

Spring 2010 Research

TITLE: Visual Morse: A New Training Paradigm for Morse Code

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CHAIR: Denis Anson MS, OTR/L

READER: Lalit J Shah Ed. D., OTR/L

Abstract:

Visual Morse is a new approach to display and training Morse code. Forty subjects with ages ranging from 18 to 46 (mean age = 23.8) were recruited for this quasi-experimental study. The 33 female and 7 male subjects were assigned to learn either traditional two-switch Morse, or Morse using a new visual paradigm as a means of computer access. The results of this study do not support the use of Visual Morse for training two-switch Morse code. This finding agrees with the assertions of Koch and Farnsworth that codes for each letter should be learned as units or "tunes." The visual display of a cue sheet allows the learner to perceive the entire code at once, facilitating this "unit" learning. Visual Morse, on the other hand, breaks code into elements, and does not support "unit" learning of the code for letters. While Visual Morse does not appear viable for individuals who are able to execute sequences of motor actions, it may be useful for individuals with motor control issues that preclude timed patterns, and must rely on three-switch Morse or row-column scanning.

TITLE: A Grounded Theory of Self Rediscovery in Men with Spinal Cord Injuries

RESEARCHERS: Leonard Casimir, OTS, Heidi English, OTS, Sarah Ford, OTS, Christina Saxton, OTS, and Angela Seyler, OTS

RESEARCH CHAIR: Grace Fisher, Ed.D., OTR/L

READER: Verna Eschenfelder, PhD, OTR/L

Abstract

OBJECTIVE: The purpose of this study was to investigate how the lives of men with spinal cord injuries (SCIs) changed as a result of their injuries. This research examined the men's participation in occupations and the impact of their SCI on occupational performance, activity participation, and life goals.

METHOD: Semi-structured interviews were conducted with five adult males who had SCI's. An open coding method was used to determine common categories of information. This was followed with axial coding to establish connections between categories, which lead to the development of a grounded theory.

RESULTS: Participants in this study were five Caucasian males between the ages of 37-49 years old with quadriplegic SCI. Narrative vignettes were compiled from interviews completed with each participant. Each vignette details the participant's life history and how they experienced life and faced challenges that arose.

CONCLUSION: After the axial and coding process was completed a grounded theory emerged through analysis of the results, which is titled "*A Grounded Theory of Self-Rediscovery in Men with Spinal Cord Injuries.*" This theory identified the path that participants took from the time of injury to the present and how they used self-rediscovery to regain control over their lives.

TITLE: The Unrecognized Power of Cooking Groups: Are We Helping People More Than We Know?

RESEARCHERS: Robyn Healey, OTS, Lindsay Miller, OTS, Jennifer Walter, OTS, Richelle Wesley, OTS

CHAIR: Grace Fisher, Ed.D, OTR/L

READER: Christine Hischmann, MS, OTR/L, FAOTA

Abstract:

OBJECTIVE: This study sought to identify and describe the perceptions of occupational therapy cooking groups in adult patients who were in a state psychiatric hospital.

METHOD: Twenty-one participants (12 female and 9 male), all of whom were diagnosed with severe and persistent mental illness, participated in the study. All were ongoing participants in low and high functioning cooking groups at the hospital. The researchers recorded their own observations during the four cooking group sessions and group interviews were conducted at the end of each cooking group.

RESULTS: Data analysis of participant responses was performed collectively by all of the researchers. This consisted of content analysis for each sentence completion statement and each interview question across all participants. Five central themes emerged concerning the perspectives of the participants. Themes found consisted of positive feelings and memories, learning new skills, active participation, interpersonal relations, and teamwork.

CONCLUSION: The patients' perspectives of cooking groups were positive and demonstrated perceived benefits of occupational therapy within the state psychiatric hospital setting. There was also an interesting observation on the part of the researchers that the patients' stated benefits of the cooking groups related to specific treatment goals in that environment.

TITLE: Impact of Proprioceptive and Vestibular Input on Reducing Non-Purposeful Behaviors in Children with an Autism Diagnosis

RESEARCHERS: Megan Ettinger, OTS, Alyssa Lefano, OTS, Tara Mullen, OTS, Tanya Sellevold, OTS

CHAIR: Lalit J. Shah Ed. D., OTR/L

READER: Ellen McLaughlin Ed. D., OTR/L

Abstract:

This study examines the short-term impact of sensory integration based interventions, specifically vestibular and proprioceptive input, on displayed non-purposeful behaviors of children diagnosed with autism spectrum disorder (ASD). Participants included two children, ages three and four, with a diagnosis of ASD and no other co-morbid diagnoses. Observations were performed in either a home or school environment, with data collected in the form of video recordings. Participants were videotaped for 1-1 ½ hours over two consecutive days, for a total of 2 ½ hours of recorded data for each participant. Data analysis indicated that the sensory input impacted the occurrence of different behaviors for each child, with reductions in non-purposeful behaviors for each of the two children. Findings suggest that proprioceptive and vestibular input may be used to reduce non-purposeful behaviors of children with ASD, improving potential to engage in purposeful activities.

Keywords: autism spectrum disorder, sensory integration, vestibular and proprioceptive input, occupational therapy

TITLE: Decreasing Anxiety Through a Children's Yoga Class

RESEARCHERS: Julia Glenn, OTS, Nicole Moore, OTS, Maura Musial, OTS, Lynsi Stahl, OTS, Katie Feusner, OTS

CHAIR: Ellen McLaughlin Ed. D., OTR/L

READER: Lalit J. Shah Ed. D., OTR/L

Abstract:

OBJECTIVE: There is limited research on the effectiveness of yoga programs for decreasing anxiety in children with emotional disturbance. This descriptive research study explored the experiences of children in an specialized school setting diagnosed with social and emotional disturbances before, during, and after the implementation of an eight week yoga program.

METHOD : Via visual analog scales, interviews of students and teachers, and collection of postural evaluations, data were collected on 24 participants.

RESULTS: T-tests revealed there were significant differences in the ability to assume and maintain postures from week 2 to week 7 of the study. Study participants and teachers reported that students were experiencing a myriad of anxiety and emotional issues prior to yoga; however, they indicated after completing group yoga treatment sessions, they demonstrated decreased anxiety levels and increased feelings of relaxation and concentration levels in the classroom.

CONCLUSIONS: This study illuminates the importance of occupational therapeutic intervention through a developed

yoga program, the innovativeness of a yoga program to decrease anxiety and increase concentration and relaxation, and the possible potential of yoga as a therapeutic means for children with anxiety.

TITLE: Preparing Occupational Therapy Students to Promote Safety of Community Dwelling Elders

RESEARCHERS: Mujib Amin, OTS, Stacey Bartlett, OTS, Kimberly Serafin, OTR/L, Kimberly Stahl, OTS

CHAIR: Verna Eschenfelder, PhD, OTR/L

READER: Grace Fisher Ed.D., OTR/L

Abstract:

This purposive mixed method research design is aimed at assessing the effectiveness of safety practices taught by Master's Degree Occupational Therapy Curriculums at one hundred and fifty occupational therapy colleges and universities (located in the United States). The research project addresses how educational teachings related to the needs of the home based community dwelling elders. It included an e-mailed survey and seven telephone interviews. The emailed survey research was gathered using SurveyMonkey.com (an internet research tool).

During the telephone interviews, professors and directors of occupational therapy programs were asked a series of questions about how the schools were preparing to meet the demanding needs of a changing geriatric demographic population.

Documented throughout our literature review were key words of medication, medication management, cognition, environmental modifications, environmental barriers, and falls. These were the current safety concerns of community dwelling elderly.

This research will help Occupational Therapy schools to critically analyze how their curriculum can be altered to assist in preparing entry level occupational therapists to meet the safety needs of home based community dwelling elders.

TITLE: The Look-At/Look-Through Interface: A Conceptual Test

RESEARCHERS: Denis Anson, MS, OTR/L, Lauren Arcury, OTS, Kerry Chomas, OTS, Beth Giangrieco, OTS, Amy Kozick, OTS, and Rachel Thompson, OTS

CHAIR: Denis Anson MS, OTR/L

READER: Dawn Evans MS, OTR/L

Abstract:

On-screen keyboards have always competed for space with the space used to perform tasks. Making the keyboard larger makes the individual keys easier to see and click, but decreases the available space for the task being performed. Making the keyboard smaller increases the available workspace, but makes typing more difficult. This project tested the efficacy of a layered approach, using a fill-sized keyboard and full-sized workspace. The results indicated a significant improvement in productivity, suggesting further work on this concept.

TITLE: Mothers of Children with Autism: A Contextual Model of Coping and Acceptance

RESEARCHERS: LeeAnn Bower, COTA/L, OTS, Daniel Holbrook, PTA, OTS, Rae Beth Mattioli, COTA/L, OTS, Denise Worman, COTA/L, OTS, Candace Mack, OTR/L

FACULTY RESEARCH CHAIR: Grace S. Fisher, Ed.D., OTR/L

READER: Dr. Verna Eschenfelder, PhD, OTR/L

Abstract:

The unique experiences of mothers of children with autism spectrum disorder (ASD) were investigated using a phenomenological approach. Through a purposeful and snowball sampling technique, eight mothers of children with ASD were recruited for participation in the study. Each mother was asked to partake in a semi structured interview. All interviews were transcribed and analyzed using grounded theory building techniques. As the open coding process began, emergent categories were used as a guide to determine the course of follow-up questioning. Open and axial

coding allowed the research data to become an expression of the mothers' experiences, and resulted in the evolution of a grounded theory. The resultant theory, The Contextual Model of Coping and Acceptance of Mothers of Children with ASD (CMCA), presents the direct experiences reported by the mothers, and explores the multiple contexts in which mothering a child with ASD occur. This model also presents how the use of adaptive strategies and support systems helps mothers move towards acceptance and promotes family function.