, Model 2 performed the best and is recommended over the other two. This model could be used by clinicians to estimate the severity of OAB-related symptoms based on the responses to the IPSS.

Concluding message

Prior to a formal diagnosis, it can be difficult to ascertain which PRO instrument should be administered. Mapping models, like the one developed in this study, can be used retrospectively to compare PRO values for clinical and evaluative purposes.

Disclosures

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