The WOMAC was developed in the early 1980s as a disease-specific measure for hip and knee osteoarthritis (Bellamy 2009). It was designed to provide a standardised assessment of self-reported health status while incorporating activities relevant to patients. The instrument has since been used extensively in lower limb osteoarthritis and joint replacement research. The WOMAC consists of 24 items: 5 pain, 2 stiffness, and 17 physical function items. It produces three subscale scores (pain, stiffness, and physical function) and a total score. The WOMAC has been translated into 80 languages and the Australian version (3.1) is available in 5-point Likert, 11-point numerical rating, and 100 mm visual analogue scale formats. Clinicians and researchers interested in obtaining a copy of the instrument and User Guide should visit the WOMAC website for information about licensing and applicable fees.

Instructions to the client and scoring: The WOMAC can be self-administered and takes approximately 5 minutes to complete. Patients are asked to answer each question with regard to the pain, stiffness, or difficulty experienced in the previous 48 hours. In particular, the Likert version is simple to use and offers 5 response options ranging from ‘none’ to ‘extreme’. A response of ‘none’ is scored as 0, ‘mild’ as 1, ‘moderate’ as 2, ‘severe’ as 3, and ‘extreme’ as 4. Scores for each section are summed to produce pain, stiffness, and physical function subscale scores. The WOMAC is scored on a best to worst scale, so that lower subscale scores represent less pain, less stiffness, or better physical function. A total WOMAC score can also be produced and is commonly transformed to a 0–100 scale for ease of interpretation and comparison with other studies.

Reliability, validity and sensitivity to change: Many studies have reported the psychometric properties of the WOMAC (Bellamy 2009), including a comprehensive literature review (McConnell et al 2001). Each subscale has been shown to be internally consistent and test-retest reliability has been reported for the pain and physical function subscales (McConnell et al 2001). The WOMAC has also demonstrated construct validity when compared with other measures including joint range of motion, gait tests, and the Medical Outcomes Study 36-Item Short Form (SF-36). The responsiveness of the WOMAC has been documented across a number of research settings, including an Australian study which showed the measure was highly efficient in detecting short-term improvements after joint replacement (Ackerman et al 2006).

In summary, the WOMAC is a valid, reliable and responsive measure for evaluating outcomes of interventions for people with osteoarthritis. The clear wording of the items together with the simple scoring algorithm enhances the applicability of this instrument in both clinical and research settings.

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References

Website
www.womac.com