Master of Occupational Therapy Program

Fourteenth Annual
Master of Occupational Therapy Student Research Poster Presentations

Tuesday, November 12, 2013
Rogalski Center Ballroom

Presentations
2:00 – 4:00 pm

Poster Viewing
4:00 – 6:00 pm
A Multifactorial Assistive Technology Approach to Fall Prevention Education with Older Adults

Megan Gent, Brett Gray, Kami Holst, Heidi Richter, Todd Riefenberg, Sarah Vogel, Brittany Weisinger, and Lynn Kilburg

Abstract

Falls are a significant concern among the older adult population (CDC, 2012). Current research suggests that multi-factorial programs are best to address this issue (Chase, Mann, Wasek, and Arbensman, 2012; Corman, 2009; Costello and Edelstein, 2008; Hakim, Newton, Segal, and DuCette, 2003; & Schepens, Panzer, and Goldberg, 2011). The effectiveness of a multi-factorial fall prevention program involving education, assistive technology (AT) demonstration, and AT implementation in older adults’ natural environments was investigated in this study. Participants were 65 years and older residing in various assisted living facilities in a Midwest metropolitan city. Eighteen participants completed an education session. Nine participants from the initial group completed a second session focused on an AT demonstration. Five participants from the second group received a third component consisting of an individualized home visit. The instruments used in this study included: Modified Falls Efficacy Scale (MFES), AT Pre-Test Questionnaire and AT Post-Test Questionnaire. The AT Questionnaires were created by the researchers to assess knowledge and confidence related to fall prevention. All participants were given a MFES and AT Pre-Test questionnaire at the beginning of the study and a MFES and AT Post-Test after each phase of the study. No statistical significance was found to support a change in knowledge or confidence levels as a result of a multi-factorial AT approach to fall prevention. However, numeric results imply that a multi-factorial approach to fall prevention is beneficial, as the group that participated in all three phases did report increased knowledge and confidence compared to those who only received education and/or education and demonstration. Despite this, more research is needed to determine the most effective way to implement fall prevention education.

References


Journal of Rehabilitation Research and Development, 45(8), 1135-1152. doi:10.1682/JRRD.2007.10.0169


Creating a Sustainable Wellness Program with At-risk Youth

Aaron A. Benson, Kristy M. Demmer, Elizabeth J. Kadavy, April J. Peterson, Katherine L. Smeltzer, Casey E. Sullivan, and Erin A. Phillips

Abstract
The purpose of this study was to develop a sustainable wellness program with at-risk youth through co-participation. A six week wellness program was developed with input from youth and key stakeholders. All youth attending a facility for at-risk youth were considered for participation in the study. Data were collected from participants at time 1 and 2 (pre and post intervention) using the Perceived Wellness Survey (PWS) and an open ended questionnaire. Data from four participants who completed pre and post testing measures were analyzed. Results from the PWS showed an increase in physical wellness; this was not found to be significant at the p = 0.05 level. Overall composite wellness also exhibited positive change; again, significance was not found. Responses from the open ended questionnaire were analyzed and categorized into themes. Themes pre intervention focused on wellness being primarily physical in nature. Themes post intervention indicated a slight change in word choice and tone suggesting that participants were starting to view wellness more holistically. This study shows the need for further education of wellness concepts. Future studies employing community based strategies with at-risk youth must establish a strong and trusted relationship prior to implementation of an intervention.

References
Incarcerated Adolescents’ Views on Effective Transitional Services

Kristin A. Brouch, Rachael K. Evans, Kelsey R. Nolan, & Christine K. Urish

Abstract
Incarcerated adolescents are a population of concern to the profession of occupational therapy because they are often deprived of positive, meaningful occupations while incarcerated. A qualitative study of what incarcerated adolescents feel is necessary to successfully transition back into the community and avoid a return to the criminal justice system was completed to inform the development of transitional services in a Midwestern juvenile detention facility. Three adolescents between the ages of fifteen and seventeen volunteered and were interviewed two times each. Interviews were audio recorded, transcribed and analyzed using the constant comparative method. Participant checks were conducted to confirm that the adolescent's ideas were represented accurately by the researchers. Cross-case analysis enabled researchers to identify themes relating to the challenges experienced by incarcerated adolescents. Themes included: the presence of negative influences, difficulty with or lack of interest in formal education, lack of knowledge about employment options or lack of relevant skills, difficulty developing a positive attitude, lack of participation in positive leisure activities, and difficulty maintaining self-control. These findings suggest that incarcerated adolescents could benefit greatly from occupational therapy interventions that address education, work, leisure, and social participation.

References
Mirror Therapy: An Intervention for Stroke Survivors with Upper Extremity Hemiparesis

Amanda N. Eversmeyer, Kathryn L. Hanske, Laura N. Hanson, Helen A. Magers, Ann E. Noonan, Cassie A. Weber, Theresa L. Schlabach and Jon C. Turnquist

Abstract
The purpose of this research study was to investigate the effectiveness of mirror therapy as an intervention for stroke survivors with upper extremity hemiparesis. The objectives of the study included increasing functional use of the affected upper extremity and understanding the perceptions of post-CVA survivors. A total of nine participants with varying types of stroke were included in this study ranging from 2 months to 12 years post-stroke. Inclusion criteria consisted of the Mini-Mental State Examination (MMSE) and the Brain Injury Visual Assessment Battery for Adults (BiVABA) visual screen. Pre and post intervention testing was administered using the Jebsen Hand Test of Function, Motor Activity Log (MAL), Stroke Impact Scale (SIS), Semmes-Weinstein Monofilament, and Rolyan Hot/Cold Discrimination tests. Participants received the mirror therapy protocol consisting of range of motion exercises and functional activities 3 times per week, 30 minutes each session for a total of 4 weeks. Data from the Motor Activity Log and Stoke Impact Scale were analyzed using the Statistical Package for Social Sciences (SPSS). No significant results were found; however, all participants reported positive gains in function and perception. Even though more research is needed, this study suggests that mirror therapy may be an effective occupational therapy intervention for post-CVA survivors with upper extremity hemiparesis.

References
Secondary Data Analysis of CIMT Protocol to Determine Efficacy: A Pilot Study

Kayla Flannery, Laura Graff, Erin Reisner, Mindy Schlueter & Phyllis Wenthe

Abstract
The purpose of this study was to investigate outcomes from a modified Constraint-Induced Movement Therapy (CIMT) protocol implemented at a Midwestern outpatient clinic for children diagnosed with hemiplegia. Data was collected from 13 charts of individuals between the ages of 13 months to 8.5 years of age who received CIMT and met the inclusion criteria. Program protocol required that a bi-valved cast be worn 7 days a week 4-5 hours a day for 4 weeks. Study participants were assessed prior to CIMT intervention and again at 1 month and 5-6 months post intervention. Outcome data was collected via Active & Passive Range of Motion (AROM & PROM), the Quality of Upper Extremity Skills Test (QUEST), the Peabody Development Motor Scales (PDMS-II) and the Pediatric Evaluation of Disability Inventory (PEDI). Data analysis revealed improvements in the affected upper extremity following CIMT intervention with significant gains noted in AROM for supination and wrist extension. The QUEST displayed significant improvements for 10 of the 12 participants in all subtests except weight bearing. While positive gains were noted in areas of upper extremity (UE) motor control and function, these findings should be viewed with caution due to the small sample size. Pediatric CIMT shows promise; however, longitudinal studies with a larger sample size are needed. Additionally, researchers may want to limit the number of instruments utilized in future study.
The Evidence for the Effectiveness of Alternative Interventions (Music, Simulated Presence) on Decreasing Agitation for Individuals with Dementia

Brian Breen, Kacie Cassidy, Lauren Clarke, Cody Lafler, Jennifer Noonan & Jill Schmidt

Abstract
Caregivers have identified agitated behaviors as one of the most challenging barriers in caring for those with dementia which may put older adults at risk of harm to themselves, other residents, and caregivers. Agitated behaviors have traditionally been managed with the use of pharmacological or physical restraints. These treatment interventions have been known to cause adverse side effects, which has led to an increasing demand for more research supporting alternative approaches for the care of older adults with dementia. A systematic review of the literature was conducted based on a developed focus question. A comprehensive search of the literature was conducted regarding the effectiveness of alternative therapies (music therapy and simulated presence) in reducing agitation behaviors in individuals with dementia. The results indicate that the use of music and/or simulated presence is an effective alternative method. Both alternative methods have been shown to be beneficial in decreasing agitated behaviors while simultaneously improving individual’s quality of life; however, its implication of use within various health care practices is not well researched. Occupational therapy’s involvement with this population is to enhance overall quality of life and independence in activities of daily living. These areas are often negatively impacted with this diagnosis, which can hinder one’s ability to function independently in all facets of life. Overall, there is a lack of consistent research regarding the use of alternative therapies in managing agitated behaviors in dementia care. Future research is needed to determine the effectiveness of utilizing these alternative therapies within the realm of occupational therapy.

References