

# 4<sup>th</sup> Annual Waldron College Interprofessional Symposium & Expo

April 11, 2017

**RADFORD** UNIVERSITY

Waldron College of Health and Human Services

Department of Communication Sciences and Disorders | Department of Occupational Therapy

Department of Physical Therapy | School of Nursing | School of Social Work

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## Letter from the Dean

On behalf of the Waldron College of Health and Human Services (WCHHS), I want to welcome you to the 4th Annual WCHHS Interprofessional Symposium & Expo. The objective of this event is to develop relationships among the faculty and students in all of the WCHHS programs in the areas of research, scholarship, and service. We are excited to showcase the exceptional research and scholarly work of our faculty and students as well as the service opportunities in which they engage every day. It is our hope that today's event will continue to showcase and promote interprofessional scholarship and service in our college and across the university.

I would like to thank the following individuals for their support:

- Radford University President Brian O. Hemphill, for joining us today and providing the keynote address;
- The members of the WCHHS Interprofessional Planning Committee and Peer Review Committee;
- Dr. Corey Cassidy, WCHHS Associate Dean, for her passion and energy in promoting and supporting interprofessional collaboration and practice among our disciplines.

Once again, on behalf of the WCHHS, I appreciate your attendance today. I hope you find today's Symposium & Expo to be a rewarding and productive experience.

Best wishes,

KENNETH M. COX

Kenneth M. Cox, Au.D., M.P.H., CCC-A  
Professor and Dean  
Waldron College of Health and Human Services  
Radford University

## Letter from the Associate Dean

Dear colleagues and visitors,

It is my pleasure to welcome you to the Waldron College of Health and Human Services 4th Annual Interprofessional Symposium & Expo. We value this program as an opportunity to present and learn about new and unfolding scholarship, to share innovative programs that have been implemented in our college and across campus, and to acknowledge and thank community and clinical partners who work with our students throughout the year. Our faculty members have a distinguished track record of disseminating their scholarship and service within venues that involve professional associations with colleagues across the country and within international arenas. Our partnerships with agencies across and beyond the state of Virginia ensure that our students experience quality real-world experiences, collaborate across disciplines, and in general, strengthen the identity of Waldron College as a vibrant academic community. Today's program provides us with a venue through which to share and celebrate our college's successful endeavors and partnerships with our colleagues here on campus and across the Commonwealth.

The beauty of today's event is that it is truly an intra- and inter-professional presentation of projects and programs, allowing faculty and students to showcase their work for and with colleagues who may otherwise not have an opportunity to share. The themes span the full programmatic spectrum of the college and across the university. The subjects also span the globe, as many of the presentations and programs highlight work in which Waldron College's students and faculty have engaged in scholarship and service in a variety of international settings. Finally, today's activities serve as a demonstration of the natural collaboration between faculty, students, and community partnerships and how effectively faculty integrate scholarship and service into their vital commitment to teaching at RU.

As a participant – in the role of either presenter or attendee - I am sure you will learn about new scholarly opportunities and service endeavors in which you will want to participate, and enjoy a day in which you will make rewarding new connections for future endeavors at RU. I hope you take advantage of the food, the fun, and the collegiality that will be taking place throughout the day!

Sincerely,

*Corey H. Cassidy*

Corey H. Cassidy, Ph.D, CCC-SLP  
Associate Professor and Associate Dean  
Waldron College of Health and Human Services  
Radford University

# Podium Presentations

[\*] indicates session has earned Peer Review designation

## A Case Report:

### Undiagnosed Rotator Cuff Weakness in an Adolescent Baseball Pitcher

Brent Harper  
Steve Ryan  
Cameron Holshouser

*Department of Physical Therapy*  
*Department of Physical Therapy*  
*Department of Physical Therapy*

#### Abstract:

**Background & Purpose:** Biodex isokinetic strength testing identifies pre-injury RC weakness and is useful as an adjunct to medical exercise therapy (MET) for restoring normal glenohumeral biomechanics. **Case Description:** An 18-year-old high school baseball pitcher presented with right shoulder pain preventing throwing. Two years prior, evaluation by an orthopaedic surgeon including routine physical exam, radiography, and magnetic resonance imaging revealed no tissue pathology. The surgeon said nothing was structurally wrong and referred him to physical therapy. Patient failed prior physical therapy, remaining unable to pitch. He was told he needed to work harder to return to pitching. Despite this, he was unable to pitch competitively for two years. Patient presented to the clinic reporting minimal antero-lateral shoulder pain with pitching, resolving with rest, and elbow symptoms with numbness-and-tingling in the ulnar aspect of the forearm and hand. His pitching coach reported worsening pitching mechanics and early breaking of 90 degrees at his elbow, pushing of the ball, and increased elbow extension at release. He was unable to overcome these mechanical issues with his current program. **Objective findings:** non-painful, weak ER (MMT 4/5) and weak non-painful empty can special test. Bilateral assessment demonstrated significant deficits at 180, 300, and 450 deg/sec indicating rotator cuff weakness. **Outcomes:** After 17 visits of MET based exercise progression and isokinetic varied speed training, all isokinetic speeds gained significant strength. Peak torque (ft-lb) ER at 180 deg/sec increased 48.3%, 58.3% at 300 deg/sec, and 56.4% at 450 deg/sec. The athlete returned to competitive pitching, pain free and with normal pitching mechanics. **Discussion/Conclusion:** This case demonstrates that routine medical examination and interventions may be inadequate to provide best practice to throwing athletes. The combination of MET concepts with isokinetic training may optimally normalize rotator cuff neuromuscular control and eliminate neuromuscular inhibition.

## **An Interprofessional Education Model Addressing Chronic Disease Management within a Rural Appalachian Community**

Victoria H. Bierman  
Sheila R. Krajnik  
Cecile Dietrich

*School of Nursing*  
*School of Nursing*  
*School of Social Work*

### **Abstract:**

People who live in rural Appalachia in southwest Virginia are known for core values of independence, individualism, and egalitarianism (Keefe, 2005), they also are known to have poor health behaviors, poor health status, and healthcare disparities (Griffith, Lovett, Pyle, & Miller, 2011). The National Institutes of Health (2015) states cultural competency is necessary to reduce health disparities and improve health of individuals and communities. Additionally, the Institute of Medicine (2001) advocates for interprofessional education (IPE) and healthcare delivery to improve health outcomes.

The purpose of this project was to increase: 1) IPE team delivery of primary care within a rural Appalachian community; 2) cultural competence within an interprofessional student team in the delivery of healthcare; and 3) patient self-management strategies for chronic disease and behavioral health.

The research design was quasi-experimental using pretest-posttest measurements of students and clients. In addition to data collected for the purpose of the quasi-experiment, descriptive data were collected on number of students and participants involved in each health promotion activity, the number of disciplines involved and the types of chronic illnesses treated. Students undertook self-paced instruction of four learning modules on IPE followed by asynchronous discussion with peers and faculty using Desire 2 Learn. Clients from the Free Clinic of Pulaski County (FCP) and participants of a nearby congregate meal program attended faculty/student led health education and promotion instruction on topics such as blood pressure, sleep for health, chronic pain management, and mental health self-care. Medication reconciliation education was provided to select clients at FCP. Students were assessed on attitudes towards interprofessional teamwork and cultural competency. Clients were assessed as able on health knowledge and health self-management confidence.

Students and faculty from four health and human services disciplines participated in the project. Each of six health education programs was attended by 15-20 participants. Maximum flexibility and responsiveness to learner preferences was demanded due to cultural and behavioral characteristics of the targeted group of participants, e.g. participants from the meal site preferred brief, interactive health education encounters over group didactic instruction. Students' attitudes toward learning and working within IP teams increased along with cultural sensitivity and responsiveness. An unanticipated finding was the reluctance of many attendees at the meal site and FCP to learn health self-management strategies. Student gains in cultural competence and ability to work

interprofessionally were achieved through this unique care delivery model. Numerous interacting factors affect the readiness and ability of many free clinic clients and low-income community members to benefit from group-tailored instruction in health self-management. Individually tailored information delivered 1:1 appeared to be more effective.

**Can metrics applied to children's narrative writing samples show growth over time?**

Elizabeth Lanter

*Department of Communication Sciences and Disorders*

Jordan Compton

*Department of Communication Sciences and Disorders*

Nicole Flood

*Department of Communication Sciences and Disorders*

Stephanie Leirer

*Department of Communication Sciences and Disorders***Abstract:**

The purpose of this presentation is to explore whether or not various metrics that have been applied to the writing samples of children collected over time are sensitive to growth. Three production dependent metrics, words spelled correct (WSC), correct letter sequences (CLS), and correct word sequences (CWS) will be differentially applied to the writing samples of 4 children who were enrolled in a 10-week instructional program focused on writing achievement. These metrics are the focus of the investigation because they have been identified in the research literature as having sufficient reliability and criterion validity for use with developing writers (McMaster, Xiaoqing, & Pestursdottir, 2009). These metrics will be obtained to the children's writing samples obtained at the onset of the program (Time 1), to those obtained at the close of the program (Time 2). Significant score differences would suggest that these metrics were sensitive to illustrate growth over time.

## **Cerebral Palsy: Implications on Exercise**

Lauren Boush

*Department of Sports Medicine*

### **Abstract:**

The scholarly question I will be investigating for my Honors Capstone is: How Does Cerebral Palsy Affect Health Related Activity? In the past, studies have been done to show that individuals with Cerebral Palsy do in fact fatigue more quickly when participating in health related activities because their muscles expend a greater amount of energy when compared to an individual without Cerebral Palsy. With my research, I hope to discover what kinds of activity these individuals can do without being completely exhausted and what contributes to this fast paced exhaustion.

I am actively doing research on the following categories: Description of Cerebral Palsy, Pathology, Treatment of Cerebral Palsy, Effect of Cerebral Palsy on Activity & Exercise, & Effect of Exercise for Persons with Cerebral Palsy. After doing detailed research on each category, I will compile all of my findings into a literature review paper, giving an overview of Cerebral Palsy and all of the components that lead to this fast paced muscle fatigue during exercise. I plan on presenting my research at the NCUR conference this April and will hopefully have the opportunity to present at the 4th Annual Waldron College Interprofessional Symposium & Expo.

## Clinical Practice Guidelines to Reduce CLABSI in Acute Care Setting-Disinfect Caps

Anne Maria Saunier

*School of Nursing*

### **Abstract:**

Central line associated bloodstream infection (CLABSI) remains one of the most common and deadly hospital-acquired infections in the United States. Creating a culture of safety is an important part of healthcare-associated infection improvement efforts (Weaver et al 2014). In an effort to improve safety and reduce CLABSI, this project will propose new clinical practice guidelines added to hospital policy and procedures. This proposition is based on evidence related to disinfectant caps (alcohol impregnated caps) that are placed consistently on central and peripherally inserted central venous access devices while not in use, and in between uses to prevent infection. This practice would not replace standard protocol of sterile dressing changing and scrubbing hubs between uses but would be in addition to these standard protocols. The data supporting the addition of the caps in daily use, promises greater reduction of infection than what is achieved with use of standard protocol alone.

Developing clinical practice guidelines for a local acute care hospital regarding use of these disinfectant caps added to standard protocol will be the outcome for this DNP project with data showing that this change will aid in reduction of CLABSI. Implications for this practice will show reduction in morbidity, mortality and cost, by showing that evidence based research and practice is critical for optimum patient outcomes, specifically in all acute care settings. This project may be utilized by doctors, mid-level providers, and nursing staff who care for patients with central venous access devices.

### Keywords:

Clinical practice guidelines, clinical practice protocols, standard protocols, CLABSI= central line acquired blood stream infection; AAIP's= alcohol-impregnated port protectors; CVL's= central venous lines; CRBS= catheter related blood stream infection; AB Cap= antimicrobial catheter cap; CVC= central venous catheters; vascular device, infection and prevention, care and maintenance of central venous catheters, nursing.

## **\*Current Recommendations for Managing Menopausal Symptoms in Perimenopausal-aged Women**

Shannon Dechant

*School of Nursing*

### **Abstract:**

The Women's Health Initiative (WHI) directed by the National Institutes of Health (NIH) drastically changed the treatment of menopause over the course of a decade. While aimed at discovering best practices and treatments for women, it may have caused providers and patients to question and fear treatments that may improve quality of life as well as provide health benefits. In the years following the Women's Health Initiative, use of hormone replacement therapy dropped from 22% to just 4% (Hodis & Mack, 2014). The fear was increased risks of breast cancer and cardiovascular events. Menopause symptoms may be severe for many women and affect nearly every aspect of their lives. Hormone replacement therapy is the most effective treatment for vasomotor, mood, vaginal, and urinary tract symptoms of menopause. The follow up and more recent studies to the Women's Health Initiative have discovered that the risks of breast cancer and cardiovascular disease may not be as significant as once thought; that there may be a protective factor to hormone use. The risks or lack of risks may be more related to age and proximity to menopause. While there are some relative contraindications to hormone replacement therapy, symptomatic women should be given the opportunity to discuss hormone use with the provider and perhaps even have a trial of treatment. Each woman should be evaluated individually based on symptoms and past/family medical history. Treatment should be based on symptoms and providers should prescribe the lowest effective dose for the shortest period of time needed. This project reviews twelve articles and/or studies regarding HRT. Many of the studies reference the original WHI study as a comparison. The review includes two comparative studies, three double-blind studies, one ancillary sub-study, one data review study and four literature reviews. Current recommendations from UpToDate were reviewed as well. After reviewing the most recent recommendations, providers and patients should discuss risks versus benefits of hormone replacement therapy. There are a few relative contraindications as well as methods that can decrease the risks of use.

## Development of an Evidence-Based Diagnostic Decision Tree for Polycystic Ovary Syndrome

Maria McDermott

*School of Nursing*

### **Abstract:**

**Background and significance:** Polycystic ovary syndrome (PCOS) is the most common endocrine disorder of women of reproductive age worldwide. It is a complex, incompletely understood condition; however, it is known that PCOS is a significant risk factor for multiple metabolic, cardiovascular, and obstetric conditions. Due to the elevated risks, recommendations have been made to detect PCOS and intervene early; however, diagnosis of PCOS is complicated by conflicting definitions and confusing guidelines.

**Purpose:** The purpose of the project is to develop a decision tree model for diagnosis of PCOS in adult females based on the current evidence. The audience is primary care practitioners. **Methods:** A comprehensive search was conducted of electronic databases using the key words polycystic ovary syndrome, diagnosis, and screening. After conducting the literature review, a decision tree diagram was created based upon a synthesis of the current evidence regarding diagnosis of PCOS. **Conclusion:** To diagnose PCOS, at least two of three conditions must be present: hyperandrogenism, chronic anovulation, and/or polycystic ovarian morphology. Chronic oligo/anovulation may be determined by the history. The preferred biochemical assessment of hyperandrogenism is free testosterone levels using liquid chromatography combined with mass spectrometry assays or radioimmunoassay with purification. If neither is available, then the calculated free androgen index is an alternative. Polycystic ovarian morphology is best determined by the presence of at least 25 small follicles on transvaginal ultrasound with the current technology (frequency of at least 8 MHz and automatic follicle numbering software). If this ultrasound technology is not available, then alternatives are ovarian volume of >10ml, or anti-Mullerian hormone 4.5 ng/ml. Differential diagnoses must be ruled out before the diagnosis of PCOS can be made. **Clinical implications:** The diagnostic decision tree provides a guide for practitioners to understand the diagnostic process from initial evaluation, eliminating other possible diagnoses, to establishing the PCOS phenotype.

## **\*Effectiveness of 300 Unit Heparin versus 500 Unit dosages in the Patency of Implanted Ports**

Michele Keesling  
Marsha Myers  
Anthony Ramsey  
Stuart Goldstein

*Blue Ridge Cancer Care  
Lewis Gale Hospital Pulaski  
Radford University  
New River Surgical Associates*

### **Abstract:**

The purpose of this research was to compare the patency of implanted venous access devices (VAD) with varying doses of Heparin. The research question was: “Do patients receiving 300 Units of Heparin for VAD maintenance experience more VAD occlusions than those who receive 500 Units of maintenance Heparin?” An experimental two group posttest design was utilized. The subjects were randomly assigned to an intervention group or to a control group. Participants were invited to participate in this study if they have a single lumen (6.6 French) Port-a-Cath (VAD), followed maintenance protocols, and did not have a history of thrombosis and/or current warfarin use. The total sample size was 79 participants with 75 ports accessed in the 300 Unit group and 112 ports accessed in the 500 Unit group for a total of 187 actual sticks. Subjects were assigned to a group using an online randomization generator. Participants in the control group received 500 Units of Heparin in a 5 milliliter dose. Participants in the experimental group received 300 Units of Heparin to equal 3 milliliters and 2 milliliters of Normal Saline to ensure there is consistency to the amount of milliliters that was placed in the implanted ports.

Participants with a Heparin allergy and all vulnerable populations were excluded from this study. Nurses that assisted with this study completed annual competencies in caring for the implanted vascular access devices per the Oncology Nursing Society guidelines. The data revealed that the average day between sticks in the 300U group was 29.25 days and the 500U group was 31.06. There was no significant difference in proportions of patients with occlusions. Overall, these findings suggest that there were no observable differences across the doses.

## Extra-nasal MRSA Colonization Detection in the ICU: Implications for the Advanced Practice Nurse

Mary Spence

*School of Nursing*

### **Abstract:**

Methicillin-resistant *Staphylococcus aureus* (MRSA) colonization detection testing is used in medical settings to identify patient carriers with active surveillance culture (ASC), and implement precautions to decrease its spread. The control of the transmission and acquisition of MRSA in the ICU setting is an ongoing area of study nationally and worldwide. Correctly identifying patients in the ICU setting with MRSA colonization is an essential part of reducing the transmission and subsequent infection that is recommended by current practice guidelines, national recommendations, and evidence to reduce transmission and subsequent infection (AHRQ, 2013a; Aureden, et al., 2010; Calfee et al., 2014; Coia et al., 2006; CDC, 2011; Harris, 2016; Marchaim & Kaye, 2015; Siegel et al., 2007; Wertheim et al., 2012; Wiener et al., 2016). Detection of MRSA colonization is analyzed through literature search of studies performed on testing of multiple extra-nasal anatomical sites that are known for potential MRSA colonization in the Intensive Care Unit (ICU) setting. The review of literature, guidelines, and studies in this DNP project propose that the addition of extra-nasal site testing for MRSA colonization in the ICU setting is valid intervention to be utilized in future research of MRSA transmission and control. The recommendations on future research on extra-nasal MRSA colonization in the ICU will be discussed and disseminated through a continuing education module.

**Keywords:** Methicillin-resistant *Staphylococcus aureus* (MRSA), colonization, anatomical site, extra-nasal, intensive care unit (ICU), screening and detection.

**\*Evidence-based Practice in Palliative Care Education**

Gwendolyn Spangler

*School of Nursing***Abstract:**

The aim of this review is to examine the evidence regarding the most effective modality for palliative care education. The findings will then be utilized to create a palliative care educational tool for use at Carilion Roanoke Memorial Hospital. Methods: A comprehensive search of the literature was performed utilizing CINAHL, Radford University SuperSearch, Cochrane Library, Ovid and EBSCOhost. Reference lists from selected studies were reviewed. Facility resources such as the palliative care team and education department were utilized to create an online book teaching the basics of palliative care. This book will be published through Cornerstone, Carilion Clinic's online education resource. Findings: Literature assessing the effects of palliative care and palliative care education is plentiful and positive. Increased usage of palliative interventions decreases patient symptoms and hospital length of stay while increasing communication, interdisciplinary care and patient satisfaction. Outcomes of one modality over another are not as well studied. While any education improves care, there is no clear benefit to online versus traditional education. Evidence does show that utilizing multiple educational platforms provides the best outcomes. Implications for practice: Provide palliative care in conjunction with aggressive care or as a stand-alone modality improves patient satisfaction and decreases health care costs. Nurses utilize palliative care interventions in every day care already. This education gives an evidence base for those interventions while increasing health care workers knowledge of palliative care practices.

**\*Health Literacy: A Growing Provider Need**

Jennifer Dale

*School of Nursing***Abstract:**

**Purpose:** The purpose of this project is to (a) review the affecting factors of and associated outcomes with the health literacy, (b) review NP understanding of health literacy assessment tools and what to do with the information learned from them, and (c) provide information on how to tailor patient education based on individual health literacy assessment results.

**Background/Significance:** Health literacy is a person's ability to obtain, communicate, process and understand information influencing health care decisions. Low levels of health literacy have been associated with medication errors, reduced use of preventive services, difficulty in managing chronic conditions, higher mortality, and unnecessary emergency room visits. Provider knowledge of patient health literacy levels helps tailor education for each patient to help ensure understanding and compliance.

**Findings:** Many studies report health literacy to be a more precise determining factor for patient understanding and compliance than any other. Increasing health literacy in individuals positively impacts self-efficacy and positive health outcomes. This integrative review, supporting incorporation of the health literacy assessment followed by tailored consultation and education while using teach-back methods, as the best strategy to increase health literacy, promote self-care, and improve better patient outcomes.

**Clinical Implications:** Nurse practitioners, in the role of primary care provider, may incorporate health literacy assessment and provide a tailored education regarding the individual needs of the patient, based on patient's health literacy level. In return, along with increased health literacy, the patient then assumes responsibility for their own health thus decreasing health disparities and increasing positive health outcomes.

## **Integrating Mental Health Services within Primary Care: Financial Sustainability**

Holly Sanford

*School Of Nursing*

### **Abstract:**

Integrated healthcare is defined as the systematic coordination of general and behavioral healthcare; the main goal being to provide mental health, substance abuse, and primary care services in one consolidated location. There are many benefits that this healthcare option offers. First, it is more efficient and costs less overall because all services are provided in one location during one appointment. It also proves beneficial due to many medical conditions having behaviorally modifiable risk factors. Integrated health clinics can therefore address both issues at once, leading to a better overall health status for patients. Studies have also shown that patients who receive mental health services in a primary care setting show a greater adherence to treatment and experience improved health outcomes. Since lack of funding is one of the main obstacles for integrated healthcare, the purpose of this project is to determine if integrating mental health services into a primary healthcare setting would be a financially sustainable option. The proposal includes a budget for an integrated model that offers primary care services by nurse practitioners and mental health evaluation and treatment by therapists at the same location. The budget is spanned over the course of five years. By year four of the proposed budget, the clinic earns a profit and becomes more sustainable as the client numbers increase and more providers were available. This project also discussed other obstacles of integrated health, including stigma patients may feel by seeking mental health services, and worries about confidentiality while receiving care. Health literacy concerning the subject of integrated health care is also lacking, as many consumers are unaware that this type of service is available as an option. Finally, there is inadequate interdisciplinary collaboration within the healthcare community; each discipline having a different knowledge base, separate language and billing codes, as well as different funding available for their services. This interdisciplinary gap can be addressed by models such as SBIRT (Screening, Brief Intervention, and Referral to Treatment). Use of this model is a good start to improve interdisciplinary knowledge and communication. The overall goal of this project is to increase the availability of integrated health clinics by raising awareness about their benefits and empowering all disciplines within healthcare to work together to make this healthcare option successful.

## **Interdisciplinary Service-Learning in Belize**

Sarah Smidl  
Rebecca Epperly  
Beckler, Melissa  
Allen, Taylor  
Swanson, Caroline  
Paulette, Lauren

*Department of Occupational Therapy*  
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### **Abstract:**

Occupational therapy and speech language pathology students participated in an interdisciplinary service-learning trip to the rural district of Toledo, Belize in January 2017. Sixteen graduate students, three alumni, and two faculty members collaborated to create and pilot a developmental screening tool for children ages 2-8, with the intent of providing a tool for Belizean educators and health workers to identify children with disabilities. Students and faculty will reflect on the experience of collaboration and interdisciplinary teamwork pre-trip and while in-country, the challenges and insights of working with children and families of another culture, and the personal and professional development that took place. Future directions, goals, and the sustainable mission of this project will be highlighted.

## **IPE Boot Camp: Where Do We Start?**

Christina Keller  
Katrina Watson

*School of Nursing/Clinical Simulation Center*  
*School of Nursing/Clinical Simulation Center*

### **Abstract:**

#### Background:

The occupational therapy (OT) faculty and the nursing faculty at Radford University's Clinical Simulation Center partnered to conduct a simulation learning experience coined as a boot camp for first year OT students. The objective was to reduce the stress level of students entering the hospital environment for the first time. Research has shown that simulation provides an opportunity to bridge the theory-practice gap in a non-threatening environment while increasing student confidence and reducing student anxiety.

#### Method:

During the activity, OT faculty and nursing faculty collaborated together in facilitating the learning of the OT students. Station number one involved the opportunity to practice blood pressure measurements while incorporating peer learning strategies. Station number two involved the nursing faculty member assuming the role of a patient who suffered multiple injuries status post motor vehicle crash who requires an OT consult. Station number three utilized a high fidelity simulator. The nursing faculty set up this patient's hospital room with both appropriate findings and safety concerns.

#### Results:

Student feedback was overwhelmingly positive. Specifically, OT students were introduced to the registered nurse's scope of practice and how the RN and OT are able to collaborate during patient care. The students stated having the nursing faculty available for questions was useful prior to entering the hospital environment. The OT faculty and clinical simulation faculty also observed that students were engaged in all 3 domains of learning during the entire experience. At the end of the experience, students verbalized that they felt more prepared for the acute care environment and thought the simulation learning experience was valuable.

## **\*Is Acupuncture as Effective as Conventional Medicine in Managing Migraine: A Systematic Reviews**

Molly Cheng

*School of Nursing*

### **Abstract:**

Migraine is a complex and multifactorial brain disorder affecting 15.8% of people over 18 years and over, approximately 21.9% of women and 8.1% of men in the United States (Pleis et al. 2010). It costs billions of dollars annually in direct and indirect healthcare and school and work absenteeism. Until this date, there have been no medications that were designed with the specific purpose to cure migraine attack, which prompts a search for alternative interventions such as acupuncture that could be valuable in treating migraine headache.

This integrative review paper assesses the effectiveness between acupuncture and conventional drug in treating migraine. Acupuncture is an alternative to mainstream pharmacological management in migraine. With many recent large-scale studies using advanced technologies, there is evidence to support acupuncture as an effective migraine management without side effects. Ten reviewed papers were varied considerably in study design and quality. The findings indicate that there are statistically significant increases in the percentage of responders and decreases in rescue medication suggesting acupuncture is an effective treatment for migraines without the adverse events of standard pharmacological management.

The evidence suggest and recommend that acupuncture should be considered as a first line treatment for chronic migraine, particularly in patients who cannot tolerate side effects from the medications. Migraine management recommendation should be updated. Acupuncture continuing education activity will empower the health care providers in managing patients with migraine.

## Light Therapy for Treating Depression in the Institutionalized Older Adult

Krystal M. Coleman

*School of Nursing*

### **Abstract:**

As the prevalence and per capita spending for depression among institutionalized older adults continue to rise, there is a need for safe, efficient and low cost treatment modalities. Current research supports nonpharmacological adjunctive therapies as beneficial for the treatment of depression. Furthermore, research in polypharmacy points to the increased risk of polypharmacy in institutionalized older adults, thus supporting the need to incorporate nonpharmacological modalities such as light therapy. However, there is little evidence to suggest that prescribing practices have been influenced by research supporting light therapy as an adjunctive treatment option. While light therapy has revealed significant antidepressant effects in institutionalized older adults, there is indirect evidence, through the relatively low utilization of light therapy, that there is a lack of knowledge among healthcare providers in long-term settings regarding the benefit of light therapy as an adjunctive treatment option. In completing an extensive literature review on depression, it is evident that there is a need for improvements in provider knowledge regarding the safety of current treatment modalities and the benefits of light therapy. The purpose of this project is to: justify the need for an educational intervention related to light therapy as an effective adjunctive process and to outline the benefits and harms of light therapy compared to conventional treatment options for depression among institutionalized older adults.

## Peer-to-peer Learning: A Strategy for IPE

Christina D. Keller  
Katrina L. Watson

*School of Nursing/Clinical Simulation Center*  
*School of Nursing/Clinical Simulation Center*

### Abstract:

#### Background:

The nursing faculty at Radford University's Clinical Simulation Center utilized reciprocal peer-to-peer learning combined with simulation to encourage students to work collaboratively and actively contribute to their own learning. The objective was to create a more engaged and interactive learning environment in which students assume both teacher and student roles. In a patient-centered care model, the healthcare provider must possess proficiency in patient teaching. Practice opportunities to teach are important in the healthcare students' program of study.

#### Method:

Nursing students rotated through 3 separate learning stations. Two of the stations incorporated direct patient care with a high fidelity simulator and instructor as a facilitator at the bedside. Upon completion of the first two rotations, the entire student group jointly participated in the last learning experience which incorporated peer-to-peer learning. After a brief presentation, students were provided with the equipment and reference resources to prepare a brief 5 minute in-service to the opposite student group. The faculty assumed true facilitator roles and ensured all students participated and verified the accuracy of the content taught.

#### Reflections and Future Implications:

Peer to peer learning instills confidence in both the student learner and in the faculty's perception of the student learners' abilities. Clinical experiences and personal backgrounds vary and students are able to share those differences with one another. Students are more apt to share these differences in a small group versus a large classroom. Student response to the peer-to-peer learning activity was overwhelmingly positive. This teaching modality could be incorporated into the classroom, clinical conferences, simulation, and IPE. When university resources are limited and staff demands are increasing, peer-to-peer learning is a teaching modality that is not resource intensive.

## **Provider Education to Improve HPV Vaccination Compliance**

Diane Campbell

*School of Nursing*

### **Abstract:**

Human papillomavirus (HPV) is a sexually transmitted disease with the potential to cause many types of cancers in both males and females. A vaccination series has been developed to decrease the incidence of cancer, but patient compliance rates with initiation and completion of the series has been very low. There are many factors to consider when finding solutions to the low vaccination completion rates for HPV, such as provider beliefs and comfort level as well as patients' or parents' knowledge level or attitude.

**\*Redefining Undergraduate Nursing with Evolving Assessment and Systematic Evaluation (RUN with EASE)**

Dr. Megan Hebdon  
Dr. Sarah Gilbert  
Dr. Marjorie Young

*School of Nursing*  
*School of Nursing*  
*School of Nursing*

**Abstract:****Introduction:**

Program evaluation and continuous quality improvement are requirements for nursing program accreditation as well as the ethical responsibility of nursing education programs in promoting positive student outcomes. In order to do this, stakeholder perspectives regarding program outcomes are key. Therefore the purpose of this study was to examine perceptions of the RUSON BSN program across the curriculum from the perspectives of alumni, faculty, and alumni employers.

**Methods:**

This study used an electronic mixed methods survey to elicit participant perspectives regarding program outcomes and the nursing role. Purposive sampling of RUSON BSN alumni, faculty, and employers of RUSON BSN alumni was utilized. Participant numbers for each group included 66 RUSON BSN alumni, 13 RUSON BSN faculty, and 74 employers of RUSON BSN alumni. The data was analyzed using descriptive statistics. Open-ended response questions were analyzed using thematic analysis.

**Results:**

Ninety percent of employers reported satisfaction with RUSON graduates along with 95% reporting graduates were assets to their organization. Concerning faculty satisfaction with the education provided to RUSON students, 93% were satisfied. Qualitative analysis revealed that faculty and alumni describe nursing holistically as a blend of art and science, while employers describe the role of a nurse as a professional instrument to improve quality and safety within an organization. The highest scoring program outcomes were critical thinking, use of evidence-based resources, and caring attitudes and relationships from the perspectives of alumni, employers, and faculty, respectively. The lowest scoring program outcomes from these participants included information technology (alumni), continuing education activities (employers), and formal/informal leadership (faculty).

**Discussion:**

Through evaluation of the RUSON BSN program, program strengths and weaknesses were identified. This will allow for program quality improvement and further research to benefit alumni, employers of alumni, and faculty by developing a stronger nursing workforce with a clear sense of the nursing role.

**\*SCI (Scholar-Citizen Initiatives) Nursing Pathway Model: A Model to Incorporate SCI into Curriculum**

Eunyoung Lee  
Megan Hebdon  
Linda Ely

*School of Nursing*  
*School of Nursing*  
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**Abstract:**

**Backgrounds/Purpose:** The Scholar Citizen Initiative (SCI) aims to foster the culture of engaged learning and scholarship through leadership roles, community service, real-world experiences, and reflective activities, in order to connect student learning with civic roles and responsibilities. The SCI Nursing Pathway was developed and implemented in Fall 2016 as an initiative to assist nursing students and faculty to incorporate this new teaching-learning paradigm into an already tight curriculum with the ultimate goal of helping students pursue university-wide Scholar-Citizen recognition.

**Methods/ Program Activities:** Three nursing faculty members formed the SCI nursing advisor group and reviewed the requirements for the SCI courses as well as fellow designation. The current undergraduate nursing program curriculum was reviewed in terms of strengths, challenges, and course content, in concordance with SCI learning outcomes. The potential SCI courses and activities meeting the SCI designation requirements were identified from Level I through Level 4, which were reflected in SCI nursing pathway model.

**Results:** Starting Fall 2016, 11 SCI nursing students enrolled in this program and are pursuing the SC scholar or fellow. Three nursing courses were designated as SCI courses (2 existing courses + 1 new course) and currently, several co-curricular activities related to health are provided and available to students within nursing and Waldron College of Health and Human Services. Two nursing students are expected to graduate as SCI fellows in Spring 2017.

**Discussion/ Conclusions:** The SCI Nursing pathway model was successful in promoting the SCI teaching-learning paradigm within the nursing program. The first phase was successful by establishing two designated courses and 1 co-curricular activity available each semester in Fall 2016. This will support students in pursuing the university-wide SCI scholar and fellow honorary status. In Spring 2017, phase two will be implemented focusing on establishing a mentoring system between senior and junior nursing students.

## The Basics of Sports Concussions

Sabrina M. Johnson

*Department of Physical Therapy*

### **Abstract:**

Traumatic Brain Injury (TBI) is a complex acquired brain injury that results from either direct contact from another individual, a fall, or is the result of a sport related accident. Sporting accidents, also known as sports concussions have been brought into the public eye in recent years, as a result of National Football League (NFL) retired athletes being diagnosed with TBI related encephalopathy. According to the Consensus Statement on concussion by the International Conference on Concussion, November 2012 summit, concussion is defined as a brain injury with a complex pathophysiological process affecting the brain, induced by biomechanical forces (McCroory et al., 2013, p. 250).

School aged children, ages 9-11, are exposed to different types of athletics that lead to traumatic brain injury. In a study of 809 pediatricians, a report of 6900 traumatic brain injuries was diagnosed in the twelve months prior to the survey (Gordon, Do, Thompson, & McFaul, 2014). The gravity of this situation in children is of particular interest. There is currently a great deal of focus on high school sports and the education of high school athletes, but the data shows that children ages 9 to 11 are just as much at risk with little to no education for providers, parents, or children concerning the dangers of these injuries.

A study of the IOM highlighted the importance of increased awareness of concussions in spite of increased reporting in the last decade (Erdtmann, 2015). The need for education of providers, parents, and children is important to decrease the incidence of concussion, decrease the likelihood of worsening symptoms from underreporting of concussions to decrease the overall severity of long-term injuries from traumatic brain injuries, and to shorten recovery time for patients with these injuries.

## **The Status of Women in Social Work Education**

Diane M. Hodge

*School of Social Work*

### **Abstract:**

Current research regarding gendered differences in the social work academy is limited. Since 2011, the Council on Social Work Education (CSWE) only collects aggregate data about full-time faculty (CSWE, 2014). This aggregate data hides the many gendered differences in the social work academy and perpetuates an illusion that women enjoy more equality in female majority fields. A stratified random sample was derived from all CSWE accredited programs. An online survey containing 115 items was provided which covered 5 scales: Climate scale, external job support, psychological job demands, the Oldenburg burnout inventory and job satisfaction subscale. Results indicated gender differences in salary, school leadership, workload, climate, and job satisfaction. Limitations and implications will be discussed.

# Poster Presentations

[\*] indicates session has earned Peer Review designation

**An analysis of the efficacy and feasibility of evidence-based novel eating disorder treatments**

Renee von Guggenberg

*School of Social Work***Abstract:**

The present integrative paper reports an analysis of identified novel eating disorder treatment strategies, practice considerations, theoretical explanations, and recent political advances. A review of the literature on pharmaceutical, neurological, technological and therapeutic strategies revealed modern avenues for clinical social workers to utilize and refer to in practice. The advantages and limitations of each of these interventions are discussed, and the ethical implications of eating disorder treatment are highlighted. Further, gaps in theoretical literature and political advocacy are elucidated, providing initiative for future research and civil engagement.

## **A Prevention Model for use with Juveniles Enrolled in Probation**

Maya English

*School of Social work*

### **Abstract:**

This study demonstrates that the juvenile justice system may well benefit from adopting a multi-pronged approach to altering problematic behaviors within the population that it serves. This approach includes the probation officer as the monitor and broker of services for juveniles who have been taken into the probation system. Also included is the family-through Multisystemic Therapy- in order to address and remediate family dysfunction. Social workers are in a unique position to work with the probation officers to implement, coordinate, and access many of these mental health services. Social learning and ecosystems theories will be utilized to understand the causes of individual and family difficulty. Adopting this systemic approach has the potential to benefit individuals, families, and communities experiencing problematic social behaviors from juveniles.

## **A Review of Light Therapy Versus Pharmacological Therapy for Treating Depression in Institutionalized Older Adults**

Krystal M. Coleman

*School of Nursing*

### **Abstract:**

As the prevalence and per capita spending for depression among older adults continue to rise, there is a need for a change in prescribing practices. Current statistics reveal that depression is one of the top causes of disability and mortality in the world. Furthermore, analysts calculate that depressive disorders cost the United States billions of dollars annually. Evidence suggests that pharmacological options alone often result in an inadequate treatment response, but this method of therapy continues to be the mainstay treatment for depression among the older adult population. Treatment with conventional pharmacological therapy also increases the risk of adverse drug reactions and incorporates potentially inappropriate medications for the older adult population. Primary care providers are at the forefront of guiding prescribing practices in regards to depression management, but these same individuals have contributed to the near doubling of antidepressant use over the past decade. The total burden of depression goes beyond the costs and affects every aspect of an individual's life; therefore, educating providers on more than the conventional pharmacological approach will not only improve patient outcomes, but will reduce healthcare costs associated with this disorder. The purpose of this presentation is to: discuss the literature review regarding treatment of depression with conventional versus nonpharmacological treatment options, examine needs among institutionalized older adults in regards to depression treatment, discuss facts and data findings, reveal an educational protocol for primary care providers and explain how this protocol would increase provider knowledge related to light therapy as an effective adjunctive process, and examine future research in light therapy as a treatment option for depression.

**Affirmative Action: Negative or Positive Impact?**

Taylor Allen

*School of Social Work***Abstract:**

Affirmative action has been a controversial issue for decades, the recent hate crimes regarding racial stereotyping has reignited the debate in society. Affirmative action programs created as a solution for discrimination against excluded groups have not solved the issue of creating equal opportunity for all. Executive order 11246, which created equal employment opportunity, has been amended over the years to ensure all qualified candidates were treated equally regardless of their age, gender, class, minority, religion, disability and/or sexual orientation. This order led to the development of government and public policies. The affirmative action programs were examined to determine if prejudices have become less prevalent or if there was a continued need for affirmative action programs. Society has become a melting pot created of a fusion of nationalities, cultures and ethnicities. This paper provides an overview of how society helped foster the development of excluded groups and discusses what still needs to be accomplished in order to reduce societal bias. The research provides information regarding roadblocks that prevents equal access for employment to all citizens. Research recommends that the label affirmative action is perceived negatively and should be replaced by diversity management. Systems theory at the micro-level, conflict theory at the macro-level and rationale problem solving at the mezzo level is utilized to discuss societal perception of the excluded groups as well as the need to create diversity in the workplace. This paper supports developing affirmative action programs. The social work profession has a commitment to end discrimination and social justice, as well as empower individuals to take control of their lives.

## **An Investigation of Happiness Among Radford Students**

Adam Cheslow

*School of Social Work*

### **Abstract:**

Colleges and universities across the country are searching for ways to improve retention rates and maintain their competitiveness in an ever-changing environment. Traditional paradigms of higher education require that specific majors incorporate specific curricula and that this information is distributed to students to study and later prove their mastery through testing. A more modern paradigm also exists in which universities acknowledge the secondary goals of education, which include building social intelligence, curiosity, teamwork, and self-control along with many others. The initial purpose of this project was to determine whether different virtues of happiness had greater or lesser effects on college students' subjective well-being, and a quantitative survey of graduate level students was conducted to ascertain whether intentionality in choosing one's major correlates with elevated rates of perceived happiness. The findings showed that there was no correlation by the data collected and measured, but recommendations are made for future research, which may prove to more accurately assess virtues of authentic happiness. Expanding to an undergraduate sample may provide more data regarding patterns and risk factors for decreased well-being among new college students. Policy recommendations and implications are made both for the benefit of the student body and for the educational institutions themselves. Graduating college is a stressful milestone, and for those that find careers outside of their majors, this building of resiliency and empowerment through authentic happiness could mean the difference between an accomplishment to remember and one to forget.

## **Are You First? Interventions to Improve Stress in First-Generation College Students**

Mia Hancock

*School of Social Work*

### **Abstract:**

According to higher education literature, first-generation college students are found to experience greater amounts of stress compared to their non-first-generation peers. National studies support the idea that stress is a prominent issue for college students. During the fall semester of 2016, a quantitative study was administered to on-campus freshmen at a Southwest Virginia university to measure stress levels. The findings of the survey contradict the findings of the national survey. Findings from this study suggest that the use of stress reducing interventions at the collegiate level can alleviate stress in first-generation college students.

## **Attachment Between Foster Care Youth and Their Caregivers**

Adriana Koss

*School of Social Work*

### **Abstract:**

This paper explores how attachment theory and practices are beneficial when working with children in the foster care system who have experienced early childhood trauma. Attachment, when healthy, can help create a bond or a trust between the foster or potential adoptive parents and the foster child. This bond can in turn create a healthy environment in which the child can thrive and grow. Research on how placements and families, and the motivation behind why parents choose to foster and/or adopt will be explored. This paper also explores the different attachment practices that are used when working in the field. Strengths and weaknesses of these attachment practices will also be analyzed. Looking at both attachment theory and ecological system theory; this study is going to examine the effects attachment has on foster children's behaviors toward their caregivers. Policies that affect foster children's future and families will also be examined.

## **Barriers to Mental Health Services for Law Enforcement Officers in South West Virginia**

James Law

*School of Social Work*

### **Abstract:**

This is an integrative paper that explores literature concerning the law enforcement population in terms of personality, subculture, stress, stress effects, and coping. The paper integrates general strain, social learning, conflict, and consensus theoretical considerations. Also, included in the paper are the results of a qualitative study that was directed at assessing perceived barriers to mental health services for law enforcement officers in south west Virginia. The paper considers the intersectionality of law enforcement officers and individuals not in the blue circle; it also links phenomenological concepts throughout the paper to the social work profession. The paper concludes with a consideration of current policy and implications for future policy.

**Battle to Books: Exploring the Student Veteran Experience**

Juwel McClendon

*School of Social Work***Abstract:**

It is estimated by 2020, some 5 million Post 9/11 US Armed Force service members will return home, and it is likely that most of these service members will pursue higher education based on the education benefits and programs available (Santos, Esqueda, & Molina 2015). Inevitably, veterans hover in a liminal space between military life and student life during transition to civilian. Because of this, state college and university systems such as Minnesota and Alaska, have developed military-friendly policies to better serve this population. This study uses Schlossberg's transitional framework: situation, self, support, and strategies, to examine how services impact student veterans experience on campus. The use of Schlossberg's practice framework will assist academic institutions, faculty, administrators, and practitioners in developing more comprehensive practices that address student veteran's needs on campus. Ecological systems theory, script theory, and symbolic interactionism will be applied to expand on the theoretical framework of this study. More importantly, implementing the 4S model, theory, and policy, may aid in the development of better-practice techniques that support student veterans on campus.

## **Breaking the Chains: Examining the Relationship between Caregivers and Children of Incarcerated Parents**

Elisabeth Gochenour

*School of Social Work*

### **Abstract:**

Parental incarceration has been attributed to many difficulties and risks for children, yet there is little research about these families. There is even less attention given to understanding the relationship between the children of incarcerated parents and their caregivers. However, caregivers have the most direct impact on the children. This study will focus on the relationship between the caregiver and the children of incarcerated parents. It will explore how the caregivers and children can overcome barriers of support, social stigmas and emotional duress. This paper will look through the lenses of attachment and resiliency theories to gain an understanding of how children and families can reduce the negative impact of incarceration. It will utilize systems theory and family systems theory to explain the generational cycle of incarceration and to address the barriers faced by the caregivers and children. There are few policies in place to support these families in overcoming financial and emotional difficulties. In this paper, suggestions for advocacy and support to these families are proposed. The results of the author's previous research highlights barriers in service, communication within families and stigma connected to incarceration. Best practices for working with caregivers and children of incarcerated parents are found in the Stress Model and Strengthening Families Program. Supporting these families begins within the interpersonal relationship between caregiver and child, and through connecting them to others in their community who are experiencing similar situations.

## **Bridging the Gap between Mental Health and Education: The Importance of School-Based Mental Health Services**

Amber Hairston

*School of Social Work*

### **Abstract:**

Adolescence is a crucial time for one's social, emotional, and intellectual growth. Signs and symptoms of mental health disorders are now more prevalent during adolescence. Many go undiagnosed and untreated. This paper explains the importance of school systems having their staff trained on trauma and attachment to increase understanding of the necessity of school-based mental health services. A quantitative study was completed to determine school personnel's perceptions of the school-based services offered in two elementary schools in Southwest, Virginia. The survey results conclude that personnel at these schools had basic knowledge of trauma and attachment, which results in the success of the services. The theoretical frameworks of social construction and conflict theory are used to explain the school personnel's perceptions of school-based mental health services. Research findings suggest policies that require mental health trainings for school personnel that would potentially decrease the amount of under diagnosed and untreated mental health disorders in youth.

## **Campus Safety Practices To Prevent Sexual Assault**

Claire Adomeit

*School of Social Work*

### **Abstract:**

College campuses across the country are increasing sexual assault prevention efforts due to high prevalence rates and federal policy mandates. This study identifies safety and prevention practices made by American colleges and universities to protect their students and from falling victim or perpetrating sexually violence offenses. Campus climate survey results and rape myth acceptance rates identify perceived safety levels and overall attitudes towards sexual offenses on campus. These factors are often influenced by societal norms. By utilizing policy, research, practice, and theory, this study determines safety methods college campuses utilize to keep students safe and the role social workers can play in these efforts.

## Client outcomes and Recovery from Borderline Personality Disorder

Michelle Camardi

*School of Social Work*

### **Abstract:**

Currently there is no broad consensus on how to conceptualize or define recovery from borderline personality disorder (BPD) and, therefore, no one generalizable way of evaluating the comprehensiveness or effectiveness of our practice. This research aims to synthesize a concept for recovery from BPD following a treatment course of dialectical behavioral therapy (DBT) with special consideration of patterns in observations of relative improvement by symptom. The purpose of which is to provide a basis from which to infer an evaluation of the effectiveness of DBT at comprehensively addressing the full gamut of BPD symptomatology and satisfying the therapeutic needs necessary to achieve and maintain a state of recovery. The original study conducted for the purposes of the following critical analysis synthesizes a concept of recovery by drawing commonalities between the personal observations and conceptions of a small sample of DBT-informed clinicians in the New River Valley and Roanoke Valley, using qualitative, semi-structured interviews and thematic coding of data. The data showed BPD to be a lifelong condition to be managed and moderated, rather than fully remitted, once clients reach their personal baseline of functionality, with the aid of intermittent short-term treatment as needed. Change in individual symptoms was reported at variable rates, with emotional dysregulation most commonly reported as a symptom expected to most improve, followed by suicidal behaviors and self-mutilation, and, with the support of a slight majority, unstable relationships and identity disturbances/emptiness, although there is evidence to suggest that the rates for identity disturbances/emptiness were skewed upward. Further established research findings and theoretical perspectives on the nature of the disorder and identity development, such as the psychodynamic theory of object relations, attachment theory, and symbolic interactionism are examined to gain a deeper understanding of the disorder and identify core symptomatology. Treatment goals and effectiveness evaluations of DBT and several other leading therapeutic approaches are considered in adjunct to the participants' testimony and a discussion of ethical considerations to determine if additional therapeutic support for clients in DBT may be necessary to comprehensively meet their needs. Current mental health care policy is explored to shed light on both the resources that have been made available and structural barriers to treatment.

## **CIMT and Hemiplegic Cerebral Palsy**

Sarah Mathew

*Department of Occupational Therapy*

### **Abstract:**

Cerebral palsy (CP) is a non-progressive spectrum disorder, which affects posture and motor movements (U.S. National Library of Medicine, 2016). Currently, CP is the number one cause for motor impairments in children from birth to 12 years old (Centers for Disease Control and Prevention, 2015). Often caused by brain injury, hemiplegic CP alters one side of the body more intensely than the other. Due to learned nonuse, children with hemiplegic CP disregard their affected upper limb, which yields developmental disuse (Lowe et al., 2014). Continued disuse causes muscle dystrophy, tonicity, and reduces potential independence (Mandich, 2015) in performing expected age-appropriate tasks such as dressing, feeding, or playing (Ramey et al., 2013).

Constraint-induced movement therapy (CIMT) is a uni-manual treatment that restricts the non-affected limb to promote use of the affected limb (Ramey et al., 2013). While the unaffected arm is constrained, sessions of intensive therapy are held for multiple hours, to maximize functionality via task specific training (Ramey et al. 2013). This intervention aims to enable exploration of the environment, establish motor patterns, and accomplish age-appropriate tasks. Success in mastery of recruitment of muscles, reduced tonicity, and control of voluntary actions are crucial to childhood development for functionality in performing ADLs.

The goal of this evidence synthesis is to evaluate the best available evidence on the effectiveness of CIMT in children with hemiplegic CP, for improving muscle function and fine motor skills for ADLs. This synthesis will answer the clinical question: What is the effectiveness of constraint-induced movement therapy on children ages 6 months to 12 years old, with hemiplegic cerebral palsy, in increasing functional motor skills and performance of ADLs?

**\*Concussion Education: Adolescent Concussion Attitudes and Behaviors in the Roanoke Region**

Brent Harper

*Department of Physical Therapy***Abstract:**

Purpose: Sports-related concussion, a category of mild traumatic brain injury (mTBI), is a serious issue, especially for younger athletes. Incidence ranges from 1.7 to 3.8 million, making it a public health issue and fundamental to health promotion and injury prevention. Concussion education is very important, but it is more than a knowledge deficit problem. It is a public health issue within the cultural of athletics in which behavior is derived from the attitudes and beliefs of those individuals within that social structure. The purpose of this study is to assess the knowledge, attitudes, and beliefs regarding concussion in the Roanoke region using a standardized questioner, the modified Rosenbaum Concussion Knowledge and Attitudes Survey Student Version (RoCKAS-ST). This study will also compare the differences, if any, in concussion knowledge, attitudes, and beliefs between high school students participating in athletics and those who are not.

Methods: The design is a survey study and will include subjects (male, female, athlete, and non-athletes) in 9th and 10th grade at a regional high school. The subjects will consist of approximately 200-500 high school students. Statistical analysis will be performed using SPSS analysis on each question of the survey regarding concussion knowledge and behaviors. Analysis of these questions may identify the behaviors regarding concussion as safe or unsafe.

Results: Data is still being analyzed at this time.

## **Constraint-Induced Movement Therapy and Hemiplegic Cerebral Palsy**

Kayla Dillow

*Department of Occupational Therapy*

### **Abstract:**

Cerebral palsy (CP) is a non-progressive movement disorder that occurs when the normally developing brain is interrupted or damaged due to injury in the developing fetus (National Institute of Neurological Disorders and Stroke [NINDS], 2016; Centers for Disease Control and Prevention [CDC], 2015). This damage results in physical impairments affecting coordination, motor movements, and muscle tone (NINDS, 2016). Hemiplegic CP is a common form of CP with varying symptoms that typically result in paralysis affecting one side of the body (Children's Hemiplegia and Stroke Association [CHASA], 2016). Currently, there is no cure for CP, but it is believed that symptoms can be improved and managed with treatment (NINDS, 2016). One type of treatment strategy is constraint-induced movement therapy (CIMT). This evidence synthesis reveals that CIMT was an effective approach to use with children ages six months to 18 years of age with hemiplegic CP in improving performance skill levels in ADLs. Moreover, CIMT was shown to be effective with statistically significant improvements compared to NDT control groups. Rehabilitation therapists such as trained OTs and PTs may choose CIMT interventions, based on their own clinical expertise and research for improvements in upper-extremity function of children with hemiplegic CP.

Implications for occupational therapy based on the research suggest that CIMT is an effective intervention to use with children ages six months to 18 years of age who have hemiplegic CP for improving performance skill levels in ADLs. Furthermore, trained therapists and interventionist should provide CIMT methods for children who have hemiplegic CP more commonly than traditional NDT interventions. According to evidences, OTs are provided with the necessary skills to safely immobilize the unaffected arm and administer techniques with expertise to provide specific therapy and training to help children gain use in the affected limb.

**\*Correlating Throwing Task Metrics to Assess Rotator Cuff Function: A Pilot Study**

Brent Harper  
Cameron Holshouser  
Cody Bailey  
Kristen Jagger

*Department of Physical Therapy*  
*Department of Physical Therapy*  
*Department of Physical Therapy*  
*Department of Physical Therapy*

**Abstract:****Background and Purpose:**

Throwing athletes are at risk for injury due to the natural imbalances among muscular internal and external rotators, the extreme speeds and eccentric demands, and movement pattern asymmetries of the upper extremities. The purpose of this study is to assess normal subjects and compare reliability of various metric tests which include grip strength, hand-held dynamometer strength, and isokinetic objective measures.

**Methods:**

Subjects will be recruited locally as a sample of convenience. Each subject will perform the three metric tests of grip strength, hand-held dynamometer strength, and isokinetic measures. Data will be assessed using SPSS to compare groups and between metric measures.

**Results:**

Data is still being analyzed at this time.

**Conclusion and Discussion:**

Isokinetics, which measures muscle strength and function at varied speed demands, is the gold standard objective measurement for muscle function, particularly rotator cuff function, at varied speeds. Unfortunately, this equipment costs approximately \$60,000. Hand grip strength and hand-held dynamometer strength assessment may be a cost effective initial diagnostic assessment for rotator cuff function deficiencies since they cost considerably less, between \$100 and \$1,000. This pilot study will provide a foundation for a future study involving baseball pitchers.

**Cultural and linguistic diversity training: The impact on COSD students' knowledge and self-efficacy**

Karen C. Davis

*Department of Communication Sciences and Disorders***Abstract:**

The purpose of this study is to examine the impact of an expert professional development on the self-efficacy and content knowledge of speech-language pathology pre-professionals and professionals in serving culturally and linguistically diverse populations. The ethnic, cultural, and linguistic makeup of this country has been changing steadily over the past few decades. The US Bureau of Census (2000) indicated that in the United States, the percentage of racial/ethnic minorities would increase to over 30% of the total population between 2000 and 2015. With cultural diversity comes linguistic diversity, including an increase in the number of people who are English Language Learners, as well as those who speak non-mainstream dialects of English (ASHA, 2006). Unlike the projected rate of cultural diversity in the U.S., the American Speech Language Hearing Association (ASHA) demographics are relatively homogenous in terms of ethnicity and gender, resulting in a cultural mismatch (Perry, 2012). The current study is designed to answer the following questions: (a) What is the impact of professional development workshop on preservice and professional SLPs' self-efficacy in serving culturally and linguistically diverse populations? (b) What is the impact of professional development workshop on pre-service and professional SLPs content knowledge in serving culturally and linguistically diverse populations?

## Daily Maintenance of Long-Distance Relationships

Rachel Hojnicky

*School of Social Work*

### **Abstract:**

Romantic relationships play a key role in many people's lives and can bring joy and happiness, or create distress and dysfunction. Because romantic relationships play such an important part in a person's life, it is important to understand what factors predict satisfaction and quality. The purpose of this qualitative research study was to explore how individuals maintain a long-distance romantic relationship while pursuing their educational or occupational careers. In-depth interviews with couples in long-distance relationships were conducted in Southwest Virginia. Additional benefits of this study were to explore relationship strengths and challenges and recommend healthier modes of communication and effective practice approaches for clinicians. Attachment theory, social learning theory and the social exchange theory were chosen to explain the different ways couples interact and communicate. Findings suggest that communication in the relationship played a huge role in satisfaction rates along with commitment to each other. The Oklahoma Marriage Initiative policy showed the need for new counseling services to help couples. Results from this Southwest, Virginia study promoted more knowledge on relationship maintenance through the promotion of new clinical practice models designed for couples.

**Debate of International Adoption**

Horace Hall

*School of Social Work***Abstract:**

International adoption has been argued over for the successfulness and ethics of the practice. This subject has been researched through content analysis and other literature reviews. In the literature review, it has been shown that international adoption has caused the children to receive harm through different means and caused some international relationship concerns. For the independent research done, several memoirs of internationally adopted children and some children adopted locally but transracial were compared for content analysis. The goal of this was to see how comparable the two adoption types are as in successfulness and other concerns. Through the research, it was found that both had common themes of community acceptance, self-identity, and cultural concerns. With this information and research, it can be applied to the field of social work as topics to further research in when working with adopted children. When social workers interact with international adoption clients, either parents or children, knowing what concerns and issues that may arise will be helpful and beneficial to all parties.

## **Development of an Evidence-Based Diagnostic Decision Tree for Polycystic Ovary Syndrome**

Marie McDermott

*School of Nursing*

### **Abstract:**

**Background and significance:** Polycystic ovary syndrome (PCOS) is the most common endocrine disorder of women of reproductive age worldwide. It is a complex, incompletely-understood condition; however, it is known that PCOS is a significant risk factor for multiple metabolic, cardiovascular, and obstetric conditions. Diagnosis of PCOS is complicated by conflicting definitions and confusing guidelines.

**Purpose:** The purpose of the project is to develop a decision tree model for diagnosis of PCOS in adult females based on the current evidence. The audience is primary care practitioners.

**Methods:** A comprehensive search was conducted of electronic databases. The key words polycystic ovary syndrome, diagnosis, and screening were used to identify relevant articles. After initial abstract review, articles were excluded which were expert opinion, case studies, not peer reviewed, related to adolescents, related to topics other than diagnosis of PCOS, and focused on specific populations outside of the United States. After conducting the literature review, a decision tree was created based upon a synthesis of the current evidence.

**Conclusion:** To establish a diagnosis of PCOS, at least two of three conditions must be present: hyperandrogenism, chronic anovulation, and/or polycystic ovarian morphology. Chronic oligo/anovulation is determined by the history. The preferred biochemical assessment of hyperandrogenism is free testosterone levels using liquid chromatography combined with mass spectrometry assays or radioimmunoassay with purification. Polycystic ovarian morphology is best determined by the presence of at least 25 small follicles on transvaginal ultrasound with the current technology (frequency of at least 8 MHz and automatic follicle numbering software). Differential diagnoses must be ruled out before the diagnosis of PCOS can be made.

**Clinical implications:** The diagnostic decision tree provides a guide for practitioners to understand the diagnostic process from initial evaluation, eliminating other possible diagnoses, to establishing the PCOS phenotype.

**Don't Forget Me: Life Satisfaction of Non-ill Siblings of Children with Chronic Illness or Disability**

Rebeckah Hoyt

*School of Social Work***Abstract:**

This study examines the relationship between having a sibling with chronic illness or disability, and life satisfaction. Higher rates of life satisfaction are associated with numerous benefits such as good mental health, high self-efficacy, high self-esteem, better academic performance, hope, positive social relationships with friends and family, and better overall physical health. Children who have a sibling with chronic illness or disability may not be getting the social/emotional support necessary to receive these benefits. Maslow's Hierarchy of Needs and Systems Theory can explain the unique set of needs for this population and how to address them. This paper investigates the role social work values, practice and policies have in intervening with non-ill siblings to increase life satisfaction and capitalize on its benefits.

## Early Intervention for Down Syndrome

Allie Woodrum

*Department of Occupational Therapy*

### **Abstract:**

The purpose of this evidence synthesis is to determine how effective early intervention is for improving fine motor skills in children age birth to 3 years with Down syndrome. Down syndrome (DS) is one of the most common genetic disorders affecting one out of every 391 babies born each year (Parker et al., 2010). DS occurs when a baby is born with an extra copy of chromosome 21 leading to developmental and intellectual delays. Children have delays and difficulties in motor skills, language, and social functioning (Kozma, 2008). Children with DS have hypotonia, or low muscle tone, affecting movement and strength. These challenges are addressed in OT, PT, SLP, and a collection of therapies called early intervention (EI) (Wilt, 2008). EI is a system of services required by federal law that helps children with developmental delays or disabilities from birth to 3 years (U.S. Department of Education, 2014). Fine motor skills are one important focus of OT in EI due to the impact on a child's engagement in the occupations of feeding, dressing, education, and play (AOTA, 2014). Improving fine motor skills of children with DS early on is important because these skills affect milestones and occupations throughout life, such as self-feeding, dressing with buttons, and handwriting (Wilt, 2008). Articles were located through various databases to examine EI for DS and the results from the studies supported the use of EI for improving the fine motor skills of children age birth to 3 years with DS. EI is effective for improving fine motor skills if the child receives intensive services and parents report active involvement. Improvements in areas of fine motor development are seen through EI and are notable as the child develops. OTs should advocate for EI and encourage parents to seek out EI services for their child.

## Effectiveness of 300 U Heparin versus Standardized 500 U Dose in Implanted Venous Devices

Michele Keesling

*Blue Ridge Center*

Marsha Myers

*Lewis Gale Hospital Systems*

Anthony R. Ramsey

*Radford University; School of Nursing*

Stuart Goldstein

*New River Surgical Associates*

### Abstract:

The purpose of this research was to compare the patency of implanted venous access devices (VAD) with varying doses of Heparin. The research question was: Do patients receiving 300 Units of Heparin for VAD maintenance experience more VAD occlusions than those who receive 500 Units of maintenance Heparin. An experimental two-group posttest design was utilized. The subjects were randomly assigned to an intervention group or to a control group. Participants were invited to participate in this study if they have a single lumen (6.6 French) Port-a-Cath (VAD), followed maintenance protocols, and did not have a history of thrombosis and/or current warfarin use. The total sample size was 79 participants with 75 ports accessed in the 300 Unit group and 112 ports accessed in the 500 Unit group for a total of 187 actual sticks. Subjects were assigned to a group using an online randomization generator. Participants in the control group received 500 Units of Heparin in a 5 milliliter dose. Participants in the experimental group received 300 Units of Heparin to equal 3 milliliters and 2 milliliters of Normal Saline to ensure there is consistency to the amount of milliliters that was placed in the implanted ports.

Participants with a Heparin allergy and all vulnerable populations were excluded from this study. Nurses that assisted with this study completed annual competencies in caring for the implanted vascular access devices per the Oncology Nursing Society guidelines. The data revealed that the average day between sticks in the 300U group was 29.25 days and the 500U group was 31.06. There was no significant difference in proportions of patients with occlusions. Overall, these findings suggest that there were no observable differences across the doses.

## **Ehlers-Danlos Syndrome: A Review of Literature and How the Sports Medicine Team Can Improve Outcomes**

Lauren Cox

*Department of Exercise, Sport, and Health Education*

### **Abstract:**

Ehlers-Danlos Syndrome Hypermobility Type (EDS-HT), also referred to as Joint Hypermobility Syndrome (JHS), is a hereditary connective tissue condition that presents with increased joint laxity, pain, dislocations, and general injury to the joints. Physiologically, EDS-HT is characterized by a defect in collagen that results in decreased tensile strength of static joint structures. It is estimated that 1 in 5,000 people have EDS-HT, but it has been underdiagnosed due to the failure to recognize the presence of an underlying condition beyond the acute injury. Researchers and healthcare providers have found a growing interest in, and recognition of, EDS and with that, its prevalence in the physically active/athletic population is also increasing. A comprehensive review of the literature was done and six articles were found appropriate using the terms Ehlers-Danlos Syndrome Hypermobility Type, athletes, and rehabilitation. Patients included in the literature were both male and female athletes (age range 18-60 years). All patients were diagnosed or were suspected to have EDS-HT or JHS. Common trends in treatment of athletic injuries found in the literature include: (1) more education is needed among health professionals about the condition, (2) treatment of injuries in individuals with EDS-HT holds the best outcome when a holistic and multidisciplinary approach is taken, and (3) more research is needed in order to create a standard protocol for treatment and rehabilitation of injuries in individuals with EDS-HT. More education among sports medicine professionals will not only give them the ability to better recognize the condition, but also understand why and how rehabilitation of injuries in EDS-HT patients must be individualized. In following these recommendations, injured athletes with EDS-HT will have improved outcomes.

## **\*Electronic Cigarette Research Proposal**

Jessica-Todd Snyder  
Majorie Young

*School of Nursing*  
*School of Nursing*

### **Abstract:**

**Introduction:** This study looks at the perceptions of college-aged students on the safety and efficacy of E-cigarette and tobacco smoking cessation.

**Background:** There are not many studies looking at the perceptions of people on the safety and efficacy of E-cigarettes. It is important for health care providers to address the perceptions of electronic cigarettes in people who are investigating methods to aid in the cessation of tobacco cigarette smoking.

**Methodology:** This study utilized a pretest/posttest quasi-experimental design. The co-investigator administered a pretest, then conducted a 5-7 minute educational intervention, which included how E-cigarettes work, what is in E-cigarette juice, and research about the safety and efficacy of E-cigarettes. Then the co-investigator administered the posttest, which was composed of the same questions as the pretest. The results were analyzed using a paired samples t-test.

**Results:** The analysis found that the pretest mean is -0.4 for question four and 0.5 for question five. The standard deviation for pretest question four is 0.598 and 0.513 for question five. The mean for the posttest question four is -0.85, while the standard deviation is 0.366. The mean for the posttest question five is 0.85, while the standard deviation is 0.366. For question four,  $t(18) = -3.04$ , and  $p = 0.004$ . For question five,  $t(18) = -2.35$  and  $p = 0.015$ .

**Discussion:** The results of this study are statistically significant, with an established  $p < 0.05$ . However, limitations of this study include the small sample size ( $n = 20$ ).

**Conclusion:** E-cigarettes are another tool to aid people in the cessation of tobacco cigarettes; however, not many people realize this. The results of this study indicate that education concerning the safety and efficacy of E-cigarettes is effective, and therefore important consumer information for the college-aged student.

**Evaluate the Practice: Service Providers Interactions with Human Trafficking Victims**

TyEnna Spencer-Sturdivant

*School of Social Work***Abstract:**

Many women and children have been forced into trafficking through threats, violence, and false promises of legal work and a better life. In recent years, news feeds have been overwhelmed with stories of human trafficking cases; however, the rescue of these victims has been hindered by flawed restraining, failed services and revictimization. Trafficking is often viewed as an international issue. The public is unaware that about 50,000 women and children are trafficked into the United States each year (Holman 2008). Ultimately, identifying a sex trafficking victim and referring to services does not ensure that adequate services are rendered. The following research evaluates service providers' interactions with human trafficking victims and explores the reality regarding the gap between anti-trafficking practices and policies. The research establishes how previous literature, practice, policy and theory of this concern can contribute to the understanding of such a sensitive population and the field of social work.

## Evidence-based Practice in Palliative Care Education

Gwen Spangler

*School of Nursing*

### **Abstract:**

**Purpose:** The aim of this review is to examine the evidence regarding the most effective modality for palliative care education. The findings will then be utilized to create a palliative care educational tool for use at Carilion Roanoke Memorial Hospital.

**Methods:** A comprehensive search of the literature was performed utilizing CINAHL, Radford University SuperSearch, Cochrane Library, Ovid and EBSCOhost. Reference lists from selected studies were reviewed. Facility resources such as the palliative care team and education department were utilized to create an online book teaching the basics of palliative care. This book will be published through Cornerstone, Carilion Clinics online education resource.

**Findings:** Literature assessing the effects of palliative care and palliative care education is plentiful and positive. Increased usage of palliative interventions decreases patient symptoms and hospital length of stay while increasing communication, interdisciplinary care and patient satisfaction. Outcomes of one modality over another are not as well studied. While any education improves care, there is no clear benefit to online versus traditional education. Evidence does show that utilizing multiple educational platforms provides the best outcomes.

**Implications for practice:** Provide palliative care in conjunction with aggressive care or as a stand alone modality improves patient satisfaction and decreases health care costs. Nurses utilize palliative care interventions in every day care already. This education gives an evidence base for those interventions while increasing health care workers knowledge of palliative care practices.

**\*Experiential Learning in OT: Taking Occupational Therapy to the Street**

Judith Malek-Ismael  
Laura Mear

*Department of Occupational Therapy*  
*Department of Occupational Therapy*

**Abstract:**

Students learn best when they are exposed to diverse learning situations. Occupational therapy faculty can use a variety of instructional methods to ensure that each student is given the opportunity to receive instruction in their preferred style of learning. A theory frequently used in occupational therapy education, and a widely accepted framework for instructional design is the theory of experiential learning (Kolb, 2015). This type of learning experience can be used to capture a student's interest and attention in a specific topic. Learning situations outside of the classroom can be designed so that attention is focused on a specific concept, thereby encouraging each student to deeply engage in the learning experience (Kolb, 2015). We used experiential learning as a dynamic instructional method to teach our entry level Master of Occupational Therapy (MOT) students the first steps of the evaluation process for an individual with a cervical spinal cord injury. This approach enabled each student to transform classroom information into a practical learning experience. By direct contact with this individual in the natural setting of his home, our MOT students learned to appreciate the contextual dimensions of that individual's preferred occupations and they developed an understanding of the initial phase of the occupational therapy process. With the guidance of two occupational therapy faculty, the students learned to critically reflect upon and synthesize information that they collected during an occupational profile interview and administration of the Functional Independence Measure (FIM). In this presentation we will share strategies and lessons that we have learned to promote effective and dynamic experiential learning opportunities.

Kolb, D (2015). *Experiential Learning: Experience as the Source of Learning and Development* (2nd Edition). Upper Saddle River N.J., Pearson Education.

## Exploring the Disconnects Between Mental and Physical Healthcare Services

Nathan Ott

*School of Social Work*

### **Abstract:**

There has always been a disconnect between physical and mental health care services regardless of how closely the two are related to an individual's wellbeing. One can argue that mental health care has always lacked behind and is only now beginning to be viewed as an important aspect of a person's life. Recent policy changes and legislation such as the Mental Health and Substance Abuse Parity Act are now being introduced and implemented that aims to address this disconnect. Research has shown, however, that social workers and other professionals are not making enough of an effort to collaborate with other professions and agencies to better bridge the gap between these services. One qualitative study that reiterates this point was conducted through semi-structured interviews in Lee County, Virginia to examine how service providers viewed the effectiveness of their agencies or programs regarding the treatment of opioid abuse. The study found that service providers tended to lack in-depth knowledge regarding other organizations' services and commonly misbelieved that their agencies programs were the only programs which were being utilized or effective. Numerous theories have been employed to study reasons as to why this problem exists including system's theory, conflict theory, and how to successfully implement a more biopsychosocial method. Health care providers are also beginning to study these theories and develop ways to better provide collaborative care and more holistic healthcare services. The purpose of this paper is to examine the methods being utilized, studying the effectiveness of these methods and discussing ways for future improvement.

## **Exposing the Need to Identify Childhood Trauma**

Caitlin Barry

*School of Social Work*

### **Abstract:**

Nearly a third of U.S. adolescents ages 12 to 17 have experienced two or more types of childhood adversity that are likely to affect their physical and mental health as adults (Stevens, 2013). Our educational and mental health systems need to become better informed about how failing to recognize trauma behaviors re-traumatizes children. The purpose of this study is to emphasize the need for mental health professionals to assess trauma-related behaviors in children. It will evaluate appropriate assessments and interventions to help children develop healthy coping skills. This study will address how research and policy on trauma-related behaviors in children influence interventions in the educational setting. It will examine micro and macro-level theories of attachment theory, Erikson's theory of psychosocial identity development, and social constructionist theory to explain how exposure of cumulative childhood trauma affects children's behaviors and coping skills.

## **Extra-nasal MRSA Colonization Detection in the ICU: Implications for the Advanced Practice Nurse**

Mary Spence

*School of Nursing*

### **Abstract:**

Methicillin-resistant *Staphylococcus aureus* (MRSA) colonization detection testing is used in medical settings to identify patient carriers with active surveillance culture (ASC), and implement precautions to decrease its spread. The control of the transmission and acquisition of MRSA in the ICU setting is an ongoing area of study nationally and worldwide. Correctly identifying patients in the ICU setting with MRSA colonization is an essential part of reducing the transmission and subsequent infection that is recommended by current practice guidelines, national recommendations, and evidence to reduce transmission and subsequent infection (AHRQ, 2013a; Aureden, et al., 2010; Calfee et al., 2014; Coia et al., 2006; CDC, 2011; Harris, 2016; Marchaim & Kaye, 2015; Siegel et al., 2007; Wertheim et al., 2012; Wiener et al., 2016). Detection of MRSA colonization is analyzed through literature search of studies performed on testing of multiple extra-nasal anatomical sites that are known for potential MRSA colonization in the Intensive Care Unit (ICU) setting. The review of literature, guidelines, and studies in this DNP project propose that the addition of extra-nasal site testing for MRSA colonization in the ICU setting is valid intervention to be utilized in future research of MRSA transmission and control. The recommendations on future research on extra-nasal MRSA colonization in the ICU will be discussed and disseminated through a continuing education module.

**Keywords:** Methicillin-resistant *Staphylococcus aureus* (MRSA), colonization, anatomical site, extra-nasal, intensive care unit (ICU), screening and detection

## **Functional Electrical Stimulation for Increasing Independence in ADLs in Adults with CVA: An Evidence Synthesis**

Laura Burkhard

*Department of Occupational Therapy*

### **Abstract:**

Upper extremity motor impairment is a common result of cerebrovascular accident (CVA) including hemiplegia (Popovic, Thrasher, Zivanovic, Takai, & Hajek, 2005). Regaining function in an upper extremity affected by hemiplegia is important for ultimately increasing independence in ADLs and other desired occupations (Rowland et al., 2008). Functional electrical stimulation (FES), unlike other common upper extremity interventions for individuals with CVA, does not require voluntary muscle movement (Mangold et al., 2009). FES can be used with clients in a variety of settings, and administered by an occupational therapist or other professional. During occupational therapy, FES is used while the client performs an occupation-based activity. This intervention allows clients with hemiplegia to use an affected extremity to reach for an object such as a telephone or to grasp a can of soup (Popovic et al., 2003). While the evidence related to FES for increasing independence in ADLs remains inconclusive, a review of the literature revealed evidence supporting FES as a viable intervention to improve upper extremity function. Significant improvements in participation in ADLs and functional upper extremity mobility were made by research participants after receiving FES to the hand, wrist, and shoulder. The best available evidence focuses on functional tasks related to feeding, however little research can be found on FES interventions associated with toileting, bathing, and dressing, these are areas in need of further investigation. Implications for occupational therapy practice include using FES to increase function and use of an affected upper extremity, and to prepare clients for participation in ADLs and other desired occupations. Evidence suggests occupational therapists should consider FES early in the treatment process for clients with limited or no voluntary muscle movement as a result of a CVA.

**\*Health Literacy: A Growing Provider Need**

Jennifer Dale

*School of Nursing***Abstract:**

**Purpose:** The purpose of this project is to (a) review the affecting factors of and associated outcomes with the health literacy, (b) review NP understanding of health literacy assessment tools and what to do with the information learned from them, and (c) provide information on how to tailor patient education based on individual health literacy assessment results.

**Background/Significance:** Health literacy is a person's ability to obtain, communicate, process and understand information influencing health care decisions. Low levels of health literacy have been associated with medication errors, reduced use of preventive services, difficulty in managing chronic conditions, higher mortality, and unnecessary emergency room visits. Provider knowledge of patient health literacy levels helps tailor education for each patient to help ensure understanding and compliance.

**Findings:** Many studies report health literacy to be a more precise determining factor for patient understanding and compliance than any other. Increasing health literacy in individuals positively impacts self-efficacy and positive health outcomes. This integrative review, supporting incorporation of the health literacy assessment followed by tailored consultation and education while using teach-back methods, as the best strategy to increase health literacy, promote self-care, and improve better patient outcomes.

**Clinical Implications:** Nurse practitioners, in the role of primary care provider, may incorporate health literacy assessment and provide a tailored education regarding the individual needs of the patient, based on patients' health literacy level. In return, along with increased health literacy, the patient then assumes responsibility for their own health thus decreasing health disparities and increasing positive health outcomes.

## Horticulture Therapy for Reducing Depression in Older Adults

Lisa Elledge

*Department of Occupational Therapy*

### **Abstract:**

This synthesis appraised evidence on the effectiveness of horticulture therapy for adults 65 and older with depression. As a country, the older adult population is growing at a rapid rate and an issue facing the elderly that is currently deemed important by many stakeholders is depression. Methods utilized to conduct this search included databases and scholarly websites such as CINAHL, MEDLINE, AMED, American Journal of Occupational Therapy, National Institute of Mental Health, and AgeLine. Seven studies in total were selected for inclusion. The results revealed that horticulture therapy, regardless of the environment and context in which it was delivered, was found to be effective in the reduction of depression levels in adults ages 65 and over. The same was found to be true for adults 25 and older and in individuals who did not have a diagnosis of depression, but displayed signs and symptoms of the disorder. Implications of horticulture therapy discovered for use within occupational therapy practice includes the interventions ability to be easily adapted and modified depending upon the individual client's diagnoses and needs. Occupational therapy also has the opportunity to refine the current available research regarding the effectiveness of horticulture therapy on depression levels of older adults as there is currently not a great deal of resources on the matter. Overall, the purpose of this synthesis was to appraise the evidence on the effectiveness of horticulture therapy for adults 65 and older with depression and findings in all studies reviewed yielded positive levels of change regarding the reduction of depression scores.

**HPV Vaccination: Changes for the Healthcare Provider**

Diane Campbell

*School of Nursing***Abstract:**

Human papillomavirus (HPV) is a sexually transmitted disease with the potential to cause many types of cancers in both male and females. A vaccination series has been developed to decrease the incidence of cancer, but patient compliance rates with initiation and completion of the series has been very low. There are many factors to consider when finding solutions to the low vaccination completion rates for HPV, such as provider beliefs and comfort level as well as patients' or parents' knowledge level or attitude. Changes to the vaccination schedule, as well as a different vaccine are new for 2017. This poster will show the difference between the different vaccinations, as well as guidelines for administration to both males and females.

**\*Identifying the Risk Factors in Ice Hockey**

Bailey Banks  
Lauren DiDomenico  
Elizabeth Woodward  
Brent Harper  
Adrian Aron

*Department of Physical Therapy*  
*Department of Physical Therapy*  
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**Abstract:**

**Purpose:** Identification of abnormal pre-screen tests that may be indicative of future injury in collegiate ice hockey athletes. Pre-participation screens may be used to detect neurocognitive performance deficiencies, which may predispose athletes for injury during competition; possibly due to the intimate relationship with motor performance (Herman & Barth, 2016). Abnormal scores may be used to identify athletes that may benefit from interventions or pre-rehabilitation, to correct neurocognitive deficiencies in effort to avert injuries.

**Methods:** 25 male collegiate ice hockey players were tested prior to beginning their season, which consisted of 30 games. All testing was completed on one day at the Radford University Doctor of Physical Therapy facility. Upon arriving at the testing location, participants completed informed consent, intake paperwork, including baseline demographic information, and Physical Activity Readiness Questionnaire (PAR-Q). Participants were educated on the study, were allowed to ask questions and voice any concerns. The participants were split into two groups for convenience: the first group began testing with the ImPACT, while the other group rotated through four stations, including height and weight measurements, and K-D, BESS and VOMS testing.

**Results:** Data is still being analyzed at this time.

**Discussion & Conclusion:** By utilizing pre-participation screens for ice hockey, discernment of atypical scores may be used as a predictive tool to pinpoint players most vulnerable for injury. Preliminary findings found that athletes who were injured during the season had poor scores on the King-Devick and impulse control and verbal memory components of the ImPACT, which may help identify those at risk for injury. Additionally, those with baseline symptoms at the time of pre-season assessment scored lower on impulse control and King-Devick, which further supports the use of these tests for injury risk assessment.

## **\*Immediate Effects of the Bioness L300 Neuroprosthesis on Oxygen Cost During Gait in Patients with Acquired Brain Injury**

Cory Lail  
Steven Boswell  
Jessica Ostrower  
Robert Weisbeck

*Department of Physical Therapy*  
*Department of Physical Therapy*  
*Department of Physical Therapy*  
*Department of Physical Therapy*

### **Abstract:**

**Purpose:** Following brain injury in the form of stroke, trauma, cancer or other, it is common for patients to experience deviations in their gait such as foot drop that cause an increase in the work of walking. The use of a neuroprosthesis to resolve foot drop in the swing phase of gait has been researched thoroughly over recent years, but with little consideration of the immediate effects it has on decreasing the work of walking in an acute population.

**Methods:** Five subjects have been recruited for this study, with four included in the data analysis. Each participant completed two walks--one with and one without the neuroprosthesis--in a randomized order, on a specialized walkway that collects a wide range of temporospatial gait parameters. Additionally, the OxyCon Mobile device analyzed respiratory gases to monitor energy expenditure. Changes in oxygen consumption (PCI/VO<sub>2</sub>), oxygen saturation, heart rate, and gait speed were recorded throughout each trial. The use of the Bioness L300 was randomized for each patient and administered on the first or second trial. From these walks, the energy cost of ambulation as well as other data was compared between the trials and among the individuals.

**Results:** Seven subjects were originally included in the study. One subject was excluded due to malfunction of the OxyCon software, which failed to capture data during his testing. The mean PCI for all subjects (heartbeats/meter) for ambulation with the neuroprosthesis was  $0.75 \hat{\pm} 0.49$  as compared to a mean of  $0.36 \hat{\pm} 0.36$  without the neuroprosthesis. The mean VO<sub>2</sub> (mL/min) with the neuroprosthesis was  $447.25 \hat{\pm} 192$  and without was  $360.3 \hat{\pm} 191$ . There was no significant difference in VO<sub>2</sub> or PCI between time points ( $p=0.77$ ,  $p=1.00$ , respectively), nor does the neuroprosthesis application have an effect on either VO<sub>2</sub> ( $p=0.75$ ) or PCI ( $p=0.16$ ).

**Discussion and Conclusion:** The present study may suggest that the Bioness L300 exhibits no immediate effect on gait speed or energy expenditure in the acute stroke subjects tested. However, these results may change as a greater number of participants are recruited.

## **Implementing Clinical Practice Guidelines for an Acute Care Hospital for use of Disinfectant Caps**

Anne Marie Saunier

*School of Nursing*

### **Abstract:**

Central line associated bloodstream infection (CLABSI) remains one of the most common and deadly hospital-acquired infections in the United States. Creating a culture of safety is an important part of healthcare-associated infection improvement efforts (Weaver et al 2014). In an effort to improve safety and reduce CLABSI, this project will propose new clinical practice guidelines added to hospital policy and procedures. This proposition is based on evidence related to disinfectant caps (alcohol impregnated caps) that are placed consistently on central and peripherally inserted central venous access devices while not in use, and in between uses to prevent infection. This practice would not replace standard protocol of sterile dressing changing and scrubbing hubs between uses but would be in addition to these standard protocols. The data supporting the addition of the caps in daily use, promises greater reduction of infection than what is achieved with use of standard protocol alone.

Developing clinical practice guidelines for a local acute care hospital regarding use of these disinfectant caps added to standard protocol will be the outcome for this DNP project with data showing that this change will aid in reduction of CLABSI. Implications for this practice will show reduction in morbidity, mortality and cost, by showing that evidence based research and practice is critical for optimum patient outcomes, specifically in all acute care settings. This project may be utilized by doctors, mid-level providers, and nursing staff who care for patients with central venous access devices.

## **Inclusion Matters! Creating a Successful Environment for Students of Color**

Tiara Jeffrey

*School of Social Work*

### **Abstract:**

The amount of students pursuing a bachelors or master's degree at a four year institution is constantly increasing. In turn a wide range of students including a diversity of ages, ethnicities, religions, and gender identification fill these institutional communities. This study explores students of colors in higher education and how inclusion impacts their experience. Inclusion efforts and the treatment of students of color by peers, faculty, and staff is studied to show if the campus climate is welcoming towards minority students. This study includes research to explore and analyze students' experiences. Furthermore, this study will utilize both conflict theory and critical race theory as tools to understand how campus climate, support services, and cultural competence are detrimental to students both inside and outside of the classroom. Policies that promote equality and inclusion are implemented in order to ensure marginalized groups have equal opportunity and access to services. The information obtained from this study will suggest a variety of best practices and resources to create and maintain a successful, inclusive environment for all students.

## **Influence of a Post-graduate Residency Program on Clinical Reasoning and Patient Outcomes in Nairobi, Kenya**

Shala Cunningham  
Clarissa Leickly

*Department of Physical Therapy*  
*Department of Physical Therapy*

### **Abstract:**

**Background:** Access to advanced instruction in physical therapy, fundamental to promoting educational development, is limited throughout the country of Kenya. One factor restricting advanced instruction has been the shortage of physiotherapists with advanced degrees and specialty training to offer educational opportunities following entry-level education. A post-graduate residency program was developed to assist with the promotion of the physical therapy profession in the country.

**Purpose:** The purpose of the study is to explore the influence of the residency program on clinical reasoning development and treatment.

### **Methods: Participants**

In October 2016, graduating residents in the third and fourth cohorts of the program completed a final live-patient practical examination to assess their knowledge and clinical reasoning skills related to the examination and evaluation of musculoskeletal conditions. Interviews were performed with the residents following the practical examination to explore the resident's understanding of clinical reasoning and the ability to utilize these skills in their clinical practice. Individual interviews were also performed with past graduates from the first and second cohorts of the program and their employers to explore the influence of the residency program training on patient outcomes.

### **Methods: Analysis**

Data management for the qualitative interviews will begin by using the transcriptions to code the information gained. This will be followed by secondary coding to identify patterns and themes. Data will also undergo analyst triangulation to avoid selective perception and illuminate blind spots in the interpretive analysis. NVivo 11 will be utilized for data analysis.

**Results:** Themes discovered through qualitative analysis will add to the limited body of knowledge regarding the influence of residency training.

**Implications:** If the residency education can positively influence physical therapy outcomes, without the need for or access to expensive equipment, the needs of the community may be better meet.

## **Influence of Exercise Delivery on Recovery Following Total Knee Arthroplasty**

William Kolb  
Ruth Afful  
Maison Puckett  
Amy Putnam

*Department of Physical Therapy*  
*Department of Physical Therapy*  
*Department of Physical Therapy*  
*Department of Physical Therapy*

### **Abstract:**

**Introduction:** There is a lack of consensus of the best rehabilitation programs to be used for patients post TKA surgery leading to highly variable functional and subjective outcome measures.

**Purpose:** To determine if there is a certain number of functional weight-bearing exercises administered during a post-TKA rehabilitation protocol that produces a greater improvement in functional outcomes.

**Methods:** Retrospective chart audit of patients who underwent total knee arthroplasty (TKA) at Carilion New River Valley Medical Center collecting functional and subjective outcome measures scores at three time points: 1) Pre-Surgery, 2) Two weeks post-surgery, and 3) Discharge from outpatient physical therapy. Subjects were divided into two groups by overall percentage of closed kinetic chain (CKC) exercises in the sub-acute rehabilitation protocol.

**Results:** There was no statistical difference in outcome scores between those who received more than 50% CKC and those who received less than 50% CKC exercises. However, all subjects significantly improved their scores from pre-surgery, immediately post-surgery, and post rehabilitation episode of care.

**Conclusion:** The amount of CKC exercises did not statistically influence the outcomes of subjects' recovery. However, clinical detectable changes and functional improvements were seen in subjects after discharge from outpatient physical therapy when compared to pre- and immediately post-surgery.

## **Interventions to Reduce Anxiety and Agitation and Improve Quality of Life for People with Dementia**

Taylor Allen-Morgan

*Department of Occupational Therapy*

### **Abstract:**

The purpose of this research is to identify holistically therapeutic techniques to reduce anxiety and agitation while improving quality of life for people with dementia. Anxiety and agitation are often symptoms of dementia due to memory problems and reduced ability to complete tasks. Difficulty with everyday tasks can leave the person feeling distressed and frustrated. Feeling anxious and agitated frequently is poor for overall health and may have negative effects on the person with dementia and create stress and tension with their caregivers. Identifying effective methods or interventions for this problem can improve satisfaction by using coping skills and relaxation techniques that calm anxieties and agitation. Improving quality of life and satisfaction is the overall result of reduced anxiety and agitation. Occupational therapists strive to provide holistic services and interventions to help people with dementia find activities that are best suited for them to reduce the negative symptoms of dementia and improve their overall quality of life. This research is intended to review the current data and compare outcomes to identify the most common and most effective forms of interventions to use with people who have dementia.

**\*Is Acupuncture as Effective as Conventional Medicine in Managing Migraine?**

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Eunyoung Lee  
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*School of Nursing*  
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**Abstract:**

Migraine is a complex and multifactorial brain disorder affecting 15.8% of people over 18 years and over, approximately 21.9% of women and 8.1% of men in the United States (Pleis et al. 2010). It costs billions of dollars annually in direct and indirect healthcare and school and work absenteeism. Until this date, there have been no medications that were designed with the specific purpose to cure migraine attack, which prompts a search for alternative interventions such as acupuncture that could be valuable in treating migraine headache.

The purpose of this integrative review paper is to assess the effectiveness between acupuncture and conventional drug in treating migraine. Acupuncture is an alternative to mainstream pharmacological management in migraine. With many recent large-scale studies using advanced technologies, there is evidence to support acupuncture as an effective migraine treatment without side effects. Ten reviewed papers were varied considerably in study design and quality. The findings indicate that there are statistically significant increases in the percentage of responders and decreases in rescue medication suggesting acupuncture is an effective treatment for migraines without the adverse events of standard pharmacological management.

The evidence suggest that acupuncture should be considered as a first line treatment for chronic migraine, particularly in patients who cannot tolerate side effects from the medications. In the US, there are already guidelines to support acupuncture treatment in migraine. There are still needs to optimize the full potential of acupuncture in the treatment of migraines.

## **Let's Talk About Sex: The Importance of Including Human Sexuality Education in the Social Work Curriculum**

Mitra Karimi-Taleghani

*School of Social Work*

### **Abstract:**

This paper explores the importance of understanding human sexuality as it relates to social work. Various issues related to human sexuality are discussed to support human sexuality education as a mandatory component of the social work curriculum. Through research and the implementation of several theoretical frameworks the author supports the hypothesis that comprehensive education on human sexuality is necessary for the success of aspiring social workers. Intersectionality, Feminist, and Social Constructionist theories serve to investigate the taboo surrounding sex education as well as the effects of socially constructed gender expectations. Then, policy is applied to emphasize the Council of Social Work Education's dedication to creating a social work curriculum that addresses diversity. The author suggests ethical implications if human sexuality education is not made mandatory as part of the curriculum for would-be social workers. The author concludes that, lacking proper knowledge of the diversity which exists within the spectrum of human sexuality and culture can seriously hinder a social worker's ability to be fully cognizant of their client's issues. This may result in misdiagnosis and probable obstruction of a client's right to self-determination.

## Lived Experiences of Ugandan Parents with Children Who are Disabled

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*School of Social Work*  
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### **Abstract:**

According to a 2006 survey, 7.2% of the Ugandan population is living with a disability. Thirty percent are children. Despite significant progress at a policy level, with the Ugandan government signing the UN Convention on the rights of the Child and the UN Convention on the Rights of Persons with Disabilities there is an implementation gap. Many people living with disabilities in Uganda face stigma and discrimination and despite having a policy of Universal Primary Education only 2% of children are graduating to secondary school. A research team consisting of a MSW faculty member and five MSW students conducted semi structured interviews with 16 Ugandan parents. This exploratory research study examined the lived experiences of parents caring for children with disabilities in the capitol area of Kampala Uganda. The interviews were conducted, audiotaped and transcribed for data analysis. Emerging themes included abandonment, isolation, role of father and need for advanced medical and technological services. Significance of the research study suggests a call for Schools of Social Work to address issues of global human rights with their students, and for American Schools of Social Work to collaborate with schools of social work in under resourced nations to address child disability issues from a policy and practice perspective. The most significant aspect of the study is to develop transcultural disability curriculum to train and prepare MSW students for service delivery to address the parental concerns about their lived experience caring for children with disabilities in a under resourced country.

**\*Menopause Treatment Recommendations for the Advanced Practice Nurse**

Shannon Dechant

*School of Nursing***Abstract:**

The Women's Health Initiative (WHI) directed by the National Institutes of Health (NIH) drastically changed the treatment of menopause over the course of a decade. While aimed at discovering best practices and treatments for women, it may have caused providers and patients to question and fear treatments that may improve quality of life as well as provide health benefits. In the years following the Women's Health Initiative, use of hormone replacement therapy dropped from 22% to just 4% (Hodis & Mack, 2014). The fear was increased risks of breast cancer and cardiovascular events. Menopause symptoms may be severe for many women and affect nearly every aspect of their lives. Hormone replacement therapy is the most effective treatment for vasomotor, mood, vaginal, and urinary tract symptoms of menopause. The follow up and more recent studies to the Women's Health Initiative have discovered that the risks of breast cancer and cardiovascular disease may not be as significant as once thought; that there may be a protective factor to hormone use. The risks or lack of risks may be more related to age and proximity to menopause. While there are some relative contraindications to hormone replacement therapy, symptomatic women should be given the opportunity to discuss hormone use with the provider and perhaps even have a trial of treatment. Each woman should be evaluated individually based on symptoms and past/family medical history. Treatment should be based on symptoms and providers should prescribe the lowest effective dose for the shortest period of time needed.

## **Mental Health and College Athletes: Implications for Social Work Practice**

Julia Scales

*School of Social Work*

### **Abstract:**

While colleges and universities pride themselves on top-notch facilities, coaches, and trainers; athletes are truly the bread and butter of college athletics-and often the ones who are quietly suffering with common mental health issues. The purpose of this directed study is to understand the current plight of college athletes, in terms of their mental health. This directed study also hopes to shed light on the areas that social work practices could benefit the college sports world.

## **Mental Health in the African-American Community**

Annie Lockett

*School of Social Work*

### **Abstract:**

The African-American community has not always had the privilege of receiving mental health services equal to that of their White counterparts. The challenge of having to cope with mental health issues outside of professional care has had a great deal of generational influence on the African-American community's attitudes and perceptions regarding mental health. The theoretical frameworks of Social Learning and Social Constructionism will provide a lens to understand mental health concerns in the African-American community. A qualitative research study was conducted with 12 African-American men and women utilizing semi-structured interviews with inquiries about their attitudes regarding mental health. Based on the coding procedures for this study, three major categories related to mental health emerged: (1) Attitudes Regarding Quality of Treatment Based on Race, (2) Perceptions of Others with Mental Illness, and (3) Restoring Mental Health. Recommendations from this study include addressing the advantages and disadvantages to using African-American clergy to address issues of mental health and to encourage clinicians to use pop culture depictions of African-American characters with mental health disorders as discussion points with their African-American clients.

## **\*Myofascial Thickness Changes: A Pilot Study Comparing Compression vs. Decompression Techniques**

Brent Harper

*Department of Physical Therapy*

### **Abstract:**

**Purpose:** The Fascial Manipulation Method (FMM) is a biomechanical assessment system of fascia that has identified specific fascial locations where dysfunction commonly occurs. FMM follows constructs including regional interdependence, planar and multi-planar constructs, and is supported and validated by histological research and anatomical dissections. The purpose of this study is to utilize gray scale (B-mode) real time ultrasound (RTUS) to measure myofascial tissue thickness changes from two different types of myofascial interventions compression (tangential oscillations) vs. decompression (cupping) at specifically identified anatomical connective tissue locations as described by the FMM.

**Methods:** A small cohort of subjects will be recruited and randomized into two groups: a compression (tangential oscillations) group and a decompression (cupping) group. Myofascial thickness measurements will be taken pre- and post-intervention. Intra- and inter-group connective tissue measurements will be statistically analyzed with SPSS.

**Results:** Data is still being analyzed at this time.

**Conclusion and Discussion:** Research limitations for myofascial interventions are primarily due to a lack of objective tissue change measures. This study may add validity to none, both, or one type of soft tissue intervention (compression vs. decompression). This research may provide more objective data to clinical research studies involving these myofascial interventions.

## Postpartum Depression and women of Low Socioeconomic Status

Laken Hibbitts

*School of Social work*

### **Abstract:**

Postpartum depression affects 10-20% of women after childbirth and can have severe consequences on women's lives, the lives of their children and the entire family. This research examines how women of low socioeconomic status experience unique challenges and barriers in the process of diagnosis and receiving treatment for postpartum depression. This research uses a qualitative data analysis of blogs written by women experiencing PPD and identifies common themes among women experiencing PPD. Stressors that significantly impact these women relate to financial stressors and coming from a lower SES background. Furthermore, this article examines feminist and attachment theories to attempt to more adequately understand unique issues that women of low SES encounter. Clinicians can tailor practice to be more individualistic and empower these women to identify and seek treatment for problems with postpartum depression. Additionally, policy changes by employers, insurance carriers and government can play a pivotal role in decreasing rates of PPD and supporting women and their families in the period after childbirth.

## **Practice Models for Co-occurring Substance Use and Trauma Among Veterans**

Kaley Kidd

*School of Social Work*

### **Abstract:**

Recent studies have shown that the treatment of comorbid PTSD and Substance Use Disorders is important in achieving and maintaining abstinence from substances. Current research also indicates that it is essential for individuals to receive early PTSD treatment in addition to substance use treatment in order to maintain long-term abstinence. Integrative treatments have become popular because they have been shown to be beneficial in addressing substance use and trauma simultaneously. The purpose of this paper is to add to the current knowledge base in social work, specifically in community-based family practices, by describing a harm reduction model for treatment for these disorders. The goal is to explore the current research, theories, policies, and practices to help clarify the impact on the clinical services offered to the veteran population. This paper also highlights the insights of professionals' perceptions about veterans and the current practice model being used for treatment.

## **Preventing Hospital Readmissions Among Patients with Mental Health and Substance Use Disorders**

Amanda Wilmoth

*School of Social Work*

### **Abstract:**

This paper examines the prevention factors that reduce hospital readmissions among patients dealing with mental health and substance use issues. Specifically, discharge planning and treatment options will be examined to find out how readmissions can be decreased. For years, mental health and substance use treatment has been unsuccessful in lowering the readmission rate for patients. This paper seeks to find why that is and what can be changed in the field. The issue of multiple readmissions for mental health and substance use issues and possible solutions will be examined through the lenses of systems theory, crisis theory and empowerment theory. Examining current practice approaches and upcoming policy changes will give perspective to how this issue is evolving, even at the present moment. This issue is important to the field of social work because if positive treatment plans and discharge planning options can be identified for these patients, it is more likely that the issue of substance use will be reduced among all individuals and hospital readmissions will be decreased.

## **Removing the Blinders: Examination of Black Students and Faculty Interactions While Improving PWIs Retention Rates of Black Students**

Kyle Lynch

*School of Social Work*

### **Abstract:**

As a social worker, odds are you have already come into contact with someone battling substance abuse issues. It is also likely that you will one day be asked to treat someone battling substance abuse issues, even if that is not the initial reason why the prospective client has been placed in your client list. While medical literature provides invaluable insight and is the most reliable source for information, what about what we see in television and film? Many in our society get their information and sometimes shape their views based on what they see from this medium. Is what Hollywood is producing accurate? The objective of this report is to analyze various depictions of substance abuse portrayed in television and film, examining what is most realistic, as well as exploring, among other facets, the prevalence of substance-related disorders in our society, the damaging role stigma plays on numerous fronts, and the theory, policy, practice, and research-related matters associated with this topic all in an effort to improve the social worker's understanding about substance abuse and offer a broader view on the issue itself. While there are numerous Hollywood productions, past and present, which have tackled the subject of substance abuse, many features in recent years have delved deeper and offered more realistic portrayals than what's been produced for audiences in the past.

## **Risk Factors That Can Lead Veterans To Experience Homelessness**

Lauren Rose

*School of Social Work*

### **Abstract:**

Homelessness is a widespread problem that can impact all aspects of an individual's life. This paper focuses on the risk factors that can lead a Veteran to become homeless. The primary risk factors that will be discussed and analyzed within this study include: mental health problems, substance abuse issues, and lack of community supports. This social problem will be explored through Systems Theory, Empowerment Theory, and Maslow's Hierarchy of Needs. Public supports such as the Housing and Urban Veterans Affairs Supportive Housing (HUD-VASH) program will provide resources for community change and future programs. As more information is known about the risk factors Veterans can face, individuals and communities will have the ability to work to end homelessness nationwide.

**Selective Mutism: Enhancing Understanding and Improving Treatment Approaches**

Melissa Gibson

*Department of Communication Sciences and Disorders*

Kelly Decao

*Department of Communication Sciences and Disorders*

Kenzie VanDerkwerker

*Department of Communication Sciences and Disorders*

Katie Weaver

*Department of Communication Sciences and Disorders***Abstract:**

Many individuals consider selective mutism as selectively choosing to not speak in specific situations or to specific people. However, current researchers are arguing that selective mutism is a complex childhood anxiety disorder, which impacts a child's ability to speak in certain situations or with certain listeners. This presentation leaps into the myths and facts about selective mutism, the impact of selective mutism on learning outcomes, and the evidence-based intervention approaches.

## **Sensory Integration's Effectiveness for Facilitating Independence in Occupations for Children with Autism**

Whitney Hill

*Department of Occupational Therapy*

### **Abstract:**

Children with autism have difficulty processing sensory stimuli, which in turn affects their ability to perceive and interact with the world. Difficulties in sensory processing that occur in children with autism are significant because the self-stimulatory behaviors and inability to concentrate on a task disrupt and inhibit their ability to participate in home, school, play, and communication activities. Children with autism may need assistance to register, process, and integrate sensory inputs to be able to engage with their environment.

Sensory integration (SI) therapy is based on the establishment that the foundation of learning skills relies on the processing of sensory information neurologically. During SI, therapists gradually introduce the child to sensory stimuli and use activities that allow the child to receive sensations through meaningful, playful, and goal directed activities. When sensory stimulation is provided in appropriate doses, it is believed to directly impact the nervous system which results in improved behavior, attention, and learning.

The goal of this evidence synthesis is to evaluate the research on the effectiveness of sensory integration therapy for children with autism because occupational therapists want and need to know how sensory integration influences a child's occupational performance and if SI helps children reach their individualized goals.

The results of the studies analyzed suggest that occupational therapy using SI is valuable for children with autism who have difficulties processing sensory information. All of the studies found that there were functional behavior changes and progress toward individual goals that occurred in children with autism during SI therapy. The children in the studies made gains in several areas such as play, social participation, and self-care. The most current evidence proposes that occupational therapists can use SI for children with autism as it allows them to develop the sensory and motor skills necessary to functionally participate in meaningful occupations.

## Social Participation and Elders with Chronic Stroke

Traci Edwards

*Department of Occupational Therapy*

### **Abstract:**

The purpose of this evidence synthesis is to investigate whether a targeted group intervention for persons with stroke to improve social participation is beneficial. A stroke can disable an individual physically, mentally, and emotionally, therefore, individuals may experience difficulty participating in meaningful and purposeful occupations such as work, leisure, and social participation. Social participation, as an occupational category, involves the individual engaging in everyday activities with peers within or outside the community. Group therapy focused on social participation aims to restore the social participation the individuals once had prior to their stroke. Group therapy can take the form of day programs, support groups, etc. The databases searched to answer the clinical question were CINAHL, MEDLINE, and PsycINFO. The keywords used were social participation, social engagement, social activities, and chronic stroke. The total number of studies located were 52, 15 studies were reviewed, and seven studies were selected for inclusion. Included studies contained large sample sizes, assessor blinded studies, quantitative studies, randomized controlled trials, and participant's subjective experiences. Excluded studies contained the caregiver's subjective experience, strokes among children, secondary sources, and no randomization of participants. The evidence shows that participants 65 years of age or older with stroke who participated in a group intervention did have an increase in social participation. The individual with chronic stroke may struggle with engaging in activities and socially participating in the community after short term rehabilitation. Occupational therapists can change their daily practice by shifting the focus of group therapy from the first months after an individual experiences a stroke to long term group therapy. The literature reviewed showed the effectiveness of group therapy along with comparison of group therapy and no group therapy. More research is needed on how group therapy increases social participation for elders 65 or older with chronic stroke.

## \* State of the States in Self-Direction for Individuals with Intellectual and Developmental Disabilities

Matthew Decarlo

*School of Social Work*

David Cacamis

*School of Social Work*

Matthew Bogenschutz

*Virginia Commonwealth University School of Social Work*

Jennifer Hall-Lande

*Institute on Community Integration at the University of  
Minnesota*

### **Abstract:**

**Background and Significance:** An estimated 13.2%- 15% of the United States population has an intellectual or developmental disability (IDD) (Boyle et al., 2011). In place of institutional services, 90% of individuals with IDD receive home and community-based services (HCBS) (Ng et al., 2015). Within the HCBS context, self-direction has emerged as a model of service delivery that provides individual with IDD greater control over their supports and daily lives. The purposes of this study were to describe how administrators understand self-direction as well as the salient forces that influence implementation self-directed service options.

**Method:** Data were collected over a one-year period (2015-2016) via phone interviews with state-level developmental disabilities program administrators and directors.

Representatives from 34 of 41 states with self-direction participated in the study. Directed content analysis incorporated theoretical and empirical a priori categories as well as categories inductively derived from the data set. The research team included a primary coder, a peer reviewer, and an auditor.

**Results:** Program administrators presented a unique understanding of self-direction. Aspects of self-direction as described by administrators—including flexibility, self-determination, individualization, and rationalization of service delivery systems—are well-grounded in the self-direction literature. However, administrators' responses also challenge the self-direction literature by favoring employer authority over budget authority, deemphasizing person-centered planning, and conceptualizing self-direction as a spectrum of options. Salient forces impacting implementation included culture, legislation, advocacy, program design, resources, and technological coherence.

**Conclusions:** The results of this study extend the current understanding of self-direction in the United States. Administrators' understandings of self-direction represent both the progress that self-determination movement has made in reframing disability supports and the challenges of facilitating self-determination in a fiscally conservative policy environment. Additionally, administrator perspectives can help disability advocates target critical areas in the implementation process to expand opportunities for self-determination for all individuals with disabilities.

## Student Therapist Person-First Language and Disability Focused Simulations

Sarah Miller  
Rene Huth  
Jordan Tucker

*Doctor of Physical Therapy*  
*Doctor of Physical Therapy*  
*Jefferson College of Health Sciences Physical Therapy Assistant Program*

### Abstract:

**Background and Purpose:** Physical therapists (PT) and physical therapy assistants (PTA) are charged within their scope of practice to communicate effectively and in a culturally sensitive manner. Person-first language is one communication technique shown to remove preconceived biases about a patient's diagnosis, age, sex, race/ethnicity or culture. To date there is limited research focused on person-first language in physical therapy practice; therefore, the purpose of this study is to investigate whether PT and PTA students' ability to recognize person-first language improved following participation in simulations emphasizing seeing through the eyes of the patient with a disability. Simulation experiences provide a tangible and safe environment for students to practice their skills.

**Methods:** Paired second-year PT and PTA students participated in lab-based simulations focused on various disabilities. Simulated patient cases included cognitive, developmental, and learning disabilities; sensory and physical impairments; as well as various cultural, linguistic, and socioeconomic backgrounds. PT/PTA students switched roles between therapist and patient to practice first-person language while engaging in everyday day patient care activities. Although participation in course simulation activities was required, students were not obligated to complete pre- and post- simulation activity surveys. **Results:** Data analysis will focus on answering the research question: Did students' recognition of person-first language improve following disability-focused simulations? Results and conclusions of this study are forthcoming. This study was a collaborative effort between Radford University Doctorate of Physical Therapy Program and Jefferson College of Health Sciences Physical Therapy Assistant Program and supported by the Radford University High- Impact Practice Teaching and Learning Grant.

## **Substance Abuse Treatment; the Hidden Truths**

Crystal Alderman

*School of Social Work*

### **Abstract:**

Although substance abuse treatment has been a long-standing societal issue for decades, the recent declaration of crisis by the state of Virginia has placed the search for solutions in high gear. Policies suggesting prohibition and criminalization as a solution for substance abuse issues have proven to be ineffective which has recently led to the development of policies such as The Drug Addiction Treatment Act and the CARA bill. These policies are explored at length to further investigate the shift in perception, which will aid in the destigmatization of addiction. This paper synthesizes barriers to treatment while providing an overview of medication-assisted treatment (MAT), Narcotics Anonymous (NA) and Alcoholic Anonymous (AA). The difference in cultures between NA and AA is emphasized with the belief that education is key to providing treatment. Furthermore, research is presented which provides information on the barriers to participation in 12-step groups while utilizing MAT in the New River Valley. Research recommends that requiring individuals receiving MAT to attend 12-step groups may not be beneficial without proper education and recommends that these individuals do not divulge their use of MAT within 12-steps groups. Social constructionism, social problem solving and the critical theory is utilized to discuss stigma and to present ways to improve substance abuse treatment on a micro and macro level. This paper encourages the discontinuation of the typical substance abuse track used by many professionals and recommends that a client-centered approach be used to navigate substance abuse treatment options in order to find appropriate treatment for each individual focusing on intersectionality and personal preference.

## **Substance Through the Lens: Dissecting Depictions of Substance Abuse in Television and Film**

James Massei

*School of Social Work*

### **Abstract:**

As a social worker, odds are you have already come into contact with someone battling substance abuse issues. It is also likely that you will one day be asked to treat someone battling substance abuse issues, even if that is not the initial reason why the prospective client has been placed in your client list. While medical literature provides invaluable insight and is the most reliable source for information, what about what we see in television and film? Many in our society get their information and sometimes shape their views based on what they see from this medium. Is what Hollywood is producing accurate? The objective of this report is to analyze various depictions of substance abuse portrayed in television and film, examining what is most realistic, as well as exploring, among other facets, the prevalence of substance-related disorders in our society, the damaging role stigma plays on numerous fronts, and the theory, policy, practice, and research-related matters associated with this topic all in an effort to improve the social worker's understanding about substance abuse and offer a broader view on the issue itself. While there are numerous Hollywood productions, past and present, which have tackled the subject of substance abuse, many features in recent years have delved deeper and offered more realistic portrayals than what's been produced for audiences in the past.

## **\*The Challenges and Successes During a 12-week Exercise Program for Post-Menopausal Women: A Qualitative Study**

Ellen K. Payne  
Joan A. Cebrick-Grossman

*Department of Health and Human Performance  
University of Scranton Department of Exercise  
Science and Sport*

### **Abstract:**

Commitment to an exercise and weight-loss program can be challenging. One way to improve retention is through self-monitoring techniques such as weekly journaling. During our study comparing high-intensity interval training (HIIT) and walking as forms of exercise among post-menopausal women we attempted use qualitative methods to explore what the participants experienced. The purpose was to investigate the thoughts and feelings, specifically related to the challenges and successes, participants experienced while completing a 12-week exercise program. Participants (N=18) were post-menopausal (56  $\pm$  5.94 years), sedentary females, randomly assigned into one of two exercise groups. Both groups exercised five days a week for 12 weeks. At the end of each week, participants submitted their answers to five open-ended questions about their experience in the program. This was done through an email exchange with a member of the research team. Additional follow-up questions were asked when needed. A total of 187 weekly email exchanges were collected and coded using Dedoose software. Data were analyzed via a general inductive approach to identify significant themes. A constant comparison process was employed during analysis to identify commonalities and differences between the two groups and among individuals. Trustworthiness was established via peer review. For both groups, the major theme of support developed. This included support from family, peers, and the researcher. Between the groups different challenges were identified including time commitment and weather challenges for the walking group and the intensity of the workouts for the HIIT group. When working with clients attempting to lose weight and commit to an exercise program, support is a key component of success. When possible, family, co-workers, and others should be included in the process to help participants reach their goals. Weekly check-ins with a member of the research team is another way to facilitate program compliance and retention.

## **The Effectiveness of Community Mobility Interventions in Changing Levels of Community Engagement in Non-Driving Older Adults**

Kellie Sparrow

*Department of Occupational Therapy*

### **Abstract:**

The purpose of this evidence synthesis is to evaluate the evidence on the effectiveness of community mobility interventions in changing the amount which non-driving older adults engage in their communities. Community mobility relates to individuals' ability to mobilize in the community whether that is by driving, walking, or accessing public transportation (American Occupational Therapy Association [AOTA], 2014). It is shown that older adults who can no longer drive are susceptible to depression and lack of community engagement resulting from their loss of mobility (Foley et al., 2002). In the United States, over 50 percent of non-driving older adults who do not have other transportation options will rarely leave their homes (Smart Growth America, 2016). Having a way to access community engagement opportunities is important to an individual's well-being (Foley et al., 2002).

Older adults having the ability to engage in the community facilitates increased interactions in other activities such as shopping, volunteering, and social and leisure participation in the community (AOTA, 2014). Therapeutic services offered by community mobility programs include identifying alternatives to driving through public transportation and educational training on how to utilize services to help older adults who no longer drive stay mobile within their communities (Stav, 2014). One of the largest barriers for community mobility programs is finances, which can be seen through insufficient funding for program development, insurance companies not offering reimbursement, and clients being unable to afford to pay out of pocket for services (Stav et al., 2011). This can be the cause for non-driving older adults to not participate in community mobility programs. Community mobility programs should be recognized and developed so that older adults may have readily available resources and access to education on options to assist them in continuing to engage in their communities.

## **The Effectiveness of Hippotherapy for Increasing Postural Stability in Children with Cerebral Palsy**

Brittany Kaminsky

*Department of Occupational Therapy*

### **Abstract:**

This evidence synthesis critically looks at the effectiveness of hippotherapy for increasing postural stability in children, ages 4-12 years old that have cerebral palsy. Through the critical analysis of eight studies, the support for hippotherapy as an intervention in occupational therapy practice, such as increase in balance, trunk and head control, and gross motor function has been highlighted.

## The Effectiveness of Nintendo Wii as an Intervention to Increase Balance for the Well Elderly

Aura Clarke-Walker

*Department of Occupational Therapy*

### **Abstract:**

A large number of older adults fall each year. Impaired balance is a common byproduct of the ageing process that leads to falls. These falls yield neurological and physical injuries that result in decreased functional mobility and occupational performance.

The Nintendo Wii video game console and the Wii Balance Board (WBB), allow players to physically interact with games and challenge their balancing skills by moving the wireless controller, pressing its buttons, or shifting their weight on the WBB according to the instructions on the screen. The Wii is currently used by Occupational therapists and playing with the Wii holds the potential to strengthen balance and other motor skills in a simulated environment, resulting in better participation real environments. The purpose of this evidence synthesis is to investigate if the effectiveness of the Nintendo Wii as an intervention to improve balance for the well elderly.

CINAHL and Psych INFO databases were used find the seven studies selected for this evidence synthesis. The search terms used were Wii, elderly, aged, older, elder, geriatric, balance, occupational therapy, and rehabilitation.

All selected studies indicated that balance improved when the Wii intervention was used and that it was equal to or more effective than traditional intervention. Both Wii intervention with and without supervision were effective for improving balance. All studies used the same Wii materials for sessions lasting 25 minutes to 45 minutes long, from 2 days to 5 days a week, and occurred in retirement communities or clinical settings.

The evidence supports the Wiis use as an intervention in clinical settings and senior communities. Occupational therapists can easily adapt the Wii and recommend its use for home programs. Additional research is needed to discover a just right frequency and duration to create a best care standard for clients.

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## The Effectiveness of Splinting in Adults with Carpal Tunnel Syndrome

Melissa Beckler

*Department of Occupational Therapy*

### **Abstract:**

This is an evidence synthesis regarding the effectiveness of splinting as a standalone treatment in the treatment of carpal tunnel syndrome (CTS) among working adults. CTS is a median nerve entrapment disorder which is one of the most common work-related injuries. For working adults with CTS, their job performance can be impeded by decreased function and/or disrupting symptoms. This evidence synthesis was conducted through a literature review of the most relevant research articles concerning the effectiveness of splinting as a standalone treatment for CTS. Results from the evidence synthesis indicate that splinting is effective in managing the symptoms associated with CTS on a short-term basis and may improve functional ability as well. However, the effectiveness of splinting is dependent upon several factors including the severity and duration of CTS symptoms and the level of prior median nerve damage. OTs should keep in mind that if a client begins splinting soon after the onset of CTS symptoms there is a greater likelihood of success in splinting and a higher possibility of preventing the progression of CTS. As a conservative measure for working adults with mild to moderate CTS, splinting is effective in reducing symptom severity and improving overall function.

## **The Effects of Burnout and Secondary Trauma on Hospice Workers: An Analysis of Self-Care**

Chelsea Fender

*School of Social Work*

### **Abstract:**

This study explores the benefits of self-care techniques in hospice workers who may be susceptible to experiencing burnout and secondary trauma. The effects that burnout and secondary trauma can have on hospice workers are immense and may impact the workers' professional and personal lives in many ways. This study analyzes the benefits of self-care through the lenses of Maslow's theory of basic needs and learning, systems theory, and the strengths perspective. By exploring self-care as central to achieving self-actualization, this study identifies many ways individuals' can work to their full potential to practice their self-care needs. This study identifies the importance of maintaining equilibrium in all areas of an individual's life so that the chances of experiencing burnout and secondary trauma are decreased. This study not only considers how social work theories help to understand the benefits of self-care techniques, but also explores how social policies, research, and practice help shape the importance of self-care in hospice workers. Additionally, this study identifies implications that social workers can use to help address self-care in their careers and daily lives.

## **\*The Effects of Kinesiotaping on Unilateral Rib Fractures**

Christine Evans  
Kasondra Frango  
Shana Harmon  
Dustin Spivey

*Department of Physical Therapy*  
*Department of Physical Therapy*  
*Department of Physical Therapy*  
*Department of Physical Therapy*

### **Abstract:**

**Purpose:** Rib fractures are extremely painful and patients usually do not experience relief with pain medication or strong analgesics. This pain can lead to secondary complications such as pneumothorax or pneumonia. Kinesiotape, an elastic tape, may be utilized to inhibit or facilitate muscles in order to improve functional mobility, increase proprioceptive feedback, and improve joint alignment. Previous studies have demonstrated Kinesiotape as a beneficial treatment to decrease pain and increase functional outcomes in several musculoskeletal conditions. In one retrospective study, Kinesiotape decreased pain associated with traumatic rib fractures, but that study did not investigate effect on respiratory function. The current study tests whether Kinesiotape could be implemented as an inexpensive option to decrease pain and increase patient's Forced Vital Capacity, Minute Ventilation, and Tidal Volume. Decreased pain may prevent secondary respiratory complications and reduce hospital analgesic use.

**Methods:** A case series was performed with three subjects that had Kinesiotape applied and received physical therapy. The Kinesiotape was applied to the fractured ribs and respiratory measures were taken prior to treatment, immediately after taping, and then once per day for the duration of the hospital stay. Forced Vital Capacity, Minute Ventilation, and Tidal volume were assessed using a spirometer. Pain was assessed using the Visual Analog Scale.

**Results:** Pain decreased by an average of 15.67 mm on the VAS. Vital capacity improved by an average of 165.3 mL and minute ventilation improved by an average of 431 mL/min. Tidal volume decreased by an average of 341 mL over the course of the hospital stay for the three subjects.

**Discussion:** Kinesiotape could provide a cost efficient alternative to narcotics if demonstrated to reduce pain in patients with traumatic rib fractures. Additionally, Kinesiotape may reduce the risk for secondary complications and decrease the length of the hospital stay.

## **The Overlapping: Reported Barriers to Substance Abuse and Mental Health Services**

Mandy Harrell

*School of Social Work*

### **Abstract:**

This is an integrative paper with the centralized theme concerning the overlapping barriers to substance abuse and mental health services. The paper utilizes the following theories: System theory, Functionalism, Rational Choice Theory, Ecological Theory, and Conflict Theory. The theories purpose is to explain the initial thought of why barriers occur, the reinforcement of the findings, which are portrayed in the result section of this paper, and to give additional support to suggested interventions. Furthermore, this paper also includes the methodology and results obtained from a systematic literature review. The objective of the systematic literature review was to accumulate, overlapping barriers to substance abuse and mental health services. This paper takes into consideration diversity in terms of intersectionality. To conclude this paper inserts policies that have significant implications towards accessibility and affordable substance/mental health services; and implies knowledge, understanding and overall training of those that who work in relation to substance abuse and mental health services.

## **The Presence of *Erysipelothrix rhusiopathiae* in the Mucoprotein Coating of Fish Found in the Peruvian Amazon**

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*School of Nursing*

### **Abstract:**

*Erysipelothrix rhusiopathiae* is the main cause of Fish Handler's Disease, a zoonotic disease that causes severe infections, joint stiffness and lymph node swelling in humans. *E. rhusiopathiae* is found in the mucoprotein coating of fish. *E. rhusiopathiae* is contracted by humans when their skin is punctured or cut with a spine or scale of an affected fish, or if they get some of the mucoprotein coating into an already existing skin abrasion. The fish themselves are not affected by the bacteria, they act only as carriers of the disease. This disease has particular relevance to the Madre de Dios region of Peru, both because many of the local people depend on fish as food and a source of income, and because recent completion of the trans-Amazon highway has increased commerce and the spread of invasive species into the region. There is no literature that shows that *E. rhusiopathiae* is in this region of the world, however there is no record of it being tested for either. Fish that were tested were caught in the Rio Las Piedras, a tributary of the Madre de Dios, several small streams feeding into the Las Piedras. In addition, we tested a variety of fish directly from the fish markets of Puerto Maldonado, the primary urban center in the region. Each fish was swabbed down the ventral side, on both flanks and along the dorsal spine. Selective and differential media and staining techniques were used to confirm the presence of *E. rhusiopathiae*. Specifically, samples were grown on Triple Sugar Iron agar, tested Streptomycin resistance, a catalase test, and finally a gram stain. In total 20 fish were tested, all from various parts of the river and small streams. Fish tested included: Siluriformes, *Pseudoplatystoma*, *Piaractus brachypomus*, and several unidentified species. None of these fish tested positive for *E. rhusiopathiae*.

## **The Relationship Between Parental Substance Abuse and Child Welfare: An Analysis from the Social Work Perspective**

Leanna Stone

*School of Social Work*

### **Abstract:**

Parental substance abuse is associated with higher rates of child maltreatment and increased negative outcomes for families involved in the child welfare system. Families who are impacted by substance abuse often face multiple obstacles when seeking treatment. One serious obstacle is that the child welfare system views the child as the client, while substance abuse treatment providers view the parent as the client. These opposing viewpoints often create friction amongst the agencies and create additional barriers to coordinating treatment for these families. This study explores the relationship between child welfare and parental substance abuse from the social work perspective. Findings suggest that substance abuse education and training for child welfare workers, collaboration amongst child welfare agencies and substance abuse treatment providers, adapting a family-based approach to treatment, and policy change in child welfare could aid in providing the best quality of services to these families. This study applies family systems theory and conflict theory to this issue, and provides insight into research, policy, practice related to this topic.

## **The Relationship Between Place of Living and Employment for Intellectually/Developmentally Disabled Population from The Social Work Perspective**

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*School of Social Work*

### **Abstract:**

This study explores the relationship between place of living and employment for people with intellectual and/or developmental disabilities. Lack of independent living opportunities and very low rates of employment are major problems faced by this population. This study intends to explore what effect different living situations have on employment. This population represents many people in the United States alone. Concurrent with the closure of most large institutions, independent living and community employment remain challenges for this population. People who do not live independent are also unlikely to work in the community. This study examines the issues from a social work perspective integrating theory, policy, practice and research. This situation will be interpreted through the lens of Social constructionism, Social Disability Theory and Systems Ecology Theory. This study is also informed by the concepts of community-based family practice.

**Key Words:** intellectual and or developmental disabilities, employment, living situation, community integration, inclusion.

**\*The Relationship of Muscle Thickness to Rotator Cuff Muscle Function (Strength): A Pilot Study**

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**Abstract:****Background and Purpose:**

Muscle and tendon thickness varies between subjects and at various anatomical locations. In the literature, muscle thickness measures using gray scale (B-mode) real time ultrasound (RTUS) of the supraspinatus rotator cuff muscle have demonstrated high interrater and intrarater reliability. The purpose of this study is to assess normal subjects in order to use grip strength and hand-held dynamometer metrics to determine if there is a relationship between supraspinatus muscle thickness and muscle function (strength).

**Methods:**

Subjects will be recruited locally as a sample of convenience. Each subject will have supraspinatus musculature measured using B-mode RTUS which will be compared to the two metric tests of grip strength and hand-held dynamometer strength to assess relationship. Data will be assessed using SPSS statistical analysis.

**Results:**

Data is still being analyzed at this time.

**Conclusion and Discussion:**

Gray scale (B-mode) real time ultrasound (RTUS) is a more affordable method of imaging for tissue based assessments and diagnostics as compared to magnetic resonance imaging (MRI) or computed tomography (CT). RTUS do not expose the subject to potentially negative radioactive emissions. A RTUS unit costs approximately \$25,000, compared to \$100 to \$1000 each for a hand grip strength or hand-held dynamometer device. Strength deficits may be the initial indicator of rotator cuff function deficiencies. If strength correlates with muscle thickness, then the less expensive assessment options may be the most cost effective initial assessment methods.

## Trauma Interventions with African American males

Danielle Johnson

*School of Social Work*

### **Abstract:**

The purpose of this study is to explore unresolved trauma within African American Males as well as to provide insight to the daily problems this vulnerable population faces. Through this topic I wanted to discover and research the challenges associated with Trauma, as there appears to be an influx of crime within urban areas across the United States. With this information I want to apply micro, mezzo and macro levels of intervention. Particular detail was shown through micro social work to study how effects of daily exposure to traumatic events present differently in these youth and why. As a social worker I want to stress the need for cultural competency principles in practice with diverse groups. Through research I was able to recognize the extent to which a culture's structures and values may oppress, marginalize or alienate. Ultimately I would like to identify clinical interventions to work with African American males that are exposed to trauma and diagnoses with PTSD.

## Utilizing Simulations to Engage Health Care Students in Collaborative Care of a Geriatric Patient

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### Abstract:

#### Background:

Simulation has been shown to promote interprofessional collaboration within healthcare teams and can meet the criteria for interprofessional education (IPE). The Clinical Simulation Center at Radford University has been developing interprofessional simulations to incorporate into the physical therapy and nursing curriculums. In a two-part simulation, professional students collaborated to provide patient centered care for an older adult diagnosed with diabetes and dementia. Students worked in interprofessional teams, where students either actively participated in patient care or assessed the team performance.

#### Methods:

This study explored the influence of interprofessional simulation on; (1) understanding the roles of healthcare professionals in the home setting, (2) beliefs towards interprofessional collaboration, and (3) comfort with working with others. Subjects included 28 physical therapy students and 25 nursing students from two institutions in Southwest Virginia. Participants completed a pre and post survey using the Interprofessional Socialization and Values Scale (ISVS). The outcomes were analyzed utilizing a Wilcoxon matched pairs test.

#### Results:

There was a statistically significant improvement in all three categories of ISVS: 1) self-perceived ability to work with others, 2) value in working with others, and 3) comfort in working with others.

#### Conclusion:

A two-part interprofessional simulation in a home health care environment was effective in meeting the core competencies of interprofessional education. The improvements noted on the ISVS by observers of the simulation suggest that high volume simulations using interprofessional teams of participants and observers may be an effective and efficient means of integrating IPE into the professional curriculum.

## **\*Verb and Thematic Role Production in Korean-English Bilingual Children Compared to English Monolingual Children**

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### **Abstract:**

**Background:** Thematic role nouns are semantic elements that complement the concept of a verb. For example, the verb slicing requires a doer of the action (agent, chef), a receiver of the action (patient, tomato), a tool being used (instrument, knife), and a place where the action occurs (location, kitchen). Recent evidence has established that a verb facilitates its thematic role production, and syntactic constraints play one of the roles. That is, an agent and patient are required components in a basic subject/agent-verb-object/patient English sentence, and therefore more strongly facilitated compared to instrument or location. On the other hand, Korean's syntactic structure is subject/agent-object/patient-verb and often subjects and/or objects are allowed to be omitted.

**Aims/Design:** This study was to determine whether agents and patients in Korean are less likely facilitated compared to English. This study used a qualitative design as it is a case study with a small sample size.

**Methods:** we recruited 3 Korean-English bilinguals and matched 2 English monolinguals. During the experiment, English monolinguals were asked to describe pictures of scenes and tell a children's story book. Korean-English bilinguals performed the same tasks in both Korean and English. Their speech samples were transcribed. For analysis each thematic role to verb ratio was calculated in English and Korean.

**Results/Discussion:** The results supported our hypothesis because the agents were produced more in English than Korean, and the instrument roles were produced more in Korean than English. However, the patient role was produced more in Korean than English and the location role is produced more in English than Korean. This study is still in progress and additional participants are being recruited. This research will provide further knowledge regarding the role of syntax on language processing in two languages, which will lead to better assessment methods in bilingual speakers receiving speech-language pathology services.

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