

[−0,540–0,289], low with SF36 FP: 0,293 [0,147–0,426] and there was no correlation with SF36 FM: 0,091 [−0,062–0,240]. Intrarater reliability (39 patients) was excellent (0,97) and interrater reliability (31 patients) was good (0,85). Internal consistency was high (0,85).

Discussion This validation study found good to excellent clinimetric properties of the new standardized version of the “400 points assessment” comparable to the original version. Our results confirm the clinical applicability of this instrument assessing hand function. Results will be refined after final inclusion of the last patients. Sensitivity to change and construct validity with the Jebsen test will soon be available.

Keywords Hand; 400 points assessment; Functional evaluation; Validation; Reliability

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

Further readings

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Abilhand-stroke: Validation of the Beninese version

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Background and objective Stroke upper limb paresis affects the ability to engage successfully in activities of daily living. ABILHAND-Stroke is a self-reported questionnaire, designed for stroke patients, that assesses bimanual activities. It has been developed and validated in Belgium. This study aims to validate ABILHAND-Stroke for Beninese subjects.

Methods The first step consisted to evaluate the content validity of 56 original items of ABILHAND-stroke, to obtain the preliminary Beninese version. Two items were taken off, three items were modified and five items were added to fit the African context. A version of 59 unimanual and bimanual items was submitted to 155 chronic stroke patients. Patients were asked to rate their perceived difficulty in performing each activity on a 4-level scale: “impossible”, “very difficult”, “difficult” or “easy”. Additional measures included: Box and Block Test (BBT), Functional Independence Measure (motor subscale FIM-motor), Stroke Impairment Assessment Scale (SIAS) and ACTIVLIM-Stroke. Data were analyzed with RUMM2030 and Sigma-Stat softwares.

Results and discussion The Rasch analysis showed that the categories “very difficult” and “difficult” were not well discriminated by patients, that 34 unimanual items were very easy for all patients, that 2 items were not fitting the model, and that two other items were redundant. The final version for ABILHAND-Stroke scale for Beninese subjects consisted of 21 bimanual items, including 3-level of rating. ABILHAND-stroke for Beninese subjects was invariant through different subgroups: age (ICC = 0.90, $P < 0.0001$), sex (ICC = 0.94, $P < 0.0001$), stroke duration

(ICC = 0.96, $P < 0.0001$), hemiparetic side (ICC = 0.97, $P < 0.0001$), level of depression (ICC = 0.88, $P < 0.0001$). This scale showed a high reliability (Person Separation Index = 0.95) and measured a large range level of manual ability (6 levels). The study of the concurrent validity demonstrated a significant correlation with SIAS ($r = 0.71$), FIM-motor ($r = 0.60$), BBT ($r = 0.66$) and ACTIVLIM-Stroke ($r = 0.97$).

Conclusion ABILHAND-Stroke for Beninese subjects can be used to assess the manual ability of chronic stroke patients in Benin and more generally in African French-speaking countries. This scale displays good psychometric properties.

Keywords Stroke; Upper limb; Activity; Scale

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

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Updating the Wallis Occupational Rehabilitation Risk (WORRK) model: Predictive values at 3 months and one year

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Objective Recently, we developed and validated a tool for the prediction of non-return to work (nRTW) at two years after an inpatient rehabilitation after orthopaedic trauma (the WORRK model) [1]. In this study, we aimed to update the prediction formula for nRTW at three months and one year.

Patients and method A consecutive sample of 428 patients after orthopaedic trauma for the follow-up after 3 months and 431 patients for the outcome at one year were included. Work status was assessed three months and one year after discharge of the rehabilitation. To evaluate the performance of the prediction tool, we used calibration (agreement between predicted probabilities and observed frequencies) and discrimination. First, we fitted the predictive model in the new sample. Second, we calculated the probabilities for nRTW based on the coefficients from the two-year prediction and evaluated performance. Third, a re-calibration was necessary for the adjustment of different probabilities of nRTW at three months and one year, thus we updated the intercepts for the prediction models for:

– three months;

– one year and re-evaluated performance.

Results Sociodemographic characteristics were similar in all samples (mean age 43; female 15%). The proportion of nRTW at two years was 50.36%. The proportion of nRTW in the sample with the one-year follow-up was 53.4% and for the sample with the 3-months follow-up was 63.8%. Performance of the original WORRK for the one year and three months prediction: the area under the curve (AUC) was 0.73 for both the outcomes at one year and three months. For the calibration test, the original WORRK showed statistical significant miscalibration for the one-year and the three year prediction ($P < 0.001$). After the updating of the intercept, the calibration was improved and did not show significant miscalibration ($P = 0.458$ and 0.341). The AUC stayed at 0.73.

Discussion/conclusion The WORRK model was successfully adapted for the prediction of nRTW at three months and one year and is now available for the use in clinical practice.

