

Construct Validity and Test Re-Test Reliability of the Forgotten Joint Score.

Simon Thompson FRCS
Justin Webb MBBS FRACS
Lucy Salmon PhD,
Alison Waller BAppSci,
Justin Roe MBBS, FRACS,

Presented at:

- ISOC, Mexico October 2014
- Australian Orthopaedic Association Annual Meeting, Sydney October 2012

Awarded:

Best Poster at APKASS Congress, 13-15 April, Nara Japan

Published:

Journal of Arthroplasty, November Volume 30 (11), page 1902-1905, 2015



NORTH SYDNEY ORTHOPAEDIC & SPORTS MEDICINE CENTRE

INTRODUCTION

As patient outcomes following total knee replacement (TKR) have continued to improve and patient expectations have increased over recent years, traditionally used scoring tools have begun to demonstrate a ceiling effect, potentially losing the ability to determine differences in outcome in a high functional range. It has recently been suggested that the ultimate goal of arthroplasty surgery is for the patient to be able to forget their prosthetic joint during regular day to day activities. A new scoring system, The Forgotten Joint Score (FJS) has been developed. The FJS focuses on the patients' awareness of their joint replacement during a range of day to day and recreational activities. This score consists of 12 questions where subjects are asked to rate their awareness of their joint replacement during various activities. The aims of this study was to investigate the test retest reliability and the construct validity of the FJS-12 in English, specifically for patients who have undergone TKR.

METHODS:

Patients undergoing TKR by the senior surgeon between 2006 and 2010 were invited to complete a questionnaire consisting of the FJS and the Knee Injury and Osteoarthritis Outcome Score (KOOS). The Western Ontario and McMaster Universities (WOMAC) osteoarthritis index scores were calculated from the KOOS score, and normalised in to a scale where high scores indicate a good outcome. WOMAC scores were normalised by summing the total score of each subscale and dividing by the maximum total score for the scale. Those who completed and returned their initial questionnaire were mailed a repeat questionnaire at 4 weeks.

RESULTS

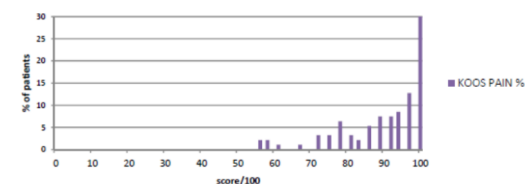
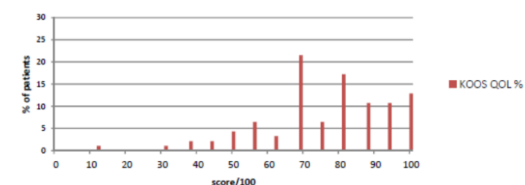
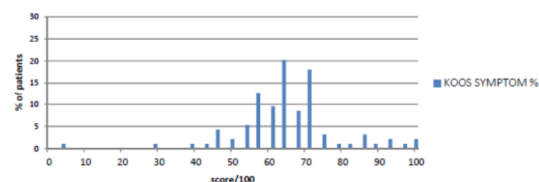
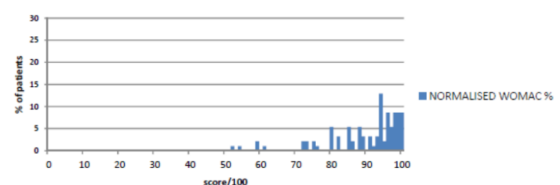
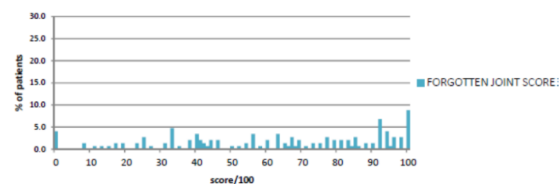
A total of 147 patients completed and returned both questionnaires and were included in the analysis.

There were 68 females and 79 males with a mean age of 67 years (range 32-89). The right knee was involved in 75 cases. A Triathlon (Stryker) prosthesis was used in 120 knees and a Genesis II (Smith & Nephew) prosthesis was used in 27 knees. The mean time from surgery to completion of the first questionnaire was 39 months (range 18-72).

RESULTS

The FJS returned a mean score of 62 and 60 (range 0-100) and the normalised WOMAC overall mean score of 90 (range 52-100).

The test-retest reliability was almost perfect for the FJS (ICC=0.97, 95% confidence interval 0.95-0.98), and the FJS subscores (ICC>0.8). Convergent construct validity of the FJS was correlated with Spearman's test to the KOOS Subscales of Quality of Life (0.63, p=0.001), Symptom (0.33, p=0.001), Pain (0.68, p=0.001) and ADL (0.66, p=0.001) and the Total WOMAC (0.70, p=0.001). The distribution of the FJS to the Normalised WOMAC and KOOS Subscales is shown in the Figures below.



CONCLUSION

The FJS demonstrates high test retest reliability and construct validity compared to the Normalised WOMAC and KOOS Subscales. The FJS does not demonstrate the ceiling effect of the WOMAC or KOOS pain scores so may have greater discriminatory ability following TKR.