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Naohito Shingu

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◆RESEARCH ARTICLES

Factors of FIM and WHO QOL 26 affecting the subjective ADL scale

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The Satisfaction of Selected Activities of Daily Living (SSADL) is a Subjective ADL scale that reflects the importance and satisfaction of the patient. The objective of this study was to verify which SSADL activity strongly reflects the factors of FIM and WHO QOL 26 in the recovery of rehabilitation inpatients and day rehabilitation service users (93 patients in total). The adopted variables were FIM movement items, WHO QOL 26 psychological domain, social domain, and social relationships. The results suggest that the SSADL evaluates the satisfaction of ADL including the degree of ADL and QOL independence, and clarifies the actual status of the patients.

Key words: ADL, Subjective satisfaction, FIM, QOL

**The predictor of IADL abilities of stroke patients living at home:
Frequency change of household activities after stroke**

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There are many studies on instrumental activities of daily living (IADL), but few studies report on changes of IADL before and after the onset of stroke, nor on the associated factors contributing to the deterioration of IADL. We compared all IADL items before and after the onset of stroke, and investigated the factors leading to the deterioration of household activities. As a result, the subjects carried out household activities more frequently than those outdoor activities which involved leaving the house and using public transportation. Furthermore, they easily did household activities, including clearing the table and washing clothes. We found significant statistical differences in scores of FIM, FIM-M, BBS, TMT-B and COPM-performance between the subjects who continued household activities and those who did not. The study shows that ADL, standing balance, divided attention and attentional capacity influences independence in household activities.

Key words: Stroke, IADL, Household activities, Predictor

Characteristics of physical activity and their relevance to step number in patients with Parkinson' s disease

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This study aimed to clarify characteristics of daily physical activity in patients with Parkinson' s disease (PD), and to evaluate relations between Moderate to Vigorous

Physical Activity (MVPA) and number of steps. This study included 35 PD patients and 70 neurologically normal control individuals. The amount of physical activity was measured using a 3-axis accelerometer. The average time of daily physical activity was analyzed in terms of intensity of physical activity and number of steps. As a result, the PD group showed lower values in all physical activities in terms of intensity ($p < 0.001$). In addition, the time of medium intensity of the PD group showed a statistically significant positive correlation with the number of steps ($R = 0.810$, $p < 0.001$), and parallelism with the control group was also maintained ($p = 0.512$). The results showed decreased physical activity in PD patients compared with that of the control group, although all PD patients participating in this study were in the early stages of the disease and independent. Thus, any intervention which increases physical activity is essential for early stage PD patients.

Key words: Parkinson's disease, Activity amount, Accelerometer

School-based occupational therapy for kindergartens and day nurseries: A pilot study

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We conducted a pilot study to examine the feasibility of occupational therapy (OT) consultation in kindergartens and day nurseries through pre-post intervention design. 7 teachers (Kindergarten:2, Day nursery:5) selected a child in need of special care. Teachers received three consultations/year by the OT for each child. All subjects continued for the duration of the study. For the individual goals selected by using Aid for Decision-making in Occupation Choice for School (ADOC-S), there was significant improvement in Canadian Occupational Performance Measure of satisfaction and performance ($p = 0.016-0.028$, $r = 0.83-0.91$) and Goal Attainment Scaling ($p = 0.014-0.017$, $r = 0.90-0.93$), but no improvement in the General Self-Efficacy Scale

($p = 0.129$, $r = 0.58$). A larger sample of 8–12 teachers per group would be required for a pre–post design study. These results suggest the feasibility of this type of consultation study.

Key words: Special education, School based occupational therapy, Consultation, Visiting consultation

The efficacy and safety of self-training using the ReoGo[®]-J robotic device for upper-extremities in subacute hemiplegia after stroke

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Seven subacute patients with severe-to-moderate arm deficits after stroke (male:3, female:4; age, forty-eight to eighty-one years old) received occupational therapy (OT) for 40 minutes and self-training using ReoGo-J (Reo practice) for 20 minutes, 5 times a week for 3 weeks. We investigated the operational method, clinical safety, and effectiveness of Reo practice. The results showed no adverse events related to using ReoGo-J. Additionally, shoulder, elbow, and forearm functions were significantly improved through the intervention. The results indicate that robotics might be able to assume a role in the training leading to the improvement of upper-extremity function. However, improvement in the affected upper-extremity use in activities of daily living is unclear because we did not use the outcomes to assess the amount of use of the affected upper-extremities in real-life.

Key words: Upper-extremity function, Stroke, Robotics, Subacute rehabilitation

Verification of the effectiveness of “Ikiiki-Rihabiri” as a group therapy

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Rehabilitation for elderly people with dementia should not only focus on physical and cognitive function but also address quality of life (QOL). Therefore, we developed “Ikiiki-Rihabiri”, an individual therapy based on Cognitive Stimulation Therapy (CST); CST is a group therapy that follows a person-centered care model. The objective of the present study was to demonstrate the effectiveness of “Ikiiki-Rihabiri” as a group therapy. After the intervention, the results showed limited improvement in cognitive function significant improvement in QOL. These findings suggest that “Ikiiki-Rihabiri”’s features of person-centered care and increased psychosocial interaction in group-based therapy contribute to the improvement of QOL in elderly people with dementia.

Key words: Elderly people with dementia, Group therapy, QOL, Reminiscence, Person-centered care

Neuropsychological assessment tools predicting employment of individuals with higher brain dysfunction:

A systematic review and meta-analysis

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The present study conducted a systematic review and meta-analysis to identify effective neuropsychological assessment tools predicting employment of individuals with higher brain dysfunction. Eleven research articles that met the eligibility criteria were analyzed using CiNii and Ichushi-Web of Japan Medical Abstracts Society. Results showed that WAIS (Verbal IQ), WMS-R (General memory, Attention/Concentration, Delayed recall), and RBMT were the 3 neuropsychological assessment tools predicting employability. Using these tools, cognitive functions of given clients may be well assessed while predicting behavioral aspects at workplaces. Implications include the role of occupational therapists with knowledge translation skills, which in turn should lead better job accommodations and employees assistance on the job.

Key words: Higher brain dysfunction, Work support, Neuropsychological assessment, Meta-analysis, Systematic review

Influence of cognitive function of acute hemiplegia patients with cognitive decline on the performance of daily activities at the time of discharge or hospital transfer

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Introduction: The purpose of this study was to examine the influence of cognitive function of acute hemiplegia patients with cognitive decline on the performance of daily activities at the time of discharge or hospital transfer. Methods: Subjects were 22 acute hemiplegia patients with cognitive decline. The cognitive function was assessed by Japanese version of Montreal Cognitive Assessment (MoCA-J) total score. The range of the MoCA-J total score is zero to 30 points (26 points or more is normal); the subjects in this study scored less than 25 points. The performance of each of the daily activities was assessed by 18 items of the Functional Independence Measure

(FIM). The scores ranged from one to seven points per activity. Single regression analysis was used to confirm whether the performance of each activity (score of one item) could be predicted by cognitive function (MoCA-J total score). Results: Single regression analysis suggests that the performance of the seven activities (Bladder management, Bowel management, Comprehension, Expression, Social interaction, Problem solving, and Memory) during three weeks after hospitalization (average length of hospital stay 24.73 ± 6.60 day) was predicted from the MoCA-J total score one week after hospitalization (average length of hospital stay 8.36 ± 2.75 day). Discussion: In the Occupational therapy plan for acute hemiplegia patients with cognitive decline, it is necessary to consider the possibility that quantity of care increases in the seven activities during cognitive decline.

Key words: Acute care phase, Hemiplegia, Cognitive function, Activity, Performance

Effects of a daily life performance report on day-care rehabilitation services: The results of a randomized controlled trial

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This paper provides the result of randomized controlled trial (RCT) conducted to verify the effects of daily life performance reports. The reports were prepared by an occupational therapist (OT) to share information with a care manager about 63 day-care rehabilitation service users on the QOL, ADL and IADL of the service user. The RCT revealed that the activities of daily living on method (BI) and health evaluation method (EQ VAS) of the intervention group were considerably higher than those of the control group; the degree of satisfaction of the living objective was

significantly higher after three months and the degree of adherence and satisfaction of the living objective was significantly higher after six months. The results indicate that the use of the daily life performance report to inform about the service user contributes to the improvement of the service user's living behavior.

Key words: The management tool for daily life performance, Cooperation, Day-care rehabilitation service, Occupational therapy

◆PRACTICAL REPORTS

Driving support for stroke patients:

Investigating purposes for leaving the home and outcomes of driving evaluation for patients in a rehabilitation ward

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92 inpatient hemiplegic stroke patients were evaluated in terms of ability to drive and exercise. We analyzed the patients' reasons for wanting to drive, and determined whether or not they could resume driving. The results of our analysis indicate that the subjects who wished to resume driving intended to maintain their lifestyle through "shopping" and "work". The subjects not wanting to resume driving only wanted

to consult with physicians outside the home and did not want to put undue burden on their families. As a result of the driving evaluation, 20 cases were judged to be able to operate an automobile. Most patients were unable to drive, and thus needed a caregiver to leave the house. Therefore, it is important to teach motion guidance to patients, assistance guidance to patient' s family, and activities apart from driving. It is important to incorporate these into day-to-day occupational therapy.

Key words: Stroke, Purpose of leaving the home, Driving, Getting in and out of the car

**Elderly suffering from dementia who are living apart from family:
A case study of reconnecting through occupational therapy support**

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An elderly patient with dementia living in a long-term nursing care facility had lost connection with family members due to the death of the eldest son who the patient had relied upon. This resulted in a reduction of the environment in which she actively engaged. OT support included providing opportunities for social interactions and establishing connections with the eldest daughter through communication by the patient to the daughter about personal feelings. As a result, interactions of the patient with the family members were promoted through exchange of letters, and the patient regained a stable lifestyle. Family interactions through letter writing helped internalize the roles of the patient and the daughter, and the subsequent deepening of their mutual relationship led to an improvement in lifestyle for the patient. This study reviews the timeline of the occupational therapy program, while focusing on the family connections of elderly patients who live apart by considering the importance of family ties, changing the feelings of family members and changing the activities within the long-term nursing facility.

Key words: Occupational therapy, Elderly patients with dementia, Family

relationships

Working life support to a man suffering from schizophrenia induced disproportion of the occupational balance:

Effectiveness of the Self-Assessment of Occupational Balance through care meetings

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Here we report the case of a patient with schizophrenia, who received employment support to reduce work absence due to occupational imbalance, depression, and hypobulia. This support was assessed using the Self-Assessment of Occupational Balance (SAOB) tool during care meetings. The occupations that he wrestled with were made clear. He engaged in fun and relaxing occupations for one month while being conscious of the number of occupations. The patient ceased to avoid a number of duties, and meaningless duties ceased as well. His desire to engage in meaningful occupations increased, and occupational balance for continuous employment could be obtained. We suggest that it is important for patients with schizophrenia receive support using SAOB in care meetings.

Key words: Schizophrenia, Occupational balance, Working life support

**The influence of vibration stimulation on upper limb function with sensory ataxia:
A single case design**

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We examined the effect of vibration stimulation using single case (ABA) design on a male in sixties with right sensory ataxia and mild hemiparesis after stroke. In phase A, the patient received only a task-oriented approach for one week, while in phase B, the patient received vibration stimulation followed by task-oriented training for one week. As a result, the phase B approach resulted in improved Box and Block test scores, as well as higher test scores in the thumb searing test than those of phase A. In conclusion, although this study was based on only a single case, vibration stimulation may result in improved upper limb function and intrinsic sensation. Further studies with more subjects should be performed in order to confirm the present results.

Key words: Ataxia, Vibration stimulation, Upper limb function

Clinical utility of the “Equating Assessment of Positive Occupation scale” in psychiatric day care

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The purpose of this study was to investigate the clinical usefulness of the Equating Assessment of Positive Occupation (EAPO) scale for clients using psychiatric day care. EAPO is an evaluation scale that measures the client's involvement in an occupation, thereby promoting well-being. The method was evaluated using EAPO for clients, and intervention was provided while providing learning opportunities for occupations that promote well-being with reference to the evaluation results. Therefore, the clients' involvement in the occupations gradually improved, thereby promoting well-being, and reducing constraints on social participation. EAPO is a useful tool

that facilitates the occupational therapists' reasoning with practice rooted in occupations promoting well-being and also facilitates teamwork.

Key words: Equating Assessment of Positive Occupation (EAPO), Horizontal equating assessment, Well-being, Psychiatric day care