

## Abstract

### The Effects of Task-Oriented Activities on ADL Performance, Balance and Satisfaction in Chronic Stroke Patients

Park, Sun-Ja, M.S., O.T., Bae, Seon-Young, B.P.E., O.T.

Dept. of Occupational Therapy, Seonam University

**Objective:** The aim of this study was to investigate of the effect of task-oriented activities on ADL performance, balance and satisfaction of chronic stroke patients.

**Methods:** Thirty-three chronic stroke patients participated in this study. Subjects were randomly divided into task-oriented activities group(n=18) and conservative occupational therapy group(n=15). The intervention was performed for 30 minute on 5 times per week over 3 months. Before and after the intervention, evaluation was carried out and was made by using the following tests: Berg Balance Scale(BBS), Canadian Occupational Performance Measure(COPM), Functional Independence Measure(FIM).

**Results:** Significant increases of mean score in BBS, COPM and FIM were observed in both groups( $p < .01$ ).

The task-oriented activities group was statistically increase more than the conservative occupational therapy group in BBS and COPM at 3 months. However, FIM mean score showed no significant differences between the two groups( $p > .05$ ).

**Conclusion:** The task-oriented activities are helpful more than the conservative occupational therapy to improve ADL performance, balance and satisfaction in chronic stroke patients.

**Key words:** Balance, BBS, COPM, FIM, Occupational therapy, Task-oriented activities

## Abstract

### The Effects of Goal Setting on Activities of Daily Living and Anxiety in Acute Stroke Patients

Kim, Mi-Hyun, M.Sc., O.T., Son, Sung-Hee, B.H.Sc., O.T.,

Kang, Se-Jin, B.H.Sc., O.T., Lee, Ye-Jin, B.H.Sc., O.T.,

Jang, Hae-Ryeon, B.H.Sc., O.T.

Dept. of Occupational Therapy, Seoul National University Bundang Hospital

**Objective:** The purpose of this study is to investigate the effects of goal setting on Activities of Daily Living (ADL), occupational performance, and anxiety level in acute stroke patients.

**Methods:** This study was carried out on 10 stroke patients. The study used a pretest/post-test control group design. The intervention was provided to both groups for 30 minutes a session, for 10 sessions, and provided an upper-extremity self-training program. The experimental group set specific goals, while the control group did not. Modified Barthel Index (MBI) and Canadian Occupational Performance Measure(COPM) were used to evaluate the ADL. State-Trait Anxiety Inventory (STAI) was used to evaluate the anxiety level preand post-experiment.

**Results:** Statistically significant differences were found in MBI, COPM-P, and COPM-S ( $p < .05$  respectively) after intervention. As a result of STAI, both groups did not show a significant difference in anxiety level ( $p > .05$ ). During each intervention, a statistically significant correlation of anxiety level was not found in the experimental group ( $r = .012$ ,  $p > .05$ ).

**Conclusion:** The results of this study suggest that goal setting, which improves the motivation and participation of acute stroke patients during intervention, has a positive impact on ADL. We also suggest further study reflecting the anxiety factors of the patients during goal setting.

**Key words:** Activities of daily living, Anxiety, Goal setting, Stroke

## Abstract

### Effect of Basic IQ and Executive IQ on ADL in Stroke Patients

Yoon, Jeong-Ae\*, Ph.D., O.T., Lee, Hyang-Sook\*, Ph.D., O.T.,

Kim, Hong-Keun\*\*, Ph.D., N.P., Kwon, Hyuk-Cheol\*\*\*, Ph.D., R.P.T.

\*Dept. of Occupational Therapy, Daejeon Health Sciences College

\*\*Dept. of Rehabilitation Psychology, Daegu University

\*\*\*Dept. of Occupational Therapy, Daegu University

**Objective:** This study was conducted to investigate the cognitive function degree of stroke patients, the difference between Basic IQ(BIQ) and Executive IQ(EIQ), cognitive function related to brain lesion locations, and their impact on the patients's activities of daily living(ADL).

**Methods:** The study was performed on 108 patients hospitalized after a stroke diagnosis. To measure the cognitive scale for older adults, an assessment of their motor and processing skills was used. According to the presence of prefrontal and basal ganglia lesions, the patients's BIQ and EIQ were comparatively analyzed.

In addition, which type of IQ has a greater effect on motor and processing skills was investigated.

**Results:** 80.5% of the stroke patients showed cognitive impairment. EIQ showed more significant damage than BIQ, with a statistically significant difference. Depending on four lesion locations, a significant difference was shown between the lesion groups based on BIQ and EIQ. For EIQ, the group with prefrontal and basal ganglia lesions and the group with no lesions showed statistically significant differences. In terms of ADL, the cognitive function affecting the patients's motor skills was revealed to be both BIQ and EIQ, while the processing skills were only affected by EIQ.

**Conclusion:** This study recognizes the EIQ's importance in stroke patients's cognitive impairment, which should be considered significant in the assessment of the stroke patients's rehabilitation and intervention plan.

**Key words:** ADL, Basic IQ, Executive IQ, Motor skills, Processing skills, Stroke

## Abstract

### Phenomenological Study on Meaningful Occupation of Nursing Home Living Elderly Person

Song, Byung-Nam\*, M.Sc., O.T., Jeon, Byung-Jin\*\*, Ph.D., O.T.,

Lee, Jae-Shin\*\*, Ph.D., O.T., Kim, Su-Kyung\*\*, Ph.D., O.T.

\*Sunwoo Happy Village Nursing Home

\*\*Dept. of Occupational Therapy, Konyang University

**Objective:** This research was conducted as a phenomenological study, and applied Giorgi's technical phenomenology to study the meaningful occupation of elderly persons living in a nursing home. The main question for this research started with, - What is the experience the meaningful occupation in elderly persons living in a nursing home?.

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**Methods:** The participants of this research were elderly persons over 65 years of age with experience in meaningful occupation. The data was collected from March 2011 until May 2011, and was generated through in-depth interviews. There were 7 participants in total. All of the interview data was transcribed and analyzed just as the participants articulated.

**Results:** The results of the study consisted of 57 semantic units, 11 sub-components, and 4 components. The 4 components are presented below. 1. Good deeds and service. 2. Role of family members. 3. Making friends. 4. Religious activities.

**Conclusion:** When entering the nursing home, the meaningful occupation aimed at a successful life. However, as time passed, the goal of the patients changed to a 'good death.' In addition, the goal according to this changing, meaningful occupation remained the same, but the factors were different.

**Key words :** Giorgi's phenomenology, Meaningful occupation, Nursing home

## Abstract

### The Effects of Sensory Integration Treatment on Handwriting Performance in Children With Attention Deficit Hyperactivity Disorder

Ham, Bo-Hyeon\*, M.P.H., O.T., Kim, Su-Kyoung\*\*, Ph.D., O.T.,

Lee, Jae-Shin\*\*, Ph.D., O.T., Jeon, Byoung-Jin\*\*, Ph.D., O.T.

\*Ewha Children Development Center

\*\*Dept. of Occupational Therapy, Konyang University

**Objective:** The aim of this study was to investigate the effects of a sensory integration treatment on the handwriting performance in children with Attention Deficit Hyperactivity Disorder(ADHD).

**Methods:** Two children scoring above 17 on an ADHD assessment using an Abbreviated Conners Rating Teacher Scale applied to the ABA, 7 design of the single-subject experiment research design. This study enforced a triplicate baseline with 24 intervention-lines, and a triplicate re-baseline of treatment from July to Sep, 2010. The evaluation tools used were a handwriting task (handwriting legibility and speed) and School Assessment of Motor and Process Skills (School AMPS). The handwriting task was used to measure the changes in handwriting legibility and speed. The School AMPS assessed the changes in the motor and processing skills in terms of schoolwork-handwriting performance.

**Results:** Subject 1, showing a rise in handwriting legibility and speed, demonstrated a statistically significant improvement. Subject 2 revealed an increase in handwriting legibility but demonstrated no significant improvement. Subject 2 also revealed an increase in handwriting speed with a significant improvement.

Subject 1 revealed an increase in School AMPS motor skills, but without a significant improvement, while their School AMPS process skills demonstrated a significant improvement. Subject 2 revealed growth in terms of School AMPS motor and process skills with a significant improvement.

**Conclusion:** The results of this study suggest that, first, sensory integration treatment is positive on handwriting legibility and speed in children with ADHD, and second, sensory integration treatment is good for improving schoolwork handwriting performance skills in children with ADHD.

**Key words:** ADHD, Handwriting legibility, Handwriting speed, School AMPS, Sensory integration

## Abstract

A Survey on the Cognitive Rehabilitation of Occupational Therapy in Korea

Lee, Hee-Ryoung\*, M.S., O.T., Kim, Ji-Youn\*\*, M.A., O.T.,

Han, Dae-Sung\*\*\*, M.A., O.T.

\*Dept. of Occupational Therapy, Seoul St. Maris Hospital

\*\*Dept. of Occupational Therapy, Woosong University

\*\*\*Dept. of Occupational Therapy, Sangji Youngseo College

**Objective:** This study investigated variations in the management of cognitive impairment by Korean occupational therapists' in practice.

**Methods:** 52 questionnaires filled out by Korean occupational therapists were analyzed. In addition, a descriptive analysis was used to identify the type and frequency of cognitive rehabilitation-related assessments and interventions.

**Results:** 98.2% of respondents participated in the cognitive rehabilitation. The best used cognitive assessment and medical insurance fee were the Mini-Mental State Examination and MMSE [F6216], respectively.

Medical facilities implementing computer-based cognitive assessment and treatment make up 14.3% and 73.2% of the total number of facilities, respectively. The uses of assessment and intervention are much different from each other in terms of facilities, and some settings have problems such as inappropriate charges.

**Conclusion:** This study determined the actual conditions of cognitive rehabilitation by occupational therapists in practice. As the role and specialty of occupational therapists' are increasing gradually, further study and guidelines on standardized assessment tools, insurance fees, and treatment methods are needed.

**Key words:** Cognitive rehabilitation, Insurance fee, Occupational therapy, Survey

## Abstract

### Characteristics of Time Use and Types of Activities of Daily Living in Non-Disabled Urban Elderly

Lee, Joo-Hyun\*, M.S., O.T., Park, Soo-Hyun\*\*, Ph.D.,

Yoo, Eun-Young\*\*, Ph.D., O.T., Jung, Min-Ye\*\*, Ph.D., O.T.,

Cho, Duk-Youn\*\*\*, M.S., O.T.

\*Dept. of Occupational Therapy, Dankook University Hospital

\*\*Dept. of Occupational Therapy, College of Health Science, Yonsei University

\*\*\*Dept. of Rehabilitation Assistive Technologies, National Rehabilitation Center

**Objective:** The purpose of this study was to investigate the types of activities and amount of time invested in such activities of a sample of non-disabled elderly persons.

**Methods:** The sample consisted of 155 participants 60 years and older. The participants completed a Time Use Survey. Each participant reported the activities they engaged in for two consecutive days. Their responses were classified and the amount of time spent was calculated in minutes.

**Results:** The results indicate that the participants spent most time sleeping and doing household chores. In addition, men spent more time on work and learning, but women spent most time on family care, volunteer activities, and social and leisure activities. Elderly participants under the age of 65 spent more time on work, while those 66 years and older invested more time on relationship and leisure activities. Finally, elderly men residing in large cities engaged more in work, while elderly men residing in small cities spent more time on relationship and leisure activities.

**Conclusion:** The results of the present study indicate that occupational therapists should consider activity management according to gender, age, and city size. It is hoped that such considerations will contribute to efficient time management in current aging societies.

**Key words:** Activities of daily living, Occupational therapist, Time use, Urban elderly

## Abstract

### Sensory Processing Abilities and Occupational Performance Skills Among Children With Developmental Disabilities

Park, Myoung-Ok\*, M.P.H., O.T., Lee, Ji-Yoeyun\*\*, Ph.D., O.T.,

Lee, June-Young\*\*\*, Ph.D., Lee, Won-Jin\*\*\*\*, Ph.D., M.D.

\*Dept. of Occupational Therapy in National Rehabilitation Center

\*\*Dept. of Occupational Therapy in Dong-Nam Health College

\*\*\*Dept. of Biostatistics, College of Medicine in Korea University

\*\*\*\*Dept. of Preventive Medicine, College of Medicine in Korea University

**Objective:** The purpose of this study was to investigate the relationship between sensory processing abilities and occupational performance skills of children with developmental disabilities and to identify those factors that affect occupational performance skills.

**Methods:** Between June 2010 and February 2011, cross-sectional data were collected on 39 children with developmental disabilities at the National Rehabilitation Center, and at the developmental center of Chung- Nam disabled person's parents society in Dang-jin over Short Sensory Profile(SSP) and Assessment of Motor and Process Skill(AMPS).

**Results:** Significant correlations were found between AMPS-motor skills and low-energy/weakness, AMPSprocessing skills and low-energy/weakness, and visual and auditory sensitivity for all subjects. The mental retardation group showed a correlation between AMPS-processing skills, SSP total score, and tactile sensitivity. The cerebral palsy group showed a strong correlation between AMPS-motor skills and movement sensitivity, and a correlation between AMPS-processing and auditory filtering. Pervasive developmental disability and other groups showed a correlation between AMPS-motor skills and lowenergy/ weakness. Low-energy/weakness was significantly related with AMPS-motor skills.

**Conclusion:** We found a difference in the relations between sensory processing ability and occupational performance skills among children with developmental disabilities.

**Key words:** Developmental disability, Motor skills, Occupational performance skills, Processing skills, Sensory



## Abstract

### The Effectiveness of Occupational Therapy in Mental Health: A Systematic Review

Jung, Nam-Hae\*, M.S., O.T., Chang, Moon-Young\*\*, Ph.D., O.T.

\*Dept. Occupational Therapy, Bongseng Medical Center

\*\*Dept. of Occupational Therapy and Elderly Life Redesign Institute, Inje University

**Objective:** The purpose of this study was to investigate diagnostic groups, interventions, and standardized assessments in mental health in occupational therapy through a systematic review.

**Methods:** The systematic review was executed using PubMed, Springer Link, Wiley Journal, and Science Direct. The key words used for the search were occupational therapy, mental health, psychiatric, mental illness. Thirteen studies were used for the data analysis, and the levels of evidence were levels I, II, III, and IV.

**Results:** 1. The subjects suffered from dementia(30.8%), schizophrenia(15.4%), panic disorders(7.7%), and depression(7.7%). 2. The methods used were client-centered intervention(46.2%), work and education(23.1%), Activities of Daily Living(ADL) training(15.3%), neurocognitive training(15.3%), and environment and context intervention(7.7%). With the exception of environment and context intervention, all interventions have positive effects on the mental illness of the patients. 3. The areas of standardized assessments were health & wellness(41.3%), occupational performance(28.3%), quality of life(19.6%), role competence(8.7%), and participation(2.1%).

**Conclusion:** This systematic review provides evidence concerning the effectiveness of occupational therapy in mental health. Studies on effective intervention to facilitate community participation for various diagnostic groups have to be conducted. In addition, the effects on occupational therapy in mental health should be assessed from multilateral perspectives.

**Key words:** Mental health, Occupational therapy, Systematic review

## Abstract

### Comparison of Sensory Processing in Children With Pervasive Developmental Disorder Depending on Autistic Tendency and Severity of Autism

Kim, Mi-Hye\*, M.A., O.T., Lee, Keun-Ho\*\*, M.S., O.T.

\*Dept. of Occupational Therapy, Seoul National Hospital

\*\*Dept. of Occupational Therapy, Samsung Medical Center

**Objective :** The purpose of this study was to investigate the differences in sensory processing of children with

pervasive developmental disorders depending on their autistic tendency and severity.

**Methods :** The subjects included 139 children with pervasive developmental disorders.

The instruments used

for this study were the Childhood Autism Rating Scale(CARS) and Short Sensory Profile(SSP). A Pearson

correlation analysis was used to investigate the correlation between the CARS and SSP.

A t-test was

performed to analyze the differences in the presence of autism and its severity.

**Results :** There were differences in the sensory processing depending on the autistic tendency and its severity.

In addition, there were negative correlations between autism score and sensory processing. In conclusion, a

high severity of autism showed greater difficulties in sensory processing.

**Conclusion :** This study indicated that an accurate assessment is needed in sensory processing of children with

pervasive developmental disorders.

**Key words :** Childhood Autism Rating Scale, Pervasive developmental disorder, Sensory processing, Short

Sensory Profile

## Abstract

Change in EMG Activities of Selected Muscles Based on the Position of the Keyboard During Computer Work for Individuals With a Spinal Cord Injury

Park, Soo-Hyun\*, Ph.D, O.T., Jung, Min-Ye\*\*, Ph.D., O.T.,

Yoo, Eun-Young\*\*, Ph.D., O.T., Park, Soo-Hyun\*\*, Ph.D., Lee, Jin\*\*, Ph.D.,

Koh, Sang-Baek\*\*\*\*, Ph.D., M.D., Roh, Jung-Suk\*\*\*\*\*, Ph.D., P.T.

\*Dept. of Occupational Therapy, Yeojoo Institute Technology

\*\*Dept. of Occupational Therapy, Yonsei University

\*\*\*Dept. of Control & Instrumentation Engineering, Kangwon National University

\*\*\*\*Dept. of Preventive Medicine, Yonsei University

\*\*\*\*\*Dept. of Physical Therapy, Hanseo University

**Objective:** This study intended to provide research materials for the proper positioning of the keyboard for computer work by individuals with a thoracic SCI based on the experimental data on the EMG activity of eight muscles related to computer work.

**Methods:** The subjects used were 9 and 11 patients with a complete high (T2-T8) or low (T9-T12) thoracic SCI (T2-T8) of A or B as categorized by the American Spinal Injury Association (ASIA), respectively, along with 9 able-bodied individuals. All participants were given the task of typing on the middle line of the keyboard at a speed of 4 characters per second at a rhythm from a metronome for 2 minutes at 2 keyboard heights (elbow flexion of more than 100°, elbow flexion of 70°). During the experiment, the EMG activity (%RVC) of the muscles of the neck and shoulder, such as the cervical erector spinae, upper trapezius, anterior deltoid, posterior deltoid, and middle trapezius, the wrist extension muscle group and the minor muscles maintaining the body core of the individuals with an SCI, such as the latissimus dorsi and pectoralis major, were measured using a surface EMG.

**Results:** The EMG activity of the patients with high and low thoracic SCI was low for the keyboard positioning

at an elbow flexion of 70°, which is similar for the anterior deltoid, latissimus dorsi, and wrist extensor muscle group of the able-bodied individuals. Also, for the low thoracic SCI patients, the positions where the elbow flexion angle increased to more than 100° showed high EMG activities of the cervical erector spinae and latissimus dorsi, which was different from the other groups.

**Conclusion:** It was identified that an elbow flexion of 70° is an appropriate work posture for individuals with an SCI. It is thought that further study with a longer research time span and more test subjects should be conducted to explore an

appropriate VDT environment for individuals with an SCI under comprehensive computer work conditions.

Key words: Computer, Electromyography, Ergonomics, Spinal cord injury, Surface keyboard

## Abstract

### A Delphi Study on the Modification of a Practice Subject for the National Board Certification of Occupational Therapists (NBCOT)

Lee, Jea-Shin\*, Ph.D., O.T., Jeon, Byoung-Jin\*, Ph.D., O.T.,

Kim, Soo-Kyoung\*, Ph.D., O.T., Chang, Ki-Yeon\*\*, Ph.D., O.T.,

Jung, Min-Ye\*\*\*, Ph.D., O.T., Yoo, Eun-Young\*\*\*, Ph.D., O.T.,

Ham, Bo-Hyoun\*\*\*\*, M.P.H., O.T., Paik, Young-Rim\*\*\*\*\*, M.P.H., O.T.

\*Dept. of Occupational Therapy, Konyang University

\*\*Dept. of Occupational Therapy, Woosong University

\*\*\*Dept. of Occupational Therapy, Yonsei University

\*\*\*\*Ewha Children's Developmental Center

\*\*\*\*\*Dept. of Occupational Therapy, The Graduate School of Public Health and Welfare, Konyang University

**Objective:** The purpose of this study was to suggest the basis to develop appropriate questions for a clinical worksite in the future by suggesting how to improve the practical test of the NBCOT in line with a timely environment and changes regarding the disorder criteria.

**Methods:** Thirty occupational therapists with experience in setting the problems used in the NBCOT and specialized professors were selected to derive a method of improvement for the on-going practical test with the availability for a sustainable Delphi test. A Delphi study was performed 3 times and the 1st survey was made of non-structured questionnaires, while the 2nd and 3rd surveys were performed using a Likert scale.

**Results:** The results of the study show that the problems were proper for improving the test as they were analyzed as being 4.06 on average in the 5-point scale used in the 3rd final Delphi survey. When they were looked into as a pattern, the average score of  $\alpha$  to diversify (for example, a practical test problem set depending on the patient group) each field,  $\gamma$  was 4.33, and the ratio of content appropriateness was analyzed highly at .82. Secondly, the average for  $\alpha$  to develop an appropriate photo and picture data,  $\gamma$  was 4.38, and the content validity ratio was .45, which was recognized as feasible. Finally, regarding the practice test method, the average of  $\alpha$  the survey on the range and content for the practical test shall be preceded by the therapists,  $\gamma$  was 4.67, which was the highest score out of the entire questionnaire. The ratio of content validity was evaluated at high score of .73. Finally, the convergence of the Delphi analysis was .52 on average, and the level of implication was .75, which is regarded as a high score.

**Conclusion:** NBCOT will be improved from its writing style to the style used to verify

the mediation during therapeutic work and the evaluation method. In addition, a proper range and contents will be confirmed with the occupational therapist, and case and motion picture oriented questionnaires will be developed.

Key words: National board for certification in occupational therapy, Occupational therapy, Practical examination