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◆RESEARCH ARTICLES

**Development of the Assessment of Belief Conflict for Profession (ABCP) through targeting occupational therapists**

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In this study, we developed an equalization measure for change over time in belief conflict for health care professions. Assessment of Belief Conflict for Profession (ABCP) prototype measures A and B were first created from the interview data of a previous study. A survey of occupational therapists (OTs) was conducted using measures A and B. Data from 454 OTs were used to examine the validity and reliability of the measures. The two measures were then equalized by items that confirmed the validity and reliability. The two equalization measures consisted of one factor for belief conflict in each of the 10 items. The equalization measures of difficulty and scale properties were roughly comparable. ABCP was able to estimate the severity value of belief conflict. The results suggest that ABCP is able to measure change in belief conflict over time.

Key words: Measure, Profession, Belief conflict, Item response theory

**Development, reliability and validity of stages of the readiness scale on Evidence-Based Practice for occupational therapists at convalescent rehabilitation wards**

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The purpose of this study was to develop the reliability and validity of the 39-item EBP (Evidence-Based Practice) scale with a sample of 274 occupational therapists at convalescent rehabilitation wards in Japan. An exploratory factor analysis found that the extracted 4 factors consisted of 26 items measuring the “Stages of Readiness for the EBP scale” were internally consistent ( $\alpha=0.65\sim0.86$ ). A principal component analysis found that the 6 items measuring the “Self-Efficacy for EBP scale” were also valid ( $\alpha=0.93$ ). Overall, the EBP Scale for Japanese occupational therapists showed reliability and validity.

Key words: Evidence, Evidence-based occupational therapy, Convalescent rehabilitation wards, Occupational therapists, Scale

### **Effect of occupational therapy patient education on pain, psychological factors and activity levels in patients recovering from total knee arthroplasty**

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Total knee arthroplasty (TKA)-induced pain has been known to affect psychological factors, chronic pain and activity levels. This study investigated the efficacy of patient education by occupational therapists on TKA patients' chronic pain, psychological factors and activity levels. TKA patients were classified into two groups: the educational group (36 subjects) and a control group (28 subjects). The following outcome indices were investigated: pain levels, including both walking and stationary pain, catastrophizing, including rumination, helplessness and magnification, psychological factors including anxiety and depression, and activity

levels. Analysis through ANOVA found a connection among walking pain, rumination, anxiety and depression in the education group. The results demonstrate the effectiveness of patient education during occupational therapy on patients suffering from TKA.

Key words: TKA, Patient education, Pain, Psychological factor, Activity level

## **Development of the Communication Skills Scale for occupational therapy students in Japan**

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The purpose of this study was to develop a self-rating scale to measure communication skill for Japanese occupational therapy students. The participants were 259 occupational therapy students and the data from 176 occupational therapy students were used for factor analysis. 43 items of this scale were made, and participants answered the questionnaire. We conducted exploratory factor analysis with promax rotation. Construct validity was determined using confirmatory factor analysis, and internal consistency was assessed using Cronbach' s alpha. The final instrument was composed of 29 items and the exploratory analysis yielded 5 factors: (1) introduction of the relations, (2) interpreting of non-verbal behavior, (3) expression of non-verbal behavior, (4) agreement with others and (5) addressing the alleviation of tension. The scales showed high internal consistency (Cronbach' s alpha = 0.902). Using confirmatory factor analysis, the 5 factor model provided the best fit (chi-square = 21.313, GFI = 0.953, CFI = 0.922, RMSEA = 0.137). The above self-rating scale to measure communication skill for occupational therapy students has adequate reliability and validity. The scale has potential to measure communication skill for occupational therapy students. Further examination of the scale with a large sample size is needed.

Key words: Communication skill, Clinical fieldwork, Occupational therapy, Occupational therapy education

◆PRACTICAL REPORTS

**Occupational therapy intervention including supporting return to primary school for a child with Moyamoya disease recovering from revascularization surgery**

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Occupational therapy was conducted for a male child of twelve years old who had left revascularization due to Moyamoya disease. He used to perform activities of daily living such as swimming and marathon before the surgery. Spastic paralysis of the right upper extremity and motor aphasia appeared after the surgery. He refused to get out of bed due to limitation of activity, pain, and examinations. Standard Language Test of Aphasia showed a slight disability in auditory comprehension. Moreover, he exhibited phonemic paraphasia, speed deterioration of writing, and miscalculation. Therefore, we predicted that he would abandon his school studies due to difficulties of hearing/writing and comprehension of new contents. The following goals were set: get out of bed, improve right upper extremity function, perform ADLs without symptoms and a smooth transition back to school. At first, occupational therapy consisted of playing with toy blocks, and catching an exercise ball. These enjoyable activities using motor functions promoted the expansion of the range of

activities from the bedside to the occupational therapy room and the relationship between the child and the therapist. The relationship resulted in the child challenging calculation tasks and the examination of the Wechsler Intelligence Scale for Children–Fourth Edition. His return to school life has resulted in no neurological symptoms. Performance of patients' favorable occupations promoted getting out of bed smoothly and participating in unpleasant tasks.

Key words: Moyamoya disease, Acute phase, Occupation, Support of return to school, Higher brain function

### **Task value of the classes for occupational therapy students: Discussion using the Academic Task–Values Scale**

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This study aimed to clarify how students value classes at an occupational therapy training institute. Participants were 37 third-year students at a four-year training school, and 22 class subjects were assessed. Following the periodic examinations of each targeted class subject, the Academic Task Values Scale was used to evaluate the classes. After gaining an understanding of how class subjects fit within all class subjects with respect to value, the class subjects were divided into student-centered and teacher-centered class subjects and value trends were compared between the two. Sub-scale scores for interest value, private attainment value, public attainment value, and occupational practice utility value were significantly higher in teacher-centered classes compared to student-centered classes. These results suggest that teacher-centered classes increase students' motivation to learn and make students more aware of their future professions.

Key words: Occupational therapy education, Teaching style, Task value, Motivation

## **Improvement of disturbance through oculomotor training in the daily life of a patient with brainstem infarction**

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We report on a case of oculomotor training in a woman in her 70s who presented mild oculomotor disorders and disturbance in daily life caused by brainstem infarction. The patient suffered from diplopia due to an adduction disorder of the right eye. She felt disturbance in watching television, writing and other tasks. Her oculomotor training consisted of pursuit, fixation, and convergence reflex, and was performed for 20 minutes, six times a week for 4 weeks. As a result, her oculomotor improved, diplopia disappeared, and disturbances in daily life improved significantly. The oculomotor training prevented secondary changes such as shortening or atrophy of the extraocular muscle.

Key words: Oculomotor, Stroke, Rehabilitation, Disturbance in daily life

## **Effective muscle strengthening approaches using the scapula stability muscles and nerve gliding exercise for the disputed double crush syndrome after carpal tunnel release:**

### **A case study**

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I report on the occupational therapy of a 70 year old woman, who has been diagnosed with cervical spondylotic radiculopathy, and the disputed double crush syndrome after carpal tunnel release. Occupational therapy had two stages: the symptoms of the cervical spondylosis and the carpal tunnel syndrome. For alleviating the cervical spondylosis, scapula stability muscles, such as the middle and lower trapezius, and rhomboid major and minor, were strengthened. A nerve gliding exercise along the entire length of the affected arm was performed by coordinating each joint of the upper limb in order to improve the excursion of the entrapped nerve. This resulted in the patient regaining ADL in the affected hand. Relieving the force on the cervical spine and the entrapment of the median nerve may be effective in cases of double crush syndrome between the cervical spondylotic radiculopathy and carpal tunnel syndrome.

Key words: Double crush syndrome, Scapula stability muscles, Nerve gliding exercise, Cervical spondylotic radiculopathy, Carpal tunnel syndrome

### **Creating personal evaluation and support plans for persons with severe intellectual disabilities:**

#### **Client-centered occupational choice in a day-service for persons with intellectual disabilities (2nd report)**

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Purpose: In this research, new client-centered evaluation and personal support plan method was designed for persons with severe intellectual disabilities in the day-service center A-en. The clients were not able to adapt to group activities, fell into maladjustment, and became uncomfortable and unpleasant. Method: This evaluation and support plan were prepared from a person-centered care for persons with dementia and the Canadian Occupational Performance Measure, and were revised through the case conference with caregivers. Results: The evaluation method became a “group comparing the third person with the first person method” which compares the point of view between caregivers and clients. The support plan became a “working sheet for personal

support plan” which integrates the point of view between caregivers and clients and leads to collaboration. Finally, in A-en the activity became a personal desire from a group duty, and the clients became comfortable and pleasant.

Key words: Intellectual disabilities, Client-centered, Occupational choice, Evaluation method, Personal support plan

## **Occupational therapy and belt electrode skeletal muscle electrical stimulation for a hemodialysis patient with post-dialysis fatigue:**

### **A case study**

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We used occupational therapy and belt electrode skeletal muscle electrical stimulation (B-SES) to treat a hemodialysis patient with post dialysis fatigue. The results showed an improvement in physical function and a reduction of fatigue. Additionally, there was an improvement of satisfaction of activities from the Aid for Decision making in Occupation Choice (ADOC). This case study showed that combining occupational therapy and B-SES improves function and ADL, which also sets clear goals using ADOC for a patient showing post dialysis fatigue. In conclusion, occupational therapy and B-SES might be useful for dialysis patients.

Key words: Dialysis, ADOC, Electrical stimulation, Fatigue, Occupational therapy

◆SHORT REPORT

**On-road assessment timing:**

**The relationship between the period since the onset of stroke and on-road assessment outcomes**

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The purpose of this research is to investigate the relationship of the period since the onset of stroke and the on-road assessment outcomes. The 106 subjects that received on-road assessment were divided into three groups: those with less than two months after onset (the short-term group), those from two to four months (the middle-term group) and those with more than four months (long-term group). Neuropsychological tests and on-road assessment outcomes of the three groups were investigated. The Comprehensive Judgment by the driving instructor and the Driving Behavior Assessment (Road Test) scored by the occupational therapist were used to assess on-road outcomes. The Road Test scores of the long-term group compared to the short-term group were only significant when compared to all groups, and the score of long-term group was significantly lower than the score of short-term group ( $p=0.0159$ ). Therefore, patients who took longer to recover after the onset of stroke may exhibit poorer driving behavior during the on-road assessment.

Key words: Driving, Stroke, Assessment