How sharp is the short quickDASH? A refined content and validity analysis of the short form of the disabilities of the shoulder, arm and hand questionnaire in the strata of symptoms and function and specific joint conditions

Angst et al (2009) *Qual Life Res.* 18(8):1043-51. doi: 10.1007/s11136-009-9529-4. Epub 2009 Aug 26

Purpose To assess and compare content, validity and specificity of the QuickDASH (QD) as compared to the full length DASH and other instruments to give a recommendation for its use depending on a specific clinical situation

Introduction

DASH questionnaire has a long history of validation and application in the self assessment of outcome for conditions of the upper extremity. The most frequently used version has 30 items and takes 3-4 mins to complete. Clinic time pressures lead to a desire for shorter/quicker versions (compliance also increases) so the developers of DASH came up with QD with 11 items. So the article asks is the QD as good as the DASH or do we lose or change information by skipping 19 items?

Specific purposes were

(1) to assess the properties in subdomains of the instruments i.e. symptoms and function
(2) To examine the properties especially specificity of the short and full instrument in the assessment of joint specific conditions in the shoulder, elbow and wrist

Methods

Data of 3 large cohorts of patients with shoulder (n=138), elbow (n=79) and carpo-metacarpal (n=103) arthroplasties were analysed. The item content of both instruments was compared within the subdomains function and symptoms. Scores and correlations to other instruments (SF-36, SPADI, PREE and PRWE) were compared in all strata to assess construct convergence. Specificity was quantified and compared using receiver operating characteristics curves and effect sizes (in shoulder only)

Results

The QD underestimate symptoms in elbow but overestimates disability in wrist.
It does not measure the same content as the DASH although the total score levels of both instruments are similar.
The QD is less specific than the DASH in the subdomains, especially in symptoms

Content comparison

FUNCTION- QD asks more about heavy duties and tasks therefore more emphasis placed on mainly shoulder but also elbow. DASH has more wrist and finger emphasis

SYMPTOMS- Domains of symptoms of QD differ markedly from those of the original DASH i.e. the contents and constructs of the 2 questionnaires are substantially incongruent in the symptoms part.

Construct convergence

Less symptoms but more disability/less function reported on the QD as compared to the DASH.

Specificity and sensitivity data

The QD was with one exception, shoulder function slightly less sensitive and specific than the DASH when both parameters (symptoms and function), sensitivity and specificity were added together. Differences were small but 3 of 9 comparisons showed significance, shoulder symptoms, elbow symptoms and wrist function.

Discussion

The discussion reiterated the results and also said that the findings may lead to the interpretation that compared to the DASH, the QD better performs for conditions where functional limitations are more important than symptoms e.g. for degenerative etiologies. For symptom-dominated conditions .e.g. inflammatory arthritis, the DASH may be more appropriate than the QD, however, the authors did acknowledge that this may be difficult to examine in future studies

Limitation

Most analyses were based on cross-sectional data; longitudinal data were available for the shoulder only

Conclusion

QD and DASH are not directly comparable because of measurable, partly statistically significantly different constructs, although both show almost equal total score levels. The QD underestimates symptoms but overestimates disability and does not measure the same symptoms content. It is also less specific than the dash in the subdomains especially in symptoms. The short QD can be recommended for a summary assessment of arm symptoms and function by the total score in daily clinical busy routine. For differentiated assessment of symptoms and function, the full length DASH provides more specific sophisticated results