2015 Scholarly Projects

Dr. LaVonne Fox

Megan Mordecai & Jacquelin Jones

Implications of Huntington’s Disease on Daily Living: An Educational Tool and Guide for Occupational Therapists Treating Huntington’s Disease.

Huntington’s disease (HD) is a neurodegenerative disease that can cause stress on the individual as well as their family members and caregivers. Due to the rareness of Huntington’s disease (HD), it is common that professionals are often at a loss when treating patients who have it. Dawson et al. (2004) discussed the need for individualized and client-centered care for those individuals diagnosed with HD, as well as providing practical supports for those diagnosed and their families. Furthermore, a major challenge to assessment and intervention is the complexity of the symptoms present with HD. Etchgary (2011) found in her study that caregivers and those diagnosed with HD discovered many primary care providers lacked the foundational knowledge of HD and often were not able to find a correct diagnosis for the symptoms presented in the initial phase, thus contributing to the problem of lack of supportive care for this client population.

Implications of Huntington’s Disease on Daily Living: An Educational Tool and Guide for Occupational Therapists Treating Individuals with Huntington’s Disease, was developed to address the continuing need for supportive care in healthcare for those affected by Huntington’s disease. A literature review was conducted to identify evidence based and best practices. The guide is designed to address various occupational components affected by Huntington’s disease thus increasing quality of care, and decreasing lack of supportive care for individuals affected by Huntington’s disease and their caregivers.

Dr. Anne Haskins

Shalyn Hample & Maria Sundsted

Advisor: Dr. Haskins

Occupational Therapy’s Role: A Foundational Occupational Therapy Educational Resource for Ghana

Problem: In the developing country of Ghana, there is a population of over 1 million individuals with disabilities (Timney, 2007). Ninety-five percent of these people have no rehabilitation service access (Timney, 2007). Due to the presence of social, political, and economic factors including negative societal stigma towards people with disabilities, political corruption and poverty, Ghana’s population is vulnerable for occupational deprivation. Occupational deprivation places this population at risk for preventing engagement in or forceful discontinuation of meaningful daily occupations such as farming, education, and employment opportunities (Whiteford, 2000; Yeoman, 1998).

The U.S. has helped offer some assistance to Ghana, focusing mainly on emergencies, such as prevention of infectious diseases (Timney, 2007). This assistance neglects to include those who are disabled. Although rehabilitation faculty from other countries have visited Ghana to provide intermittent assistance, the immense rehabilitation needs of Ghana would be best met by the retention of rehabilitation personnel within the country. In response to this need, the School of Allied Health Sciences at the University of Ghana was established in 2012; however, the program lacks permanent occupational therapy faculty to teach incoming students (Crouch, 2001). In 2013, there were only two qualified occupational therapists reported in the country (Beguin, 2013). Ghana’s developing occupational therapy program could be initially sustained with external assistance to develop educational coursework to train occupational therapists that will be retained in Ghana (Crouch, 2001; Timney, 2007). Therefore, the purpose of this project is to create an education resource to provide to the University of Ghana to further the development and sustainment of the Occupational Therapy Program.

Methodology: A comprehensive literature review was conducted on topics related to occupational engagement, people with
disabilities, and the development of an occupational therapy education program in Ghana, Africa. Research was done on the culture of this country, prevalent disabilities, adult learning style, the healthcare system, and steps that have already been taken in Ghana, Africa to develop rehabilitation services for individuals with disabilities. In addition, data was obtained from a series of needs assessments to provide a personal perspective for content of the product and targeted audience. Lastly, a personal communication interview was conducted with qualified individuals who had first-hand experience with this culture and occupational therapy to gain insight into their professional opinion of foreseen needs to address. The Person-Environment-Occupation Model has guided the data gathering process and development of the product. This information has supported the need for implementation of occupational therapy educational materials to further progress this country's developing occupational therapy rehabilitation program and meet the unique needs of this population.

**Conclusions:** An educational resource was developed to provide the foundational materials needed for occupational therapy students to learn about the role of this profession as well as the basic assessment and intervention strategies that meet Ghana's population needs. This resource contains foundational skills that teachers and students will use to prepare occupational therapy students for meeting the unmet needs of people living with disabilities in Ghana. It is anticipated that this foundational occupational therapy educational resource will enable this profession to become better known and understood, in addition to aiding in the development of a sustainable, established, and permanent occupational therapy program in Ghana.

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<tr>
<th>Blake Sweeny &amp; Will Creel</th>
<th>Cross-generational Occupation-based Interventions for Upper Extremity Injuries.</th>
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<td>Advisor: Dr. Haskins</td>
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**Dr. Debra Hanson**

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<th>Jaclyn Swangstue &amp; Whitney Josephson</th>
<th>Occupation-Based Leisure Interventions for Individuals with Spinal Cord Injury</th>
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**Purpose:** The purpose of this scholarly project was to provide occupational therapists with a practical guide for implementing occupation-based leisure interventions for individuals with spinal cord injury (SCI). In recent years, the occupational therapy (OT) profession has seen a shift from a biomechanically driven paradigm back to the occupation-centered practice from which OT is rooted. Though the definition and mission of OT involves the use of occupation-centered interventions, this vision is not always evident within current treatment plans for people with a SCI diagnosis. Research has indicated that leisure participation is essential for this population due to the physical benefits and more importantly for the emotional and social benefits. This manual was created to guide OTs to address leisure engagement with individuals with SCI, ultimately resulting in higher quality of life.

**Method:** An extensive literature review was completed to support the need for this product and identify areas of focus. Topics of research included: 1) etiology and incidence of SCI, 2) functional ability at each SCI level, 3) role of OT, 4) problems with current OT intervention, 5) importance of occupation-based leisure interventions, and 6) utilization of the Ecological Model of Human Performance to facilitate leisure engagement with individuals with SCI.

**Summary:** In order to address the needs identified through the literature review, a manual was created to assist OTs in enabling client-centered, occupation-based interventions for individuals with SCI. To provide highest level of care for today’s clients, OTs need to be equipped with the correct resources for creating individualized, meaningful intervention plans with client-driven goals. This manual will assist OTs in extending the range of leisure tasks available to individuals with SCI, resulting in successful engagement and increased quality of life.
**Dr. Janet Jedlicka**

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<th>Marlee Wheelhouse &amp; Hanna Eickenbrock</th>
<th>Therapy/service Dog into an OT Educational Program</th>
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<td><strong>The purpose of the scholarly project is to incorporate a therapy/service dog within the occupational therapy department at the University of North Dakota (UND). The therapy/service dog will be utilized as a support system for student’s and faculty’s health and well-being and as an educational tool for enhancing student learning. The authors completed the process of implementation by progressing through the hierarchical process of UND gatekeepers. Through the development of a legality and safety protocol, loan agreement, and purpose proposal, the authors obtained official approval to implement a therapy/service dog in the UND Occupational Therapy program.</strong></td>
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**Alexie Traiser & Katie Huot**  
**Advisor: Dr. Jedlicka**

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<th>A Protocol for Animal Assisted Therapy in a Midwestern Hospital</th>
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| **Problem:** Animals can provide occupational therapists and other healthcare professionals with a unique tool to utilize in various aspects of the therapy process in order to match the client’s physical, psychological, physiological, and/or social needs. It has been documented throughout the literature that walking, feeding, brushing, petting, and bathing an animal can improve overall well-being, socialization, and activities of daily living (Barak & Mavashev, 2001). Benefits of incorporating animals into therapy have been documented throughout the literature, however, there are very limited facilities in the Midwest that implement animal-assisted therapy (AAT) and existing protocols have been written for recreational animal visits, or animal-assisted activities (AAA), rather than goal directed therapy (Winkle & Jackson, 2012).  

**Methods:** An extensive literature review was conducted on the benefits and contraindications of AAT, the role of the interprofessional team using AAT, AAT policies and procedures, and implementation of an AAT program. Staff members at a Midwestern hospital interested in incorporating AAT into therapy also provided feedback and suggestions for the creation of this protocol.  

**Conclusions:** The purpose of this scholarly project was to provide occupational therapists and other health care professionals with a protocol for implementation and use of an AAT program at a neurological rehabilitation facility. |

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**Dr. Cindy Janssen**

| Sarah Faehnrich & Kalee McCann  
**Advisor: Janssen** | An After-school Wellness Program for Children in Low Socioeconomic Neighborhoods |
|------------------------|--------------------------------------------------------------------------------|
| **The purpose of this scholarly project was to develop an interdisciplinary after-school program for fifth graders living in low socioeconomic neighborhoods. This program entitled Let’s Move, Cook, and Learn With Friends! is intended to reduce obesity through promoting healthy habits in children by increasing physical activity, consumption of healthy food, and positive interactions with peers. Childhood obesity is a worldwide epidemic that can result in lifelong health problems if not treated proactively (Vizcaino et al., 2008). Therefore, the goal of this scholarly project is to raise their knowledge about obesity and decrease the risk factors for childhood obesity.  

A literature review was conducted by the authors of this scholarly project to examine the problem of childhood obesity and obtain research about other after-school programs regarding what has worked and what has not worked at reducing childhood obesity. Researchers supported the need for this interdisciplinary after school program for children living in low socioeconomic neighborhoods. These children are at a higher risk of obesity than their peers. The researchers also provided evidence of effective health promotion strategies that was used to design Let’s Move, Cook, and Learn With Friends!.  

An after-school program manual was developed through multiple theoretical frameworks including** |

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pedagogy, self-efficacy theory, person-environment-occupation [PEO] model and Cole’s Seven Steps (Bastable & Dart, 2011; Cole, 2012; Law, Cooper, Strong, Stewart, Rigby, and Letts, 1996). This product has a strong focus on increasing children's self-efficacy through their engagement in meaningful occupations. This manual includes an introduction section with background information for the program coordinator, three separate booklets for each session area addressed (i.e. physical activity, nutrition, and well-being) and a parent handout for implementing healthy habits into the home environment. *Let’s Move, Cook, and Learn with Friends!* program is intended to run 30-weeks, with three 90-minute sessions each week.

This after-school program will provide professionals and children with knowledge about physical activity, healthy eating and implementing positive interactions with peers at school. It is unique to existing after-school program as it is interdisciplinary and focuses on children from low socioeconomic neighborhoods, while coordinated by an occupational therapist, who is trained in group process and occupation-based activities.

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<th>Professor Breann Lamborn</th>
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<td>Cynthia Nelson &amp; Laurel Prusak</td>
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Intergenerational programs are known to bring older adults together with children in order to promote social inclusion, and increased self-confidence and motivation for both age groups (Hatton-Yeo, 2010). Programs of this nature have proven to influence greater academic outcomes and school performance, decreased criminal behavior and greater personal adaptability in younger populations (Hatton-Yeo, 2010). Research with community dwelling seniors who participated in intergenerational programs indicated that older adults showed a decrease in depressive symptomology after participating in weekly programming (Kamei et al., 2011). While the outcomes of these studies clearly identify the benefits of intergenerational programming on both youth and the elderly, the healthcare professions identified as facilitating these studies are largely nursing, social work, or student in health education. There has been little evidence based research connecting intergenerational programs to occupational therapy facilitation.

Through an extensive literature review, a product was developed that outlines a school based intergenerational program, facilitated by an occupational therapist, that brings together school aged children and community based seniors.

The primary objective is to increase reading, writing, and communication skills of elementary school children diagnosed with specific learning disabilities through the facilitation of a relationship with community based seniors. A secondary objective is to decrease social isolation and depressive symptomology for senior participants while providing an opportunity to benefit the community through support of youth academic improvement. Program activities will highlight collaboration through shared experiences to decrease the generational gap (Wright et al., 2012) through mentorship, relationship building, and occupation-based learning activities. This scholarly project will provide support for the development and implementation of an occupational therapist facilitated intergenerational program. Further development of such beneficial programming is warranted.
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### Professor Sue Morrison

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<th>Anne Lee &amp; Kasie Parker</th>
<th>Facilitating Play in Siblings where one is diagnosed with ASD: Guide</th>
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Quality relationships are important and needed in human life. The sibling relationship is an important bond to maintain because it is a lifelong relationship (Sage & Jegatheesan, 2010). Many individuals diagnosed with Autism Spectrum Disorder (ASD) have difficulty forming and maintaining relationships (Travis & Sigman, 1998). An effective way for children with ASD to develop appropriate skills needed for social interaction can be through interactions with a normal functioning sibling during play. Emphasizing play as an occupation can improve the relationship and increase interaction between siblings when one is diagnosed with ASD. The purpose of this scholarly project was to examine sibling relationships, determine the utilization of the occupation of play as an avenue to enhancing sibling relationship, and look at the collaboration between the occupational therapist and the families. The scholarly project resulted in a guide for occupational therapists to give to parents to facilitate communication and collaboration with families in regards to play as an avenue of relationship development amongst siblings.

### Dr. Sarah Nielsen

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<th>Bailey Stotts &amp; Madeline Aandal</th>
<th>Addressing Vehicle Safety for Children with Additional Behavioral and Emotional Needs</th>
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**Purpose:** More than 148,000 children were injured in motor vehicle crashes in 2011 (Center for Disease Control and Prevention, 2014). Currently, while it is understood that transporting children with special needs likely to affect behaviors (SNLAB) provide safety challenges (Huang et al., 2009; Yonkman, Lawler, Talty, O’Neil, & Bull, 2013), there is little information regarding how to evaluate and intervene for this significant aspect of daily life. The purpose of this project was to develop an occupational therapy protocol for evaluation and intervention for car safety to be used by occupational therapists working with children who have SNLAB.

**Methodology:** An extensive literature review was conducted in order to better understand the targeted population and supports and barriers to providing transportation safety services to this population. Utilizing the Person Environment Occupation Model (PEO) (Law et al., 1996), a systematic analysis of occupational performance issues for riding safely in a car was conducted and was the basis for creating the evaluation and intervention tools to be used by occupational therapists.

**Results:** The Traveling Safely Evaluation and Intervention Protocol was developed to address the issue of vehicle transportation safety for children with SNLAB. The protocol includes an assessment for evaluation and resources to be utilized by the occupational therapist and caregivers when planning for car safety.

**Conclusion:** This protocol development is only a first step in addressing car safety for children with SNLAB. It is recommended this protocol be piloted and further refined. In addition, there is need for development of resources to assist in problem solving solutions for car safety for children.

### Dr. Jan Stube

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<th>Alexis Nims &amp; Kayli Schumacher</th>
<th>The Role of Occupational Therapy in Primary Care for Clients with Rheumatoid Arthritis.</th>
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Chronic disease management is an ever-growing need within the current U.S. population. One of those chronic diseases, arthritis, is the present leading cause for disability among adults (Helmick et al., 2008). This incidence is expected to increase by 40% over the next 25 years. Within this overall population are those diagnosed with rheumatoid arthritis (RA). RA alone is anticipated to affect over 1.2 million Americans each year (Helmick et al., 2008). RA is a debilitating condition that results in the loss of function impacting various occupations of daily life. The needs of this population are great, yet are often left unmet. Occupational therapists are well equipped to meet the clinical needs and support this population.
Clients diagnosed with RA are seeking help largely through the use of primary care physician visits (NCHS Data Brief, 2010). The need for successful chronic disease self-management has led to the expansion of primary care services to include occupational therapists. Various skills of occupational therapists (such as comprehensive evaluations and the implementation of client-centered, holistic care) equip this profession to step in, educate, and treat clients with a diagnosis of RA within a primary care setting.

This occupational therapy (OT) clinical guide was developed to address the needs of the RA population; bridge communication with primary care physicians to highlight the value of occupational therapy; and to create a partnership with physicians in treatment of clients with chronic diseases such as RA. Additionally, this guide will direct occupational therapists working with clients with RA towards the most current evidence-based, effective evaluations and interventions.

**Problem:** In 2014, the National Council on Aging reported that almost 92% of older adults were affected by a chronic condition and 77% of these individuals had at least two chronic conditions. In addition, chronic disease is responsible for 75% of United States health care spending. Ironically, only 1% of health care dollars are spent on public education and other efforts to reduce the incidence of chronic disease.

**Purpose:** The purpose of this scholarly project was to provide a framework for occupational therapists to deliver effective treatment for individuals with chronic disease. Due to the longevity of chronic disease, encouraging clients to self-manage their condition is important.

**Methodology:** An extensive literature review was conducted on the impact of chronic disease on individuals and effective strategies to self-manage chronic disease. The literature review was completed using reliable databases and journal articles to ensure relevant information was obtained. During the literature review, it was evident there is limited research discussing the role of occupational therapy in relation to chronic disease. Upon completion of the literature review, a manual was produced to outline the role of occupational therapy in chronic disease management. The Occupational Adaptation (OA) model was used as a theoretical base to guide the development of this manual. The sections are organized as follows:

- Part I contains information related to assessing individuals readiness for change and strategies to advance them through the change process.
- Part II is consistent with the person component of the OA model and contains three sections discussing cognitive, psychosocial, and sensorimotor components and how to address each of these areas. This section contains information for therapists as well as handouts for clients.
- Part III contains post-intervention evaluations for both the client and the therapist to assess their satisfaction with the therapeutic process.

**Conclusion:** The purpose of this scholarly project and resulting manual was to provide a guide identifying the role of occupational therapy in chronic disease self-management. The product was written for both the occupational therapist and the client to provide an intervention framework for chronic disease self-management. The goal of this manual is to develop relative mastery within the client and allow them to participate in occupations important to them. In addition, the manual aims to change a client’s internal adaptive response to facilitate more adaptive responses to novel situations in the future, thus helping them manage their chronic disease more effectively.
the occupation of social participation.

Methods: An extensive literature review of evidence-based journal articles addressed the definition of depressive disorders in both adults and children and adolescents, the impact symptoms have on occupations and daily functioning, current treatment approaches, and the role of occupational therapy.

Results: The product of this scholarly project is an occupational therapy intervention guide to promote social participation for children and adolescents diagnosed with or experiencing depressive disorders. Concepts from the Ecology of Human Performance model provide the foundation for this intervention guide. Reproducible handouts addressing social participation with peers, family, and within the community are provided.

Conclusion: Social participation is a key area of occupation that is affected by symptoms of depressive disorders. The intervention guide created for occupational therapists promotes child and adolescent social participation amongst peers and family, as well as within the community.

Ilse Coleman & Jamie Kauffman

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<th>Gaming: Occupation-Based NBCOT Exam Preparation</th>
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Purpose: The purpose of this scholarly project was to create a novel, unique, and effective preparation tool for the National Board for Certification in Occupational Therapy (NBCOT) certification examination.

Methods: A literature review of 40 evidence-based journal articles addressed adult learning principles; guidelines for facilitating learning; types of, advantages, and disadvantages of using gaming in higher education; and preparation methods for high-stakes examinations. Information reviewed also included current preparation tools; exam blueprint; and domain, task, and knowledge statements of the NBCOT certification examination.

Results: An Open Book: NBCOT Exam Prep Game is a board game that can be used as a supplementary preparation tool for candidates who are preparing for the NBCOT certification examination. The game is designed to use group discussion, simulated exercise, problem-solving activities, case methods, and peer-helping activities to stimulate learning and provide the opportunity to apply knowledge required for passing the certification exam. Adult learning principles and concepts from the Occupational Adaptation model provide the foundation for the project design. The design of the game board and questions were developed with the blueprint of the NBCOT examination and the validated domain, task, and knowledge statements as foundational information.

Conclusion: Evidence in the literature supports the use of games in higher education to reduce anxiety, increase motivation to study, allow test takers to learn perspectives from one another, and increase confidence for taking an exam. The product of this scholarly project presents a social learning tool in the form of a board game that incorporates adult learning principles, concepts of the Occupational Adaptation model, and the NBCOT blueprint and domain, task, and knowledge statements reflecting current practice in occupational therapy. The game is designed to supplement current preparation tools.