

Responsiveness and ceiling effects of the Forgotten Joint Score-12 following total hip arthroplasty

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OBJECTIVES

To assess the responsiveness and ceiling/floor effects of the Forgotten Joint Score -12 and to compare these with that of the more widely used Oxford Hip Score (OHS) in patients six and 12 months after primary total hip arthroplasty.

METHODS

We prospectively collected data at six and 12 months following total hip arthroplasty from 193 patients undergoing surgery at a single centre. Ceiling effects are outlined with frequencies for patients obtaining the lowest or highest possible score. Change over time from six months to 12 months post-surgery is reported as effect size (Cohen's *d*).

RESULTS

The mean OHS improved from 40.3 (sd 7.9) at six months to 41.9 (sd 7.2) at 12 months. The mean FJS-12 improved from 56.8 (sd 30.1) at six months to 62.1 (sd 29.0) at 12 months. At six months, 15.5% of patients reached the best possible score (48 points) on the OHS and 8.3% obtained the best score (100 points) on the FJS-12. At 12 months, this percentage increased to 20.8% for the OHS and to 10.4% for the FJS-12. In terms of the effect size (Cohen's *d*), the change was $d = 0.10$ for the OHS and $d = 0.17$ for the FJS-12.

CONCLUSIONS

The FJS-12 is more responsive to change between six and 12 months following total hip arthroplasty than is the OHS, with the measured ceiling effect for the OHS twice that of the FJS-12. The difference in effect size of change results in substantial differences in required sample size if aiming to detect change between these two time points. This has important implications for powering clinical trials with patient-reported measures as the primary outcome. Cite this article: Dr D. F. Hamilton. Responsiveness and ceiling effects of the Forgotten Joint Score-12 following total hip arthroplasty. *Bone Joint Res* 2016;5:87-91. DOI: 10.1302/2046-3758.53.2000480.

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