Reviewer's report

Title: Prediction of grip and key pinch strength in 978 healthy subjects.

Version: 1 Date: 7 November 2009

Reviewer: Richard Bohannon

Reviewer's report:

Very well done.

Major Compulsory Revisions

1) I realize the focus of the paper was on factors that explain grip strength. That said, I believe it is essential that the readers are provided with the basic descriptive data from which the correlations/regressions were determined. I do not feel it is sufficient to provide a global mean standard deviation and range for grip force and for pinch force. I would much prefer such information be provided for relevant strata. Even doing so for age and sex strata would allow comparisons with published norms.

2) The authors indicate that testing of grip strength was done in a "standardized way." Elaboration is needed. Were the recommendations of the American Society of Hand Therapists used? Was the Jamar in the second handle position?

Minor Essential Revisions

1) The authors claim (truthfully) that "numerous publications provide normative data grip strength..." Their claim should be supported by a reference. I would suggest " Bohannon RW, Peolsson A, Massy-Westropp N, et al. Reference values for adult grip strength measured with a Jamar dynamometer: a descriptive meta-analysis. Physiotherapy 2006; 92: 11-15.

2) The authors also claim that "Grip strength can be taken as a surrogate for overall strength..." That, in fact, is often done. Nevertheless, caution should be exercised in doing so (see: Bohannon RW. Is it legitimate to characterize muscle strength using a limited number of measures? J Strength Cond Res 2008; 22: 166-173.

Discretionary Revisions

1) I would suggest that the authors indicate in the Discussion that their equations will provide a more precise normative standard than those available for relatively broad strata (sex and age).

2) The authors indicate that the equations are easily programmed in Excel. True enough, however they may want to indicate in Excel and other commercially available database programs.

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.