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## ◆RESEARCH ARTICLES

### **Developing an observation checklist on environmental items in “regular classrooms” for special needs education**

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The importance of assessing valid observation methods is needed in special needs education. This study provides the observation items for the environmental equipment that assess “what/where” and “how” to observe the human and equipment environments when the OTs visit regular classrooms. The first study implemented a semi-structured interview for 12 OTs with ample experience visiting regular classrooms. The results of the interviews were analyzed by KJ-method, and 978 items were extracted. In the second study, the Delphi-method was implemented for 51 OTs nationwide with experience visiting regular classrooms utilizing 3 rounds of questionnaires on the importance of items obtained in the first study. The 99 items were obtained from the second study and arranged into observation items for the environmental equipment. This study provides a foundation for the development of observation checklists in visiting regular classrooms.

Key words: Special needs education, Observation, Checklist, Environmental items, Regular classroom

### **The living conditions and the Self-rated Health of elderly individuals living alone with long term insurance in rural areas: A cross-sectional study**

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Elderly individuals living alone have increased risk and mental anxiety, which necessitate self-health care. This study examined the living conditions and the Self-rated Health (SRH) of elderly living alone and certified as needing long-term care. The participants were divided into Good SRH and Poor SRH groups, and their attributes were compared. The SRH and the Good SRH group scored significantly higher on the following: Age, percentage of respondents having someone who provides functional and emotional support, percentage of marital status, and medians of IADL. The results suggest that the following factors, regardless of their frequency, are important for elderly individuals living alone and certified as needing long-term care to continue living alone: an ADL independence level of “Modified independence” or higher, good SRH, the presence of an individual who provides functional and emotional support, and the ability to sufficiently carry out affairs both in and outside the household to some degree. To support elderly individuals living alone, occupational therapists need to grasp the change of clients’ ADL function, accomplish adequate frequency of the IADL, and support the client both functionally and emotionally.

Key words: Elderly individuals living alone, Self-rated Health, ADL, IADL, Long term insurance

### **Comparing psychological functions of patients with hip fractures and community-dwelling elderly**

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The purpose of this study was to clarify the psychological functions of hospitalized patients with hip fractures by comparing such functions with those of community-dwelling elderly. The subjects were 24 patients with hip fracture and 34 community-dwelling elderly. For the psychological examinations, the following measurements were used: Mini mental state examination (MMSE), Trail Making Test (TMT), Geriatric Depression Scale Short Forms (GDS-15), the WHO-Five well-being index (WHO-5), and the State-Trait Anxiety Inventory-Form JYZ (STAI). A comparison of the results between the two groups indicated that patients with hip fractures exhibited significantly lower levels in the MMSE and WHO-5, and significantly higher values for GDS-15, while the Delta TMT time was considered pathological. These results suggest that rehabilitation for patients with hip fractures should focus on both physical aspects and psychological areas.

Key words: Hip fracture, Psychological function, Community, Older people

### **A qualitative study on the commencement of occupations of elderly women living independently in the community**

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The kinds of occupations that the elderly select and practice in the community, as well as their original motivations and personal meanings, remain unclear. Therefore, this study clarifies the motivations and meanings for the parties involved of occupations that have been introduced by elderly residents. Semi-structured interviews were conducted with 12 participants, and their responses were subjected to a qualitative inductive analysis. As a result, 840 labels were obtained from participants' statements, which were eventually aggregated into eight conceptual categories: "activity overview", "circumstances", "motivation", "sentiments", "health", "impact of activities", "goals", and "resignation". Participants' "activity overviews" consisted of exercise and physical activities, and cultural activities with an emphasis on proceeding with these at one's own pace. Moreover, all activities entailed

relationships with others, and it was found that such activities were associated with various “sentiments”. In addition to the intrinsic motivational factors needed for beginning activities, extrinsic factors were also important. In terms of intrinsic factors, a sense of wanting to maintain “health” was associated with the commencement of activities, and recognizing the “impact of activities” also affected their continuation. In terms of extrinsic factors, activities began based on the information obtained from recommendations of medical personnel or friends, news magazines, or other media, and others’ praise and positive feedback. It was revealed that the elderly, along with changes to their mental and physical function and in the “circumstances” that surround them, were inspired to change how they pursued their conventional activities, to continue their activities, and even to undertake “goals”.

Key words: Elderly, Occupation, Qualitative research

**Exploratory study of meaning generation style of occupation of the elderly who are continuing important occupations while experiencing a crisis of occupational adaptation**

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The aim of this research was to investigate the elderly who are continuing important occupations while simultaneously experiencing a crisis of occupational adaptation, and clarify meaningful occupational semantic generation styles. Participants in the study included elderly over 65 years old living independently without dementia, and who participate in the local community. A non-structured interview was used, and the responses were analyzed using SCAT (Steps for Coding and Theorization). Four concepts were extracted through semantic generation styles: fundamental sense values, strategies, influence from occupation, and internal/external dialogues. The results indicate that the generation of the meaning of occupation was carried out in choice of the occupation (display of strategies) along one’s sense of values through

internal/external dialogues.

Key words: Meaningful occupation, Make decision, Narrative, Choice of occupation, Model of occupational therapy

### **Development of a regional cooperation clinical pathway to comprehensive environmental support for elderly individuals: A content validity study**

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To develop a regional cooperation clinical pathway to promote comprehensive environmental support among elderly individuals undergoing recovery rehabilitation, targets and tasks were created and content validity was examined. The draft of the pathway was prepared in accordance with the construct of the Comprehensive Environmental Questionnaire, which comprised 10 target categories and 26 task items. The draft was examined using a Web-based questionnaire system with the Delphi approach in 31 professionals at convalescent hospitals or maintenance facilities. The content validity was verified for nine target categories and 24 task items. To utilize this pathway effectively, a process to reconsider the pathway upon subjecting it to variance analysis after its use based on the PDCA cycle is needed.

Key words: Elderly, Environment, Regional cooperation, Clinical pathway, Recovery rehabilitation

## ◆PRACTICAL REPORTS

### **Approaches to quantify the amount of upper paretic extremity use in chronic stroke patients: A case study**

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The outcome measures to assess the frequency of paretic arm use in activities of daily living in stroke patients were mainly used as subjective patient assessments. However, some researchers question the objectivity of such assessments in measuring upper extremity use in activities of daily living. This case report used accelerometer values to objectively assess the frequency of use of the paretic arm in activities daily living between pre- and post-constraint-induced movement therapy (CI therapy) for a stroke patient. The CI therapy intervention improved the conventional tests score for upper extremity function in activities of daily living, and accelerometer values of the paretic arm. Moreover, the accelerometer values of the paretic arm indicated an improvement the frequency of use of the paretic arm in bimanual activities. Although case study results are generally inconclusive, accelerometer values might be an objective method to assess the amount of paretic arm use in activities of daily living.

Key words: Upper extremity function, Stroke, Amount of activity, Accelerometer, Constraint-induced movement therapy

**Home-visit occupational therapy based on the Cognitive Orientation to daily Occupational Performance (CO-OP) approach to improving participation after stroke**



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Home-visit occupational therapy based on the cognitive orientation to daily occupational performance (CO-OP) approach was provided to a stroke patient who was able to acquire the skills to cook, which was the client's goal, by practicing a trouble-free method devised by the patient. Furthermore, by applying this approach to other tasks such as oyster aqua-culture, the client was able to acquire these skills. Considering the level of self-reliance at home, it is very important to allow the client to realize his/her own problems and acquire measures to cope with them. Thus, we suggest this practice is useful. In addition, the client used the paralyzed hand effectively to acquire a series of skills, which increased the frequency and function of the paralyzed upper extremity.

Key words: CO-OP, Home-visit occupational therapy, Stroke

### **The effect of home-based constraint-induced movement therapy on visiting rehabilitation**

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The purpose of this case report was to work out the training protocols of home-based constraint-induced movement therapy (HCI therapy) for an individual with stroke-induced chronic upper-extremity hemiparesis. The patient was a 90-year-old woman who had a stroke 2 years previously and had right upper-extremity deficits. She completed a 10-week HCI program during which she restrained the unaffected upper extremity and participated in 60 minutes of intensive training of the affected

upper extremity at home. Her meaningful occupational goals were brushing teeth and picking up a single grain of rice with chopsticks using the hemiparetic upper-extremity. As a result, increased scores were noted from pretreatment to post-treatment on the Fugl-Meyer Assessment for upper-extremity, Motor Activity Log, and Simple Test for Evaluating Hand Function. Additionally, all her meaningful occupation goals were accomplished, thus indicating the positive effects of HCI intervention in this pilot study.

Key words: Stroke, Upper extremity, Activity of daily life, Occupation

### **Early intervention using the management tool for daily life performance in the return home support of a geriatric health services facility**

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This study examined the effectiveness of the early intervention of return home support using the management tool for daily life performance (MTDLP) for people entering geriatric health services facilities. As part of this study, 15 of 21 subjects left the facility to return to their homes. Ability of ADL such as transferring oneself, walking, climbing stairs, dressing and toileting were improved, along with the self-evaluation of degree of practice and satisfaction of the subjects in their agreement goals. When intervention goals using ICF were analyzed, the following ratios emerged: body functions and body structures 9%, activities and participation 70%, and environmental factors 21%. The goal setting by MTDLP focuses on activities and participation of the client and indicates that it is useful for return home support in

geriatric health service facilities.

Key words: Geriatric health services facility, The management tool for daily life performance, Certified long-term care elderly people, Return home support

## ◆SHORT REPORTS

### **The limitation of existing scales for assessing residual ADL of patients with severe dementia**

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Existing ADL scales exhibit a floor effect for patients with moderately severe to extremely severe dementia, and their inability to assess residual ADL in dementia patients has been criticized. This study examined if existing scales can appropriately measure the residual ADL of patients with severe dementia without such floor effects. We used the Functional Independence Measure (FIM), Disability Assessment for Dementia (DAD), Self-Care Rating for Dementia Extended (SCR-DE) Scale, Hyogo Activities of Daily Living Scale (HADLS), and Nishimura's Activities of Daily Living Scale (N-ADL) to rate ADL in severe dementia patients admitted to medical facilities for long-term care. We examined a floor effect of both the scores of each item and the total scores by indicating the ratio of the subjects showing minimum scores in these scales. 108 subjects were included in the analysis. Only the following items or scores did not exhibit a floor effect: "total score", "eating", "posture", and "washing" on the HADLS, and "total score" and "eating" on the N-ADL. We therefore consider that the existing ADL scales are not valid for assessing the ADL of hospitalized elderly patients with moderately severe to extremely severe dementia. The development of a new ADL scale that examines cooperative attitudes towards ADL in detail is deemed necessary for severe dementia.

Key words: Dementia, Activities of daily living, Assessment scale, Floor effect

**Acceptance of elementary school students with developmental disorders and the need for rehabilitation specialist support in an after-school childcare program:**

## **The 2015 Okayama survey**

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A survey was conducted on the acceptance of elementary school students with developmental disorders and the need for rehabilitation specialist support in after-school childcare programs. Subjects comprised staff at 340 after-school childcare facilities in Okayama Prefecture. A total of 124 facilities responded (response rate, 36.47%). The total number of the enrolled students aged 7-12 years was 5,487. Of these, 476 (8.68%) students had some form of developmental disorder. The average number of students with developmental disorders per facility was 3.84. The rate of after-school childcare facilities with childcare workers trained in disability care was 46.3%. The rate of facilities providing a consultation service was 48.3%, and the rate of facilities providing on-site guidance by rehabilitation specialists was only 4.1%. The requests to rehabilitation specialists were to give students advice “regarding the specific way to care”, “once a month” and “on-the-spot”. Although interested facilities could have responded, our results suggest the need for occupational therapist support in after-school childcare programs.

Key words: Developmental disorders, Elementary school children, Questionnaire survey