**CO32-004-c**

**Measuring complexity in neurological rehabilitation: The Oxford Case Complexity Assessment Measure (OCCAM)**

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**Keywords:** Complexity; Neuro-rehabilitation; Scale; Length of stay; Discharge location

**Objective.**—Only a few scales evaluating complexity are available, but what they really measure is controversial. We evaluated a newly developed 81-point scale based on a holistic biopsychosocial model of illness and healthcare: the Oxford Case Complexity Assessment Measure (OCCAM).

**Methods.**—Hundred and ten consecutive patients admitted to the neuro-rehabilitation unit of Oxford, UK, were prospectively enrolled from January to August 2012. Part 1: The OCCAM questionnaire, the Rehabilitation Complexity Score (RCS-E), the INTERMED scale, and a team judgment score (from 0 to 10) were administered to establish OCCAM validity. Internal consistency of OCCAM was assessed. Part 2: inter-rater agreement of OCCAM was evaluated. Part 3: Test-retest correlation and test-retest agreement were performed. We evaluated the ability of OCCAM to predict length of stay (LOS) > 80 days and no home discharge using ROC curves and statistics.

**Results.**—Part 1: internal consistency was moderate for the overall OCCAM scale (Cronbach’s α coefficient 0.69). Item-total correlations were all moderate to high except for two items (pathology α = 0.25, time α = 0.23). Significant correlation was found between OCCAM and both INTERMED (ρ = 0.694, P < 0.001), RCS-E (ρ = 0.736, P < 0.001), and team judgment (ρ = 0.796, P < 0.001). Part 2: inter-rater agreement was excellent (Weighted κ = 0.95, P < 0.001). Part 3: an excellent correlation between admission and discharge scores was observed (ρ = 0.917, P < 0.001). Test-retest agreement was good (intraclass correlation
coefficient 0.86). Patients with prolonged LOS had higher mean admission OCCAM score than those with short LOS (38.6 ± 12.2 versus 32.9 ± 13.7, P = 0.04). ROC curve of OCCAM to predict LOS > 80 days showed poor discrimination (c-statistic = 0.657; 95% CI: 0.508–0.806). Patients not discharged home had higher mean admission OCCAM score than those discharged home (48.0 ± 13.7 versus mean 32.1 ± 10.7, P < 0.001). ROC curve of OCCAM to predict no home discharge showed good discrimination (c-statistic = 0.815; 95% CI: 0.680–0.950). The optimal cut-off of OCCAM to detect patients not discharged home was ≥ 34 (sensitivity = 84.6%, specificity = 62.8%).

Conclusion – OCCAM is a valid and reliable tool to measure complexity, and could be useful to early identify patients who will not be discharged home. Further reading

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**Validation of GHQ-12 for assessing psychological distress in chronic low back pain patients**

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Keywords: GHQ-12; Psychological distress; Validation; Chronic low back pain

**Objective** – Assessment of psychological well being and screening for psychological distress are of key importance for low back pain patients. The GHQ-12 was developed to identify psychological distress in primary care settings. Therefore, screening and assessing patients affected by disabling chronic low back pain with GHQ-12 should be of interest in current practice and in clinical research to indicate or optimize multidisciplinary programs and therapeutic strategies. However, psychometric properties of GHQ-12 have not been evaluated in the specific indication of chronic low back pain patients. This lack of data validation prompted us to conduct a validity study of the GHQ-12 for assessing psychological distress in chronic low back pain patients.

**Patients and methods** – The study involved a population of patients undergoing functional restoration for chronic low back pain and replication was done in another. Assessments were done twice at 1-week interval before functional restoration and at 1-month follow-up. Intra-class correlation coefficient was used for test-retest reliability (good if > 0.7). Construct validity entailed convergence with the Beck depression inventory, the Quebec back pain disability scale and the Dallas pain questionnaire, using baseline values and Spearman’s coefficient (moderate and high if r ≥ 0.35 and 0.5, respectively). Responsiveness was assessed using Wilcoxon’s test and effect size. P value was set at 0.05.

**Results** – Two hundred and thirty-nine patients were first included. The intra-class correlation coefficient was 0.74 indicating good reliability of the GHQ-12. High convergences of the GHQ-12 were observed with the Beck depression inventory and subscales of the Dallas pain questionnaire for anxiety and depression, and for sociability. Moderate convergences were observed with the Quebec back pain disability and subscales of the Dallas pain questionnaire for daily activities, and for leisure and occupation. The score of GHQ-12 changed after functional restoration (P < 0.0001, effect size 0.61). Improved patients had better results than non-improved (P < 0.0001). Results were replicated in 166 other patients.

**Discussion** – We provide validation of the GHQ-12 for assessing psychological distress in chronic low back pain patients. The tool is suitable to use in current practice and in clinical trials. Furthermore, since generic, it could be useful for decision making in transversal perspectives.

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**African adult norms of box&block test**

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Keywords: Manual dexterity; Norms

**Introduction** – The systematic and objective assessment of patients has become a major concern in rehabilitation to evaluate the efficacy of treatments, and to adapt them to the patients’ evolution. The box&block test (BBT) is largely used as an objective evaluation of gross manual dexterity [1]. The existing adult norms have been developed in a Western population (USA) [1]. The purpose of this study is to determine the norms of a specific sub-saharian population, and to compare them to occidental norms.

**Methods** – We recruited 692 Beninese subjects from 20 to 85 years old. Subjects did not have any pathology of the upper limbs, and lived in Cotonou City. These subjects were asked to perform the BBT, as described by Mathiowetz et al. [1].

**Results** – The mean score of BBT is 77.2 ± 15.1 for female subjects and 75.5 ± 16.1 for male subjects (P < 0.001). The mean score is 80.1 ± 16 for the right hand and 72.6 ± 14.3 for the left hand (P < 0.05). The overall mean score of the right hand is higher for Beninese subjects than for American subjects [1], for both sex, although a significant difference is demonstrated in females only (P = 0.07 for males, P = 0.006 for females). On the contrary, the score obtained with the left hand is higher in American subjects, for both sex (P < 0.05).

**Discussion and conclusion** – In the Beninese population, results show a higher manual dexterity for women and for the right hand. The right hand of Beninese women even show a higher dexterity than the right hand of American women, while the converse is observed for both sex on the left side.

These Beninese norms of the BBT helps to adapt this assessment tool to the African sub-saharian populations.

Reference


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Communications affiliées

Version française

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**Étude de la validité et la reproductibilité du test de Sorensen chez le lombalgie chronique**

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**Mots clés** : Test Sorensen ; Validité ; Reproductibilité ; Lombalgie

**Objectif** – Étudier la validité et la reproductibilité du test de Sorensen chez le lombalgie chronique.

**Patients et méthode** – Il s’agit d’une étude cas-témoins à propos de 60 sujets : 30 patients lombalgiques chroniques et 30 sujets sains. L’examen clinique comportait un recueil des données anthropométriques, une appréciation de la souplesse pelvirachidienne et des tests de performance physique (évaluation de l’endurance musculaire des muscles extenseurs [test de Sorensen] et fléchisseurs du rachis [test de Shirado]) et un test de marche de 6 minutes.

Les validités de convergence et de divergence étaient étudiées à l’aide du coefficient de corrélation de Spearman. La reproductibilité était appréciée par l’étude du coefficient de corrélation intraclasse (CCI), ainsi que la méthode de Bland et Altman.

Résultats – Les deux groupes étaient comparables concernant les paramètres pouvant influencer les forces des muscles du trone.

Les corrélations du score global du test de Sorensen avec l’endurance des muscles abdominaux (test de Shirado ; r = 0,43), l’âge (r = 0,46), l’échelle de