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**Michael G. Parker**  
**Research & Scholarship Colloquium**  
Abstract Compendium

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**Title:** A Comparison of Functional Ability Between People with Parkinson's Disease Who Are Physically Active vs. Physically Inactive

**Authors/Affiliation:** Dakota Sweeny, Kaitlyn Schwass, Matthew Harney (Exercise Science) University of Mary, Bismarck, North Dakota

**Background:** Parkinson's Disease (PD) is a neurodegenerative disease that causes deficits in functional ability. **Purpose:** The purpose of the study is to assess the association between self-reported physical activity and functional assessment in people with PD. **Methods:** Individuals with PD were sampled from the Bismarck-Mandan community. Participants completed an informed consent, a health history questionnaire (HHQ), the Parkinson's Disease Questionnaire- Exercise, the 4-stage balance test, the timed-up-and-go (TUG) test, and bilateral grip strength assessments. Weekly physical activity was quantified in MET-minutes per week using the self-reported exercise on the HHQ. Pearson's correlations were used to assess the association between physical activity levels and the 4-stage balance, TUG, and grip strength. **Results:** Six males and two females completed testing. Participants were  $67.1 \pm 6$  years old ( $n=8$ ), had been diagnosed with PD for  $7.7 \pm$  years ( $n=6$ ), and completed  $576.4 \pm 305$  MET-minutes per week of physical activity. There was no significant association between MET-minutes per week and average TUG time ( $p > 0.05$ ), stage 4 left leg balance time ( $p > 0.05$ ), stage 4 right leg balance time ( $p > 0.05$ ), right-hand grip strength ( $p > 0.05$ ), and left-hand grip strength ( $p > 0.05$ ). **Conclusion:** There was no association between self-reported physical activity and functional assessments in this sample of people with PD. However, the results of this study are limited by the small sample size. Future research should include a larger sample size and objective measures of physical activity.

**Title:** Advanced Practice Provider Transition to PracticeProject: An Evidence-Based Practice

**Author/Affiliation:** Kimberly Albers, Shari Kuther (DNP Nursing Organizational Leadership), Helen Early (DNP Family Nurse Practitioner), University of Mary, Bismarck, North Dakota

**Background:** Without a standardized approach to transition to practice, new graduate Advanced Practice Providers (APPs) may experience delayed role acquisition, decreased competence, confidence, and skill proficiency, decreased job satisfaction, and the potential for turnover. **PICO:** For new graduate APPs that are starting their first clinical role at Sanford Health (Sioux Falls Market), how does a standardization of clinical onboarding compare to the current practice of no standardized onboarding impact APP's perceived self-confidence, competence, and role transition? **Project Interventions:** Pilot sites were asked to assign a dedicated preceptor, customize the onboarding plan and schedule, customize the skills checklist/competency per specialty, commit to a phased in approach to patient care, and attend regular brief formal check-ins. A toolkit that included a transition to practice guide, an APP onboarding plan template, and a customizable skills/competency checklist were provided by the project team. **Outcomes:** The transition to practice program provided a supportive environment for the successful onboarding of 16 newly graduated APPs and prevented 1 APP from resigning. The reported confidence levels of the APPs after three months in the transition to practice program were higher than at the time of hire. A phased in approach to seeing patients was reported to be empowering for the novice APP. All novice APPs involved in the pilot were ready for independent practice by 12 weeks. **Conclusion:** This transition to practice program design was found to be customizable to various practice settings. Due to the success of the pilot, Sanford Health has decided to operationalize this process throughout their Enterprise.



**Title:** An Analysis of the Ethics of Embryo Adoption

**Author/Affiliation:** Katherine Breckenridge (MS Bioethics), University of Mary, Bismarck, North Dakota

**Background/Purpose:** Embryo adoption is often viewed as a “pro-life” solution to rescue the “excess” number of embryonic human persons created through In Vitro Fertilization, and can be motivated by good intentions and a desire to protect the inherent right to life and dignity of every human person beginning from the moment of fertilization. However, there are several aspects of embryo adoption that must be considered before the Church condones the practice. This paper analyzes the ethics of embryo adoption through examining what occurs in the In Vitro Fertilization process that leads to so many “leftover” embryos, the laws surrounding the recognition of personhood of embryos in various states, the transfer of embryos as “property” to adopters, and the varying motivations of embryo adopters. Further, the downsides of embryo adoption are discussed such as how embryo adoption can contribute to the continuation of the IVF industry, how certain motivations for adopting, such as wanting to treat infertility or become a mother before one’s “biological clock” runs out, can impact the well-being of adoptees. The psychological issues and physical and intellectual disabilities that can ail embryo adoptees are also explored. There is further analysis of how embryo adoption fits into Catholic ethical principles such as the principle of double effect and the permanent principles of the Church’s social doctrine, as well as how embryo adoption distorts the unitive and procreative nature of the conjugal act and the viewing of children as gifts who are “begotten, not made.” The paper concludes with suggestions for morally licit ways to move forward with honoring embryonic life and solving the issue of what to do with “leftover” embryonic human persons.

**Title:** Between Hope and Harm: The Moral Dilemmas of Life-Sustaining Treatment in Children

**Authors/Affiliation:** Genevieve Vavrus (MS Bioethics), University of Mary, Bismarck, North Dakota

**Background/Purpose:** Comprehensive research examines the ethical and legal aspects of withdrawing life-sustaining treatment in children, a process multilayered with moral, cultural, and emotional complexities. Medical advances have extended survival while blurring the line between lifesaving and life-prolonging interventions, particularly in cases where continued treatment only stands to prolong an inevitable death without a meaningful chance of recovery. The nonproportionality of benefit relative to suffering is an ethically justifiable reason to withhold extraordinary care. Based on principlism, utilitarian ethics, virtue ethics, Catholic bioethics, and legal precedents, this analysis highlights the significance of the best interest standard within the context of pediatric decision-making. The research assesses the limits of parental authority, the role of ethics committees and courts, and the meaning of informed consent and assent in pediatric care. This review examines how cultural and religious beliefs interact with medical ethics, highlighting the importance of interdisciplinary perspectives. The argument for a compassionate, ethical, and legally informed framework to guide pediatric end-of-life decisions continues.

**Title:** Caffeine & Beta-Blockers in Exercise Performance

**Author/Affiliation:** Dawson Hawkinson, Moriku Hakim, Kylie Olander (Exercise Science), University of Mary, Bismarck, North Dakota

**Background:** It is known that caffeine increases heart rate, and beta-blockers attenuate heart rate. Beta-blockers are medications used to treat different conditions such as angina, cardiac arrhythmias, hypertension, and even glaucoma and migraines. Although many studies examined how beta-blockers and caffeine each affect exercise individually, few investigated the combined effects of both. **Purpose:** The purpose of this study was to examine the physiological effects of caffeine on adults with beta-blockers during exercise. **Methods:** The study involved two adults ages 51 to 57 who were currently prescribed beta-blockers and were physically active. Participants completed two sub-maximal treadmill tests, 24 hours apart, with the order of caffeine (100 mg) and placebo administered randomly. Vital signs, including heart rate (HR), systolic blood pressure (SBP), diastolic blood pressure (DBP), oxygen saturation (O<sub>2</sub> sat), and lactate levels, were measured at baseline, during exercise, and during recovery. We analyzed differences in exercise performance metrics, including VO<sub>2</sub> max, ventilatory threshold, and lactate concentration, using paired T-tests. **Results:** Resting HR was not affected but maximal HR was increased with caffeine (HR<sub>max</sub> +9.5bpm). HR in the fourth stage with and without caffeine showed a  $p=.024$ . Resting SBP and DBP increased with caffeine compared to no caffeine ( $p=.091$  and  $p=.180$ ). Peak SBP was increased by a mean of 26mmHg with caffeine compared to no caffeine ( $p=.049$ ). Peak DBP showed no change. Lactate levels post-exercise were an average of 0.95mmol/L higher after caffeine ingestion ( $p=.250$ ). There are no statistically significant values due to sample size of this study being  $N=2$ . **Conclusions:** Results of this study show that HR is not as affected as BP, specifically SBP, with the ingestion of caffeine prior to the CPET. However, both subjects were able to increase duration of the treadmill tests and achieve higher HRs with caffeine ingestion. These results support that caffeine ingestion prior to a CPET with a beta-blocker medication can lead to an increase of HR, resting BP, and peak SBP. The results do not show any significant changes to lactate with or without the ingestion of caffeine.

**Title:** Conscience, the Code of Ethics, and the Catholic Nurse

**Authors/Affiliation:** Judith Boyle (MS Bioethics), University of Mary, Bismarck, North Dakota

**Background/Purpose:** Conscience is an essential ingredient for ethical and moral comportment but has not been a well-understood concept in nursing. A well-formed conscience is an invaluable tool in navigating the increasingly pluralistic, humanistic, atheistic technological world of healthcare. All of these things have contributed to ethical dilemmas and conflicts with conscience for nurses. Conflicts with conscience cause negative effects and place nurses at greater risk of burnout. In addition, they weigh heavily on the Catholic nurse who believes in the sanctity of life from conception until natural death. Conscientious objection in nursing is a contentious issue worldwide. The latest revision of the American Nurses Association's Code of Ethics for Nurses (Code) may be in direct conflict with the conscience of Catholic nurses, creating an impediment to the provision of excellent, ethical nursing care. Although many provisions in the Code advance nursing practice, the interpretive statements are at times conflicting, and often reflect current political and social ideology that is not based on evidence. The right to conscientious objection is acknowledged within the Code however there are no protections for the nurse but rather only warnings as to the consequences which may be incurred if invoked. Catholic nurses who embrace the Catholic moral tradition should be valued and celebrated as ideals in the profession. Evidence shows that even where conscience protections are in place, nurses do not feel they can object without experiencing negative consequences. Much of the nursing scholarship surrounding conscience has been done outside the United States (US). Education, policy development, and research in the US nurse population will greatly benefit the profession, as well as Catholic nurses ensuring that all patients receive excellent, ethical nursing care.

**Title:** Developing Education Interventions to Support Nursing Leader's Confidence in Recognizing and Responding to Incivility

**Author/Affiliation:** Jaclyn Kramer, Kelly Wendt (DNP Nursing Organizational Leadership), University of Mary, Bismarck, North Dakota

**Background:** Workplace incivility remains a prevalent concern within healthcare environments, adversely affecting staff well-being, team solidarity, staff retention, patient care, and the organization's financial well-being. This Doctor of Nursing Practice project examined the impact of communication-based education interventions on nursing leaders' confidence in recognizing and responding to workplace incivility. **PICO:** At a Midwest rural healthcare organization, how does implementing communication-based education interventions impact nurse leaders' confidence in recognizing and responding to workplace incivility as compared to current practice? **Project Interventions:** Based on the literature synthesis and project site needs assessment, themes identified included education, cognitive rehearsal, and supportive policies. Project leaders identified five recommendations: 1) utilize a pre-post intervention questionnaire to assess baseline levels of confidence in addressing incivility, 2) develop communication-based education resources focused on recognizing and responding to incivility, 3) create and deploy educational scenarios utilizing cognitive rehearsal, 4) recommend revisions to organizational policies 5) utilize pre-post questionnaire to assess post-intervention levels of confidence in addressing incivility. **Outcomes:** The project was implemented over twenty-seven weeks. All five recommendations were successfully met. Project participants reported increased self-confidence in managing incivility. Project findings underscore the significance of education and skill development in enhancing nursing leaders' ability to recognize and respond to incivility effectively. **Conclusion:** Recognizing and responding to incivility education modules were designed for continued integration. Upon conclusion of the project, education modules and project resources were provided to organizational nursing leaders for practical application within the project site.

**Title:** Efficacy of High-Intensity Interval Training for Patients with Heart Failure: A Systematic Scoping Review

**Author/Affiliation:** Jacob Dix (MS Clinical Exercise Physiology), University of Mary, Bismarck, North Dakota

**Purpose:** The aim of this systematic scoping review was to determine the efficacy of high intensity interval training (HIIT) on patients with heart failure (HF) compared to moderate intensity continuous training (MICT). The purpose was to view how HIIT compares to MICT on left-ventricular function (ejection fraction [EF]) and oxygen utilization (VO<sub>2</sub>peak and VO<sub>2</sub>max). **Methods:** The PRISMA 2020 Scoping Review Checklist was used to guide the process. An electronic search was conducted to find peer reviewed articles with HIIT and MICT interventions on patients with HF, primarily using Medline and PubMed databases. Three independent reviewers screened titles and abstracts. A total of 175 randomized controlled trials and clinical trials were screened for titles, leaving 54 for abstract screening, and 15 articles (total of 1,044 subjects) meeting inclusion for full article analysis. The Modified Downs and Black Bias Checklist was used to assess quality of the included articles. **Results:** HIIT showed the most significant improvements in VO<sub>2</sub>peak and EF. HIIT demonstrated a 16.9% increase in VO<sub>2</sub>peak compared to MICT with a 4.9% change. HIIT was also superior to MICT in the improvement of cardiac function, with a 10.76% increase in EF compared to MICT's 3.47% decrease in EF. **Conclusion:** HIIT demonstrated greater improvement in VO<sub>2</sub>peak and EF compared to MICT. HIIT should be a primary intervention mode in cardiac rehabilitation settings for patients with HF.

**Title:** Establishing an Innovative Model of Care for the Homeless: The Labre Redemption Center

**Authors/Affiliation:** Fr. Daniel Lorimer (MS Bioethics), University of Mary, Bismarck, North Dakota

**Background/Purpose:** The current methods of outreach to homeless persons are not providing most of them an adequate opportunity for their health care needs and proper reintegration into our society. In fact, many of the current methods of support only exacerbate the problem. As their numbers increase, and their life expectancy continues to lower, it is incumbent as members of the Catholic Church to lead the way in showing them that they have true dignity. The high rate of drug and alcohol abuse among this population does not make this an easy task. Still, we have to fulfill the teachings of Our Lord in the Gospels. Hospitals, schools and orphanages for the poor were begun and established by the Catholic Church long ago. Now, we must deal with the current problem of homelessness with a similar vigor and innovation. The social teaching principles of our Church: preferential option for the poor, the dignity of the human person, the principles of subsidiarity and solidarity with a respect for the common good must be utilized in this endeavor. The Labre Redemption Center will offer a new model of care for homeless persons. In a rural environment, this inpatient facility will welcome those left out of our society and teach them about their true value in solidarity with their brothers and sisters. Moreover, through mental and physical health care as well as education and job training, they can be renewed and reintegrated into society with confidence and support. As a Catholic institution, their spiritual growth will be encouraged through study, prayer and work. Instead of the limited sporadic acts of charity homeless persons often receive, the Labre Redemption Center offers a place that can actually change their lives.

**Title:** Evaluating Access to Health Care in a Technological Age: Justice, the Common Good, and the Free Market

**Author/Affiliation:** Michael Best (MS Bioethics), University of Mary, Bismarck, North Dakota

**Background/Purpose:** Catholic social teaching is firm in its view of the right to basic medical care, but it does not defend the cost-blind adoption of medical technology that has become a hallmark of today's practice of medicine. While medical care has undeniably benefitted from the improvement of medical technology, its combination with insurance has led to spiraling costs, an illusion of affordable access, and an erosion of the physician-patient relationship. Central to this technocratic system is a usurpation of the principle of subsidiarity by a centrally planned healthcare economy, leading to a number of evils – profligate spending, moral hazard, defensive medicine, and a loss of the *ars moriendi*, or art of dying. The resulting price obscurity from this heavily regulated yet profit-driven industry undermines prudent decision-making at the local level and thwarts truly just exchanges, while the massive scale of the industry weakens solidarity and charity among peoples. These evils can only be remedied by a truly Catholic healthcare economy, one refounded on subsidiarity, solidarity, the common good, and strengthened by the virtues.



**Title:** Evaluating In Vitro Fertilization: How the Transhumanism Trend Harms Healthcare

**Authors/Affiliation:** Clare Marie Donohue (MS Bioethics), University of Mary, Bismarck, North Dakota

**Background/Purpose:** This paper evaluates the assisted reproductive technology (ART) known as in vitro fertilization (IVF) in light of transhumanism and the classical telos or end of healthcare depicted in the Hippocratic Oath. The telos of healthcare, or the end of healthcare identified by the Hippocratic Oath, can be summarized as the good of the patient. In this paper, the good of the patient is divided into four parts: the medical good, the personal good, the good peculiar to humans, and the spiritual good. IVF is evaluated in terms of each of these goods, and conclusions are drawn on whether IVF serves or harms each. Furthermore, each good is also evaluated from a transhumanist perspective. The spiritual or religious aspect traditionally incorporated into the practice of healthcare will be sourced from the Catholic tradition. After carefully evaluating whether IVF serves or harms the four parts of the good of the patient and how transhumanism perceives these goods, the conclusion will be drawn that the rising transhumanism trend in healthcare undeniably harms the classical end and implicit assumptions that once constituted good healthcare and encourages immoral practices like IVF.

**Title:** Exploring How to Support Fieldwork Educators in Occupational Therapy

**Authors/Affiliation:** Talitha Donnan, Lillianna Hanson, Makenzi Long (Doctor of Occupational Therapy), University of Mary, Bismarck, North Dakota

**Background:** The demand for occupational therapy practitioners is projected to grow significantly, increasing the need for fieldwork placements. However, a shortage of fieldwork educators (FWEs), coupled with staff shortages, productivity demands, and time constraints, has made securing placements increasingly difficult. **Purpose:** The purpose of this study is to determine the perspectives and preferences of practicing occupational therapy practitioners in the management of level II fieldwork placements.

**Methods:** A cross-sectional survey was distributed to licensed occupational therapy practitioners across six states, yielding a final sample of 316 respondents. Participants provided insights into their experiences supervising students, preferred fieldwork management strategies, and factors influencing their willingness to serve as FWEs. Descriptive statistical analysis revealed key trends, including preferred resources, barriers to supervision, and strategies to enhance fieldwork support. **Results:** The top factors identified as beneficial to fieldwork management included defined student assignments, knowledge of accreditation requirements, and supervisory training. The top factors identified as barriers were frequent placement requests, long-term advanced placement notices, and required weekly meetings with students. Open-ended responses highlighted key considerations for accepting students, including student characteristics, workplace demands, and personal work-life balance, emphasizing the need for improved university support and incentives for fieldwork educators.

**Conclusion:** Findings suggest that understanding and addressing FWEs' preferences could improve fieldwork management, increase participation in student supervision, and strengthen collaboration between academic institutions and clinical sites. These insights contribute to ongoing efforts to enhance occupational therapy education by informing strategies that ensure future practitioners receive high-quality training.

**Title:** Exploring the Ethics of Performing Surgery on Patients with Dementia: A Case Study

**Author/Affiliation:** Briana Farnsworth (Doctor of Physical Therapy), University of Mary, Bismarck, North Dakota

**Background and Purpose:** Dementia is a condition that interrupts a person's memory and function, with many being dependent on others for managing medical decisions. The possible ramifications experienced in the post-operative stages of surgery should be part of the overall conversation between patients, their families, and their care team. The purpose of this case report is to explore the ethics of performing major surgeries on patients with a dementia diagnosis and the effects surgery has on the patient's overall prognosis. **Case Description:** The patient was a 70-year-old female with dementia and other comorbidities directly admitted to the hospital due to progressive lower extremity weakness and ongoing numbness and tingling in her extremities. The patient has previously undergone two spinal fusions, with one resulting in a surgical site infection and post-operative agitative delirium. Her readmittance was to determine whether another spinal fusion surgery would be appropriate. **Outcomes and Follow-Up:** Following three days of evaluation in the hospital, the patient was negative for an intracranial pathology and was deemed inappropriate for surgery. Her strength and endurance improved, but she still required frequent cueing for safety. The patient was discharged home on her previously established hospice care for another diagnosis. She received in-home physical therapy to improve comfort. **Discussion:** Although there is considerable data related to the risks and outcomes of surgery related to dementia, there is limited research exploring who makes these decisions and when it is appropriate to defer to someone other than the patient. This case report provides information on the possible ramifications of surgery for those with dementia, as well as the effects on the person's overall well-being and prognosis.

**Title:** Exploring the Personal and Professional Outcomes of Pursuing Fellowship Training in Orthopedic Manual Physical Therapy: A Mixed-Methods Analysis

**Authors/Affiliation:** Joshua Clark, Andrew King, Corbin Olson, Maddy Steckler (Doctor of Physical Therapy), University of Mary, Bismarck, North Dakota

**Objective:** Post-professional education in orthopedic manual physical therapy (OMPT) provides a unique pathway for clinicians to refine clinical skills and reasoning in pursuit of professional excellence. Despite these benefits, fellowship training demands significant personal and financial investment. Therefore, understanding whether fellowship education promotes professional growth, job satisfaction, and return on investment is essential. The aim of this study was to explore fellowship-trained OMPTs' self-reported perceptions of pursuing fellowship education in the United States (US), while identifying predictors that may be associated with career success following fellowship education. **Methods:** A convergent parallel mixed-methods design via online survey and one-on-one semi-structured interviews was used. A thematic coding process was implemented for qualitative analysis. Descriptive statistics were calculated for demographic data. Binary logistic regression models assessed relationships between demographic variables and the personal and professional impact of fellowship training. **Results:** One hundred and nine participants completed the survey, and 23 underwent focused interviews, meeting data saturation. Merging of analyses revealed five themes related to personal and professional impacts of fellowship including clinical outcomes, job satisfaction, barriers, clinical excellence, and professional opportunities. Board-certified clinicians had greater odds (OR = 4.47, 95% CI 1.17–15.93,  $p = .03$ ) of reporting fellowship training enhancing their application of current research. Those with a doctorate degree reported greater odds (OR = 9.18, 95% CI 2.31–36.56,  $p = .002$ ) of establishing impactful mentors through fellowship. PTs with < 10 years of practice were more likely to report fellowship training positively affecting their salary (OR = 4.28, 95% CI 1.50–12.24,  $p = .01$ ) and self-perception as expert clinicians (OR = 7.29, 95% CI 1.65–32.22,  $p = .01$ ). **Discussion/Conclusion:** This study is the first to examine personal and professional outcomes among US fellowship-trained clinicians, highlighting the positive impact on clinical reasoning, mentorship, and compensation – especially among novice clinicians. Fellowship enhances job satisfaction, career growth, and clinical excellence, offering insights for prospective fellows and future research directions.

**Title:** Gestational Diabetes Education Project: Implementation of a Culturally Sensitive Gestational Diabetes Awareness Initiative in a Tribal Community

**Authors/Affiliation:** Ivy Brosseau, Madison Hetletved, Aleta Peltier (DNP Family Nurse Practitioner), University of Mary, Bismarck, North Dakota

**Background:** Gestational Diabetes Mellitus (GDM) is a common metabolic disorder in obstetrics, leading to significant maternal and neonatal health risks. Native Americans have a disproportionately high GDM prevalence due to socioeconomic factors contributing to adverse pregnancy outcomes. Despite its impact, awareness of GDM-related complications remains low. This project aimed to address this gap by implementing a culturally sensitive GDM education initiative in a tribal community.

**PICO:** How does the implementation of a culturally sensitive gestational diabetes awareness initiative in a tribal community impact awareness as compared to current practice? **Project Interventions:** In collaboration with Tribal Health Education, the project introduced evidence-based educational materials, including staff resources, culturally relevant flyers, a video, and postpartum pamphlets designed for Native American patients. A pre- and post-implementation assessment measured staff awareness and knowledge of GDM and available community resources. **Outcomes:** Participating staff reported increased confidence in delivering culturally competent education, improving patient-provider interactions. Healthcare providers also gained a greater understanding of available GDM resources and the importance of a structured referral process. **Conclusion:** Findings suggested culturally sensitive, multimodal education enhances GDM awareness and supports management for Native American women. Future efforts should focus on long-term sustainability and integration into routine prenatal care to reduce health disparities and improve maternal outcomes. This project highlighted the importance of tailored education in addressing healthcare inequities within Indigenous communities.

**Title:** Impact of Occupational and Physical Therapy Collaborative Intervention Strategies Addressing Chronic Pain

**Author/Affiliation:** Serena R. Bangasser, Alexandra Crain, Hanna M. Johnson, Ashlyn D. Kessel, Alli M. McCoy, Joseph T. Mochinski, McKinsey R. Rosendahl, Ryan A. Woroniecki (Doctor of Physical Therapy), Brynne S. Hauer, Laura N. Krom, Lonnie N. Myers, Rachael D. Neu, Julia M. Simonson, Abby N. Stark, Shaylin M. Sundby, Gabrielle R. Volk (Doctor of Occupational Therapy), University of Mary, Bismarck, North Dakota

**Background:** Due to the complex nature of chronic pain, treatment strategies for this patient population can be challenging. Chronic pain impacts many aspects of wellness and treating it requires holistic interventions. Because of limited research, a need has been identified to investigate an interdisciplinary approach to treating the complexity of chronic pain. **Purpose:** The purpose of this quasi-experimental, pre-test/post-test study design was to determine the impact of a 5-week multimodal occupational therapy (OT) and physical therapy (PT) interdisciplinary pain management intervention on outcomes related to occupational competence and value, quality of life, and fear of movement for individuals with chronic pain. **Method:** Thirteen participants, between the ages of 25 to 90 with chronic pain were recruited through convenience sampling. Participants engaged in OT/PT multimodal interventions consisting of mindfulness, cognitive behavioral therapy, pain neuroscience education, and physical activity. Pre- and post-assessment scores of the occupational self-assessment (OSA), Tampa Scale of Kinesiophobia (TSK), and 36-item short-form survey (SF-36) were analyzed using a Wilcoxon signed-rank test. **Results:** Significant differences ( $p < .05$ ) in pre- and post-test scores were found in one of two OSA categories and three of seven SF-36 categories. No significant ( $p > .05$ ) differences were found in TSK, one of two OSA categories, and four of seven SF-36 categories. **Conclusion:** Statistically significant data supports the use of a multimodal interdisciplinary treatment for chronic pain. However, findings suggest the need for further research to explore the effectiveness of an OT/PT multimodal interdisciplinary pain management intervention due to limited sample size.

**Title:** Impact of Spinraza Injections & Physical Therapy Interventions on Motor Function in a 7-Year-Old Female with Spinal Muscular Atrophy (SMA) Type 1: A Case Study

**Authors/Affiliation:** Molly Gathman (Doctor of Physical therapy), University of Mary, Bismarck, North Dakota

**Background/Purpose:** Type 1 Spinal Muscular Atrophy (SMA) is a severe, infantile, hereditary condition affecting the anterior horn cells, leading to progressive muscle weakness and impairing an individual's ability to perform everyday activities. Spinraza (nusinersen) is a treatment option for SMA that targets the motor neurons.<sup>1-3</sup> This case report aims to explore the impact of Spinraza treatment on motor function and management of physical therapy in an individual with Type 1 SMA. **Case Description:** The patient is a 7-year-old female who was diagnosed with SMA at 3 months of age and has been receiving Spinraza treatment since shortly after her diagnosis. Interventions included the use of a Universal Exercise Unit and Peanut Ball to enhance overall strength, balance and posture. **Outcomes:** Over the past seven years of receiving Spinraza injections and physical therapy, improvements in her Revised Hammersmith Functional Motor Scale (RHFMS) score have reflected gains in overall strength. This has led to better transitions, enhanced posture, and improved movement of her extremities. **Discussion:** Based on existing literature on Spinraza injections and physical therapy, this case report highlights the critical role of physical therapy for patients with SMA in preserving strength and mobility, which are essential for maintaining overall function and supporting long-term well-being.

**Title:** Impacting Newly Licensed RNs' Knowledge and Confidence in Quality and Safety Through Formal Education in a Transition-to-Practice Residency Program

**Authors/Affiliation:** Nicole Spidahl (DNP Nursing Organizational Leadership), University of Mary, Bismarck, North Dakota

**Background:** The purpose of this project was to determine if a quality and safety didactic and escape room simulation activity in a Registered Nurse (RN) Transition-to-Practice (RNTTP) Program would impact newly licensed RNs' self-reported perception of knowledge and confidence in quality and safety. Newly licensed RNs face challenges when entering professional practice which may lead to unsafe practice. RNTTP Programs play a role in supporting newly licensed RNs as they transition to professional nursing practice. **PICO:** How does the use of simulation as an adjunct to didactic content provided in a RNTTP Program impact newly licensed RN's self-reported perception of their knowledge and confidence in quality and safety concepts defined by CCNE as compared to current practice? **Project Interventions:** This evidence-based practice project included the implementation of a didactic and escape room simulation activity to project participants, newly licensed RNs in a RNTTP Program, and the evaluation of impact. **Outcomes:** Results of the project include postimplementation questionnaire from project participants (n=2) who strongly agree that the activity will address the quality and safety standards set by CCNE. Four surveys were given to newly licensed RNs in a RNTTP Program immediately before the activity (n=7), immediately after (n=7), 3 months postimplementation (n=4), and 6 months post implementation (n=5). RNs' self-reported an increase in knowledge and confidence in quality and safety topics and overall satisfaction with the learning modality. **Conclusion:** Newly licensed RNs benefit from a quality and safety didactic and escape room simulation activity provided in a RNTTP Program.



**Title:** Implementation of an Assessment Scale to Identify Patients at High Risk for Central Line-Associated Bloodstream Infections

**Author/Affiliation:** Jodi Edlund (DNP Nursing Organizational Leadership), University of Mary, Bismarck, North Dakota

**Background:** Despite considerable progress in reducing central line-associated bloodstream infections (CLABSI) through improved prevention practices, they continue to be one of the deadliest and most expensive preventable healthcare-associated infections in acute care hospitals. CLABSI reduction efforts currently emphasize universal prevention, but predictive screening for risk factors could provide a patient-centered approach and strengthen commitment to best practices. **PICO:** Among intensive care nurses caring for adult patients with central venous access at a large academic medical center, how does the use of a CLABSI risk assessment tool impact CLABSI rates over sixteen weeks, compared with current practice? **Project Interventions:** This project implemented an evidence-based predictive tool to stratify patients' CLABSI risk. Nurses received training on tool application and worked with the project team to conduct the assessment on eligible patients. Patients were categorized into four risk levels based on the presence of CLABSI potentiators. **Outcomes:** Although multiple barriers negatively impacted staff's participation in the screening process, 93% of eligible adult ICU patients were evaluated using the risk tool. Though CLABSI rates did not change during the intervention, staff surveys found that over 90% of nurses agreed the tool efficiently determined risk and improved their awareness of CLABSI potential in their patients. Over 80% of staff surveyed agreed the tool should be added into the daily patient assessment. **Conclusion:** While the intervention did not produce a reduction in CLABSI rates, the strongly positive reception of the tool indicated that a patient-centered screening approach can increase awareness of infection risk and may drive adherence towards proven evidence-based prevention practices.

**Title:** Implementation of Evidence-Based Strategies for Hypertension and High Blood Pressure Documentation in a Primary Care Clinic

**Authors/Affiliation:** Queen Elizabeth Fugah, Tina Morrison Lewis, Cassandra Olivas (DNP Family Nurse Practitioner), University of Mary, Bismarck, North Dakota

**Background:** Hypertension is the leading contributor to premature death worldwide, affecting 1.3 billion individuals. One in 4 adults has their blood pressure (BP) under control with medication. Uncontrolled hypertension contributes to many chronic conditions. Evidence indicates that adequate documentation of high BP in the electronic health record (EHR) is essential for the early detection and management of hypertension. Despite existing guidelines, many primary care providers fail to meet documentation requirements. **PICO:** In the primary care setting, how does a hypertension documentation tool for providers impact hypertension compliance with quality metrics compared to current practice? **Project Interventions:** Interventions include a presentation on the importance of meeting hypertension quality metrics, development and implementation of a high blood pressure documentation template and visual cues. **Outcomes:** A survey conducted following a staff education session showed that all four resident physicians had a strong understanding and positive reception of the material (100%, n = 4). A chart audit of 129 patients with high BP revealed that 64.3% (n = 83) had first and second BP readings. Treatment plans were initiated for 65% of patients with high BP, and the hypertension template usage was recorded at 34.3% (n = 44). A survey distributed to three resident physicians revealed that all found the visual cues effective for reminding them of elevated BP, with 67% (n = 2) finding the dot phrase helpful for documentation. One physician reported no challenges in using the dot phrase. **Conclusion:** The findings suggest that high blood pressure template, education, and visual cues are effective in enhancing provider documentation efficiency. The tools help alert providers to patients' high blood pressure readings and prompt the initiation of treatment plans that reflect these readings. Future recommendations include the potential for improvement in developing and consistent use of dot phrase to standardize documentation.

**Title:** Implementation of Routine Anxiety Screening in a Rural Health Clinic: An Evidence-Based Project

**Author/Affiliation:** Amber Albrecht, Cassidy Freeman, Jayme Jonasson (DNP Family Nurse Practitioner), University of Mary, Bismarck, North Dakota

**Background:** Anxiety disorders are the most prevalent mental health issues in the United States. However, they often go undiagnosed and untreated, especially in rural areas, where 60% face a shortage of mental health providers. The consequences of untreated anxiety include impaired work performance, reduced quality of life, worsened physical health, strained relationships, and an increased risk of suicide. While screening for anxiety is recommended for all adults, guidelines on timing and frequency are lacking. **PICO:** How does implementing a routine Generalized Anxiety Disorder-2 (GAD-2) screening tool with an anxiety treatment toolkit at a rural primary care clinic influence the healthcare team's confidence in the quality of care in adults ages 18-64 compared to current practices? **Project Interventions:** The project involved integrating the GAD-2 as a routine screening tool at a rural primary care clinic. Staff received education on its use and pre-surveys measured staff confidence regarding anxiety and GAD-2. Post-implementation surveys evaluated the tool's and project's effectiveness. **Outcomes:** Findings from three post-implementation surveys showed that 100% (n=3) of staff felt confident using the GAD-2 tool, although only 67% (n=2) were confident in identifying anxiety. All respondents (100%) would recommend the GAD-2 for screening and expressed satisfaction with the project. **Conclusion:** Overall, the findings suggest that the GAD-2 benefited rural primary care. This project's limitations include limited number of surveys completed and the limited time the GAD-2 was utilized. Project leaders recommend that the clinic's future efforts focus on utilizing the GAD-2 for all routine visits for adults ages 18-64.

**Title:** Implementing a Structured Nurse Preceptor Development Program

**Author/Affiliation:** Maria Socorro C. Smigo (MSN Nurse Educator), University of Mary, Bismarck, North Dakota

**Background and Purpose:** Nurse preceptors are crucial for onboarding new nurses. However, a shortage of experienced preceptors often leads to advanced beginner nurses precepting new-to-practice nurses without adequate guidance, impacting their teaching effectiveness. This Evidence-Based Practice (EBP) project aims to develop and implement a structured preceptor development program for nurses in a cardiac surgery unit at a large academic medical center in southeastern Pennsylvania. **PICO:** For advanced beginner nurses selected as preceptors in the cardiac surgery progressive care unit, how does a structured preceptor development program impact perceived competence and confidence in precepting skills compared to current practice? **Synthesis of Evidence:** Literature highlights the vital role of nurse preceptors in transitioning novice nurses into professional practice. Effective preceptorship and orientation are linked to nurse retention. The success of the preceptor-preceptee relationship depends on preceptor selection. Many institutions lack standardized methods for selecting qualified preceptors, which can negatively affect new nurses, preceptors, the unit, and patient care. Using a validated tool for preceptor selection may benefit preceptorship. **Practice Change/Implementation:** The EBP project implemented a structured preceptor development program in the cardiac surgery PCU, utilizing an active-learning approach for advanced beginner nurses. This included case scenarios, case studies, and navigating policy, practice, and regulatory resources. An informal support group was established for preceptors to share experiences and discuss issues in a supportive environment. The Cotter Preceptor Selection Instrument (CPSI) was adapted to evaluate staff nurse qualities for preceptor selection. **Outcomes and Discussion:** Positive feedback from preceptors indicated that they achieved their desired learning outcomes and felt the course met their expectations. Preceptors reported increased preparedness, enhanced knowledge of CT surgery nursing, and improved familiarity with hospital resources and policies. The Preceptor Self-Assessment Tool – 40 (PSAT-40) scores showed proficiency in interpersonal and intrapersonal skills, knowledge, understanding, and administrative resources, demonstrating preceptor competence. Survey results reinforced the program's effectiveness and provided a basis for ongoing improvement and sustainability. The informal support group and the objective preceptor selection using CPSI were also positively received.

**Title:** Implementing Healthcare Provider Education on Advance Care Planning and Advance Directives: A Clinical In-Service Evidence-Based Practice Project

**Authors/Affiliation:** Amanda Fossum (DNP Family Nurse Practitioner and MS Bioethics), Kaleb Kirby, Anna Thadi (DNP Family Nurse Practitioner), University of Mary, Bismarck, North Dakota

**Background:** Healthcare providers lack education on advance care planning (ACP). This lapse in education leads to unwillingness to participate in ACP discussions.

Patients are left unequipped to make informed decisions. It is important to increase the willingness of providers to have ACP conversations so informed decision making is maintained.

**PICO:** In a rural North Dakota primary care clinic, how does a clinical in-service and incorporation of a toolkit regarding advance care planning and advance directives, affect the amount of advance care planning conversations that occur and provider willingness to have advance care planning conversations compared to current practice?

**Project Interventions:** Included the development and implementation of an educational in-service and toolkit. Effectiveness was measured by asking the providers to note the number of ACP discussions and number of toolkit references over a 14-week evaluation period. Once complete, the providers were asked their willingness to pursue ACP conversations by noting more willing, less willing, or unchanged willingness.

**Outcomes:** Results included 100% (5/5) of providers stating they were more willing to pursue ACP in the future. Only 40% (2/5) providers had ACP discussions with patients during the survey period. A total of 7 ACP conversations occurred, and the toolkit was referenced 3 times.

**Conclusion:** Overall, the findings are clear that the implementation of an educational in-service and supply of a reference toolkit were effective in creating increased willingness to participate in ACP conversations. Despite this increased willingness, the quantity of ACP conversations did not drastically increase.

**Title:** Inpatient Rehabilitation Treatment of Non- Traumatic Brain Injury: A Case Study  
**Author/Affiliation:** Mariah Lund (Doctor of Physical Therapy), University of Mary, Bismarck, North Dakota

**Background/Purpose:** Severe brain infection is often associated with mortality and morbidity creating swift need for diagnosis and treatment. Infection can cause compression of the brain leading to non-traumatic brain injury with cognitive and functional deficits. Brain injuries present differently in each case creating difficulty determining the best treatment approach. The purpose of this case study is to determine the effect on functional mobility outcomes and level of independence following inpatient physical therapy rehabilitation post non-traumatic brain injury. **Case Presentation:** Presented is the case of a 61-year-old male with diagnosis of meningitis, mastoiditis, subdural empyema, and brain abscess, with eventual complications of sepsis and lower lung collapse. Medical management through a myriad of surgeries and antibiotics decreased pressure on the brain and allowed for healing and the start of inpatient rehabilitation therapies. This case looks specifically at physical therapy in the inpatient setting with focus on increasing independence and improving functional mobility measures via the standardized inpatient rehabilitation facility patient assessment instrument. Treatments discussed include bed mobility, transfer training, endurance exercise, neurological re-education, family training, and the interdisciplinary approach to care. **Outcomes:** Once medically managed, the patient's brain infection rapidly recovered. Upon discharge, the patient demonstrated improvement with assistance levels ranging from stand by assistance to independence. Ambulation of 150 feet with supervision was achieved before discharge. The patient also demonstrated minimal residual signs of ataxia upon discharge. Due to continued need for medications, the patient was discharged to a transitional care unit for continued therapies with medical management. **Discussion:** Participation in physical therapy for 1 hour per day allowed for significant repetition, reinforcement, and strategy utilization in primary areas of physical and mobility deficits. At discharge, the patient was able to perform functional tasks with minimal to no assistance demonstrating significant progress and recovery.

**Title:** Intentional Nurse Leadership Rounding on Inpatient Units at a Midwest Hospital: An Evidence-Based Practice Project

**Author/Affiliation:** Robyn Manke, Tiffany Bennett, Nicole Zabel (MSN Nursing Leadership & Management), Katelyn Kennedy (MSN/MBA in Healthcare Administration), University of Mary, Bismarck, North Dakota

**Background/Purpose:** The Formal Nurse Leadership Rounding evidence-based practice project implemented nurse leadership rounding on two inpatient units at Sanford Health in Fargo, ND. The aim was to improve patient and employee satisfaction, which were two areas identified by Sanford leadership as needing improvement in the organization. Substantial evidence supports nurse leadership rounding to increase patient and staff satisfaction. **Implementation:** The UMary EBP Project Team worked with two inpatient units to complete intentional nurse leadership rounding. Leaders blocked 90 minutes in their calendar per rounding session. Five patients and one staff member were to be rounded on during the three times-a-week rounding sessions. Unit leaders were provided with an iPad and Microsoft Form link to document each rounding and learning. There were scheduled touch-base meetings between the unit leaders, organizational mentor, and project team to discuss compliance, barriers, feedback, and staff turnover rates for 3 months pre-implementation, 3 months post-implementation, and the same 3 months in the prior year. **Outcomes:** Patient satisfaction was measured utilizing pre project Sanford Health Peakon surveys, focusing mainly on 'Management Support' scores. Post project satisfaction scores cannot be compared to another Peakon survey, as the latter was not completed within the project timeline. Therefore, all employees were sent a post-employee survey to gauge project satisfaction and gain feedback. Seventy-five percent of the unit staff surveyed felt that nurse leader rounding should be continued. Patient satisfaction was measured utilizing NRC patient satisfaction survey trends for six months pre- and three months post-implementation, focusing mainly on the 'would recommend facility' questions. Staff turnover rates were measured at three months pre- and three months post-implementation, and the same three months in the prior year. **Discussion:** Nurse leadership rounding may enhance patient and staff satisfaction. Additionally, nurse leadership rounding can help to meet specific unit or organizational goals. It is recommended that the leadership rounds be structured to the unit's needs and priorities, that leaders set aside designated time to complete rounding sessions, and that frequent communication and reflection occur throughout the process. Limitations to nurse leadership rounding include the leader's time constraints and prioritization of the rounding sessions.

**Title:** Investigating Differences in Autism Spectrum Disorder Classification and Gestational Age

**Author/Affiliation:** Steven Friez, Alyssa Nelson, Kennedy Ortega (Doctor of Occupational Therapy), University of Mary, Bismarck, North Dakota

**Background:** Preterm and post-term children demonstrate higher incidence rates of autism spectrum disorder (ASD) when compared to full-term children (Martini et al., 2022). This study investigated differences between the three Autism Diagnostic Observation Schedule (ADOS-2) classifications and gestational age (GA). **Purpose:** This study aimed to determine whether differences exist between ADOS-2 classifications and GA to support earlier ASD diagnosis and early intervention (EI) services. **Method:** This quantitative, cross-sectional design analyzed differences in ADOS-2 classifications by GA. The ADOS-2 classifies ASD into three classifications of autism, autism spectrum, and non-spectrum based on the child's overall score. Convenience sampling from the Montana Developmental Assessment Clinic was utilized to collect data from 216 children's medical records. Data was analyzed using frequency analysis to determine differences in ADOS-2 classifications based on weekly GA. **Results:** Results indicated differences in classifications within extremely preterm, very preterm, moderate to late preterm, and late term GA. Analysis indicated these ages had higher incidence rates of the autism classification as compared to autism spectrum and non-spectrum classifications. Full-term GA demonstrated lower percentages of the autism classification. **Conclusion:** Preterm and late term children demonstrate higher incidences of the autism ADOS-2 classification. Occupational therapists can utilize these findings to recommend and implement autism screening and EI services for children born preterm and late term.



**Title:** Knowledge and Experience of Dysphagia Among Healthcare Students

**Authors/Affiliation:** Mikayla Beck, Mariah McKeever, Morgan Salwei, Elizabeth Wortz (MS Speech-Language Pathology), University of Mary, Bismarck, North Dakota

**Background/Purpose:** Pre-service health care professionals will encounter patients with a variety of disorders during their programs, including those individuals with swallowing disorders, also known as dysphagia. Research regarding the impact of interprofessional education on enhancing allied health professionals' understanding of swallowing disorders exists. However, there is a notable gap in the literature regarding the knowledge of swallowing disorders among graduate and undergraduate students in healthcare programs. Thus, this study aimed to explore further pre-service occupational therapy and nursing students' understanding of dysphagia and experiences working with individuals with dysphagia in their clinical and didactic coursework. **Method:** Graduate and undergraduate students enrolled in the occupational therapy and nursing programs at the University of Mary participated in the study. Participants completed a survey to evaluate their confidence, knowledge, and experience when working with individuals with dysphagia. **Results:** The results indicated that nursing and occupational therapy students generally had a strong understanding of dysphagia. However, the data also suggested that students expressed a desire to learn more about dysphagia at the pre-service level, to prepare them better and enhance their confidence when working with patients with dysphagia in the future. **Discussion:** The findings suggested that students would benefit from additional training on dysphagia at the pre-service level. Additional experiences could include a dedicated course on treating individuals with dysphagia, a specialized seminar, and guest speakers with expertise in the field.

**Title:** Laterality as a Prognostic Indicator for Chronic Low Back Pain: A Prospective Quasi-Experimental Cohort Study

**Authors/Affiliation:** Michael Hein, Hannah Gushwa, Kaitlyn Merchak, Spencer Churchill (Doctor of Physical Therapy), University of Mary, Bismarck, North Dakota

**Background:** Chronic pain is a condition that ranks as one of the highest financial burdens for patients in the United States. For those with chronic pain, it has been proposed that there are alterations in the way the brain processes sensory information and perceives pain. Laterality measures may be an index of sensory processing and may be negatively affected in patients who experience chronic pain. Low back pain (LBP) is the most common form of chronic pain, however there is currently little research on laterality scores in patients with LBP. **Objective:** To investigate changes in laterality measures in response to skilled physical therapy (PT) interventions in patients with chronic LBP. **Design:** A Longitudinal Within Subjects Design. **Methods:** Participants, aged 18-65 with chronic LBP excluding secondary conditions, were recruited by trained physical therapists from orthopedic practices in North and South Dakota in the United States. Recruited physical therapists were trained on the study procedures and obtained approvals. Participants provided informed consent and completed a questionnaire. This was followed by completing a laterality assessment using the Recognize Back app to test for accuracy and response time and a separate pain assessment using the Oswestry Disability Index (ODI). Participants then received personalized care plans based on the recommendations of their physical therapist and underwent retesting after either two months or at the time of discharge. **Results:** Nine participants who met the inclusion criteria were enrolled in the study. Significance of changes in ODI scores, and the accuracy and response time using the Recognize Back app were evaluated by Wilcoxon Signed Ranks test (SPSS version 28). ODI scores significantly decreased in all patients over the course of the study ( $p = .006$ ). While there was a trend towards increased accuracy with treatment, no significant changes were found in either the accuracy ( $p = .161$ ) or the response time ( $p = .411$ ). Additionally, no significant correlation between changes in ODI scores and changes in laterality accuracy was found ( $p = .659$ ). **Discussion:** ODI scores significantly decreased from the first to the last assessment. While there was a trend towards increased accuracy, this was not significantly different. **Conclusion:** Some participants demonstrated improvements in laterality accuracy and response time following the PT intervention; however, these changes were not statistically significant. Further research is needed to determine whether improvements in ODI scores after PT interventions are correlated with significant improvements in laterality scores.

**Title:** Mortal Choices: Advance Care Planning in Catholic Healthcare

**Authors/Affiliation:** Chip Chipman (MS Bioethics), University of Mary, Bismarck, North Dakota

**Background/Purpose:** Advance Care Planning (ACP) is essential for promoting and upholding patient autonomy and dignity, particularly in end-of-life circumstances. Hundreds of patients and their families will experience the ethical dilemma of surrogate decision making and choose interventions that may not be aligned with their diagnosis or their loved one's wishes, values or beliefs. This essay reviews the significance of ACP and its historical development, ethical foundations, operational challenges and best practices within Catholic healthcare. Landmark legal cases and legislative acts, such as the Patient Self-Determination Act (PSDA) and the Texas Advance Directives Act (TADA), highlight ACP as both a state and federal patient rights issue. The ethical principles of autonomy, justice, non-maleficence, and beneficence are rooted in philosophical and theological traditions and are entirely aligned with Catholic teaching and ACP. This essay also addresses widespread misconceptions that hinder ACP, further revealing a community health issue as 66% - 75% of Americans lack documented preferences for their medical care in the future. Catholic healthcare, inspired to extend the healing ministry of Jesus and guided by theological and philosophical principles such as the *Ethical and Religious Directives for Catholic Healthcare Services*, is uniquely positioned to facilitate ACP. OSF HealthCare successfully demonstrated that proactive ACP does lead to significant reductions in expenditures and length of stay and enhanced patient-centered care. However, barriers such as "teleopathy" demand vigilant process oversight and continuous improvement strategies. To increase ACP, this essay proposes interdisciplinary education, electronic medical record innovation, and increasing pastoral care services. Ultimately, ACP is a profound act of respect for human dignity and charity, supporting the right of individuals to more fully participate in their healthcare and encounter mortality with grace and preparedness.

**Title:** Nursing Faculty Experiences with Student Nurses with Varying Degrees of Healthcare-Related Work Experience

**Authors/Affiliation:** Haley Bossert (MSN Nurse Educator), University of Mary, Bismarck, North Dakota

**Background/Purpose:** This qualitative phenomenological study aimed to explore the experiences of nursing faculty teaching in baccalaureate (BSN) or associate-level (ADN) registered nursing programs with students who have varying degrees of healthcare experience or none at all. A literature review revealed significant differences between experienced and inexperienced students, but revealed a gap in understanding faculty perspectives, demonstrating the necessity for this study. **Research Questions:** There were two research questions for this study. What are the experiences of nursing faculty members who teach in baccalaureate or associate-level registered nursing programs with students who have varying degrees of healthcare experience or no healthcare experience at all? How do the lived experiences of these nursing faculty members influence their teaching and evaluative strategies when educating students with various amounts of healthcare-related work experience? **Methodology:** A qualitative phenomenological approach involving semi-structured interviews with participants was utilized. **Data Collection and Procedures:** Ten participants were interviewed for this study to meet data saturation. All participants were currently working in either an ADN or BSN level nursing program. **Results:** Rich data was collected and was later organized into five themes. These themes included: Impact of Student Experience and Student Characteristics, Teaching Tips for Diverse Learning Needs, Evaluation Consistency and Fairness, Program Advice for Nursing Educators, and Benefits and Downfalls of Certified Nursing Assistant (CNA) Certification Requirements. Each theme discussed various portions of the interview results. Participants shared their similarities and differences witnessed among students with varied experiences and shared strategies for effectively educating a diverse student body. Furthermore, they shared insights on their evaluation methods and offered advice to fellow educators. Lastly, some participants shared their opinions on having CNA certification requirements. **Discussion:** The findings addressed the research questions, with participants detailing their experiences with students of varying healthcare backgrounds. Additionally, they explained how these experiences and situations influence their teaching strategies and interactions with students, although not as much in terms of their evaluative strategies. This research will benefit other nursing faculty members and undergraduate nursing programs by providing them with factual insights and experiences of other faculty members who have dealt with the struggle of properly educating students from various backgrounds. This information may provide helpful information and advice on this topic that other faculty members and programs can utilize in their own educational practices.

**Title:** Occupational Therapy and Health Literacy

**Authors/Affiliation:** Emma Hagen, Morgan Murphy, Brenna Oksa (Doctor of Occupational Therapy), University of Mary, Bismarck, North Dakota

**Background:** Health literacy is the ability to find, understand, and use health information to make informed decisions. Factors such as age, education, socioeconomic status, and communication skills influence health literacy. Limited health literacy is linked to poorer health outcomes and higher healthcare costs. Occupational therapists play a key role in promoting health literacy through client education.

**Purpose:** This cross-sectional survey examined factors impacting the integration of health literacy in U.S. occupational therapy practice. **Methods:** An online survey (n=87) was distributed via convenience sampling across six U.S. regions, with the Midwest most represented (n=40). Most participants had 0-5 years of clinical experience. Data analysis included descriptive statistics and frequency distributions. **Results:** Formal training and continuing education were the strongest influences on health literacy integration. Written and verbal communication were the primary education methods, with written materials being the most effective. Education level and age were the strongest predictors of comprehension. Lack of time was the most significant barrier while strengthening client-therapist interactions was the preferred strategy for improving health literacy integration. **Discussion:** Occupational therapy practitioners have a key role in improving health literacy through assessment and education to promote health equity and improve long-term outcomes. This study found that formal training, continued education, and a combination of verbal and written methods are essential for enhancing client understanding, while time constraints remain the primary barrier to effective health literacy integration. Addressing these challenges through standardized assessment tools, curriculum integration, and continuing education can improve health literacy outcomes in occupational therapy practice.

**Title:** Occupational Therapy Practitioners' Perceptions and Confidence in Bariatric Care  
**Authors/Affiliation:** Jordan Brehmer, Katelyn Brown, Lydia Sipple, Sarah Wobbema  
(Doctor of Occupational Therapy), University of Mary, Bismarck, North Dakota

**Background:** The prevalence of obesity continues to increase, contributing to a growing need for healthcare services. While existing research has explored the perceptions of other healthcare professionals toward bariatric clients, there is limited research on how occupational therapy practitioners (OTPs) perceive their role in bariatric care. **Purpose:** The purpose of this research study is to explore OTPs' attitudes, confidence level, and perceptions of adequate training when working with bariatric clients. **Method:** This quantitative study utilized a 5-point Likert scale survey consisting of 15 questions. The survey was conducted through Qualtrics, using frequency statistics to analyze OTP's perceptions, attitudes, and confidence of bariatric care. **Results:** A total of 39 OTPs completed the survey questions in entirety. The results of the study revealed OTPs have varying levels of confidence and preparedness when working with bariatric clients. Some practitioners expressed concerns about inadequate training and resources, but many reported confidences in their ability to adequate care to bariatric clients. Many participants acknowledged biases towards the bariatric population and emphasized the importance of additional education to improve their competency. **Conclusion:** There is a gap in OTP's education and confidence regarding bariatric care, suggesting the need for further education and training for OTPs to reduce biases and improve quality of care for this population.

**Title:** Optimizing Maternal Mental Healthcare: Educating Healthcare Professionals and Enhancing Utilization of the Healthy Beginnings Program for Pregnant and Postpartum Women

**Authors/Affiliation:** Shelby Heyen, Megan Macke, Tori Weinand (DNP Family Nurse Practitioner), University of Mary, Bismarck, North Dakota

**Background:** Postpartum depression (PPD) is a significant maternal health concern affecting the well-being of mothers and their families. Although guidelines exist for screening and management, gaps in care leave many women with PPD under-recognized and under-treated. **PICO:** Among healthcare professionals who provide care for pregnant and postpartum patients at a small Midwest women's clinic, how does the implementation of a postpartum depression education session impact the knowledge and practices of the healthcare staff on the topic of maternal mental healthcare compared to current practice? **Project Interventions:** The project created an educational initiative and care pathway to ensure all mothers and healthcare professionals are well-informed about PPD and receive consistent, thorough, and timely care. Educational sessions were conducted at the clinic and the delivering hospital. The sessions educated on current ACOG screening guidelines, Cheryl Beck's Theory on PPD, the Healthy Beginnings program, and a care pathway to better integrate these evidence-based strategies. **Outcomes:** Surveys distributed throughout the educational initiatives assessed changes in healthcare professional knowledge, attitudes, and intended practice changes. The survey results showed increased awareness of PPD screening guidelines (92%), increased commitment to the Healthy Beginnings Program (100%), and increased confidence in identifying and managing PPD. Postpartum follow-up rates were also tracked, revealing a 13% increase in follow-up within three weeks post-initiative. **Conclusion:** This project was successful as it improved healthcare professional knowledge and commitment to postpartum care. The focus should remain on continuing education and improving patient education to better support mothers in this vulnerable time.

**Title:** Organ Donation after Euthanasia: An Emerging Ethical Dilemma

**Authors/Affiliation:** Anna Quigley (MS Bioethics), University of Mary, Bismarck, North Dakota

**Background/Purpose:** It has been purported that organ donation after euthanasia would be a rare event in countries that allow euthanasia, however it has been demonstrated in Canada in recent years that neither euthanasia nor organ donation after euthanasia are rare events. In fact, since the legalization of euthanasia in Canada in 2016, requests for organ donation after euthanasia have increased, which has posed serious ethical dilemmas for the medical establishment and society. This paper examines the medical, social, and legal reasons that organ donation after euthanasia is problematic for the practice of medicine and the wellbeing of individuals and society. The fundamental ethical principles that underpin this paper include Principlism, the Principle of Totality and Integrity, Individual Good v. Common Good and the Principle of Informed Consent. Further discussion includes the dead donor rule (DDR) and the proposition that the medical community should abandon the DDR since it unnecessarily infringes on the autonomy of individuals who have chosen to donate organs after euthanasia. This paper contends that organ donation after euthanasia or by euthanasia, sometimes referred to as organ donation euthanasia (ODE), presents serious irreconcilable ethical dilemmas to informed consent, fosters a utilitarian approach to human life and purposely disregards human life by contributing to its destruction. The protection of conscientious objection, the upholding of the DDR and the prohibition on euthanasia are safeguards that are irreplaceable to maintain a society that values human life and is actively working towards the good of every individual in society.



**Title:** Pediatric Lifestyle Risk Assessment and Provider Education: Implementing an Evidence-Based Practice Project Assessing Provider Comfort and Confidence

**Author/Affiliation:** Tierza Engen, Chloe Sieling, Molli Strandberg (DNP Family Nurse Practitioner), University of Mary, Bismarck, North Dakota

**Background:** Rates of pediatric obesity were at an all-time high in 2022. There is a knowledge deficit among providers in comfort and confidence discussing lifestyle with pediatric patients. Needs were identified for improved access and further development of educational materials, methods to empower children and families to make healthy changes, and education for providers on stigma-free counseling. **PICO:** Among providers at an outpatient pediatric clinic, how does age-appropriate healthy lifestyle education paired with the distribution of a lifestyle risk assessment screening tool for patients aged 6-10 years influence provider comfort and confidence engaging in stigma-free lifestyle discussion with their patients/caregivers compared to current practice? **Project Interventions:** Project interventions included clinic providers participating in an educational session, providers utilizing a screening tool to assess pediatric lifestyle risk factors, and clinic staff distributing a healthy lifestyle educational handout. **Outcomes:** A post-implementation survey of providers found that provider comfort discussing lifestyle with patients and avoiding stigmatizing language increased by 15%. Providers who felt they had necessary screening resources and educational resources increased by 30% and 50%, respectively. Screening tool use increased by 18.75% and educational material use increased by 43.75%. **Conclusion:** Lack of standardized screening and education tools leads to missed opportunities for healthy lifestyle counseling. Project interventions were successful at increasing provider comfort and confidence in screening, counseling, and educating their pediatric patients on healthy lifestyle topics.

**Title:** Perceptions and Experiences of Peer Mentors in An Undergraduate Nursing Skills Lab

**Authors/Affiliation:** Madison Lien (MSN Nurse Educator), University of Mary, Bismarck, North Dakota

**Background/Purpose:** This study aimed to understand the real-life experiences of senior-level nursing students serving as peer mentors in an undergraduate nursing skills lab. The goal was to understand their experiences and explore peer mentorship's perceived impact on their personal, professional, and leadership skills. **Problem:** Peer mentorship can occur in various nursing education settings, including the classroom, simulation lab, clinical setting, or even beyond these settings. While numerous studies have explored mentorship in these contexts, a gap exists in the research focusing specifically on the effects of mentorship within the nursing skills lab environment.

**Participants:** A total of 10 senior-level peer mentors participated in the study. These peer mentors were senior nursing students enrolled in an undergraduate nursing program at a public land-grant university located in the upper Midwest. **Method:** This study utilized qualitative research methodology with a phenomenological approach to conduct semi-structured interviews with peer mentors. **Findings:** Peer mentors were found to have varying motivations for mentoring. Peer mentoring fosters a collaborative and supportive learning environment among mentors, student mentees, and nursing skills lab faculty members. The mentorship program enhances mentors' understanding and ability to perform clinical skills, educate their peers and patients, communicate effectively, and develop leadership skills. Students shared how mentorship will help them prepare to enter professional nursing practice and their future career aspirations.

**Implications:** Peer mentoring promotes the development of personal, professional, and leadership skills that are essential for nurses as they transition into professional practice. This evidence supports the implementation of a peer mentorship program to enhance competency-based education, particularly for leadership development. Nurse educators can use findings from this study to guide the development of new teaching practices.

**Title:** Preparedness of Athletes Utilizing the I-PRRS

**Author/Affiliation:** Madison Yonke, Elyse Schweikert, Brenna Monosmith (Athletic Training), Allie Elliot (MS Kinesiology), University of Mary, Bismarck, North Dakota

**Background:** This systematic review addresses the impact that confidence levels have on rehabilitation and return to sport. It is known that both, physical and mental readiness of the athlete must be addressed after an injury to achieve successful return. Mental readiness is often overlooked in terms of rehabilitation methods, which has led to a greater focus on external sources. Mental health has a notable impact on the body's recovery process and the psychological confidence of the athlete before, during, and after they step back onto the field. With increased mental detriments due to removal from sport, it is important to safely monitor confidence levels in athletes and return them to sport when ready in all aspects. **Objective:** The purpose of this review was to find a post-injury assessment tool that measures confidence and mental readiness in athletes. This tool would then be utilized so athletes may return to play without risk of reinjury due to decreased self-confidence. This review explores the Injury-Psychological Readiness to Return to Sport (I-PRRS) survey to determine the safety and effectiveness of the tool to assess readiness in athletes and use derived data to impact the rate of return to sport. **Outcomes:** Confidence levels were obtained using the assessment tool, I-PRRS. Subjective data was obtained via survey completion at various stages of the rehabilitation process. These studies revealed that athletes who obtained a score of 50% or higher after completion of rehabilitation were able to return to sport successfully without a risk of reinjury. **Conclusion:** From the findings it can be determined that confidence levels must reach a score of 50% or greater on the I-PRRS survey to be cleared to play. This correlates with a decrease in the chance for reinjury and can be used as a guide in rehabilitation programs. By assessing confidence levels, the health professional can assess mental apprehension in the athlete and allow for intervention if applicable. This review reveals that the I-PRRS is an adequate tool to monitor athletes' confidence levels in return to sport; however, it should be used in conjunction with a physical evaluation and other objective return to play protocols to rule out physical limitations.

**Title:** Rural Clinical Experiences Increase the Likelihood of Graduates to Practice in Underserved Areas: An 11-Year Retrospective Analysis of a Rural Physical Therapy Program

**Authors/Affiliation:** Brady Torborg, Ellie Page, Tacey Fischbach (Doctor of Physical Therapy), University of Mary, Bismarck, North Dakota

**Introduction:** Rural healthcare disparities are a pressing issue in the United States (US), particularly since the COVID-19 pandemic. Therefore, the purpose of this study was to explore a rural health initiative by the University of Mary (UMary) entry-level Doctor of Physical Therapy (DPT) educational program, investigating whether full-time rural clinical education experiences (CEEs) influenced graduates' decisions to practice in a rural setting following graduation. **Review of Literature:** Rural populations in the US are underserved, demonstrating lower use of healthcare services and poorer health. While the American Physical Therapy Association highlights the importance of physical therapists serving these communities, it faces challenges, such as sparse rural training in DPT curricula. **Subjects:** 471 UMary DPT graduates between 2014-2024. **Methods:** An 11-year retrospective analysis of the UMary DPT program examined alumni demographics, rural CEEs (<10,000 population), and initial post-graduation job placements with descriptive statistics calculated for demographic data. A binary logistic regression was used to model the relationships between demographic variables, CEE placements, and job placements post-graduation. **Results:** More than half of the graduates (51.3%; n=174) experienced at least one rural CEE throughout the curriculum, while 17.7% (n=60) had a rural CEE in their final year. Nearly one-quarter (22%; n=75) practiced in a rural setting immediately following graduation. Graduates with at least one full-time rural CEE were more likely to practice in a rural setting following graduation (OR=3.25,  $p<.001$ , 95% CI 1.71-6.17), as were those with a rural CEE in their final year (OR=2.91,  $p=.002$ , 95% CI 1.50-5.65). **Discussion and Conclusion:** The findings of this study highlight the impact that rural DPT CEEs have on graduates' decisions to practice in a rural setting following graduation. This study may serve as a benchmark for DPT education in prioritizing rural health, including strategically incorporating rural CEEs to promote physical therapy practice in underserved areas.

**Title:** Screening of the Thoracolumbar Spine is Almost Completely Absent in Trials Evaluating Conservative Management for Sacroiliac Joint Pain: A Systematic Review of 43 Randomized Controlled Trials

**Authors/Affiliation:** Keith Forkin, Dillan Kovash, Dylann Bylund (Doctor of Physical Therapy), University of Mary, Bismarck, North Dakota

**Background:** Sacroiliac joint (SIJ) pain is a commonly diagnosed lumbosacral condition with historical diagnostic uncertainty. Recent literature suggests that accurately diagnosing SIJ pain requires first screening the thoracolumbar spine, as it is commonly associated with SIJ region pain and exhibits frequent referral patterns to this region.

**Objective:** The aim of this systematic review was to evaluate the screening methods of the thoracolumbar spine in randomized control trials (RCT) for the evaluation and treatment of SIJ pain or dysfunction. **Methods:** A search of PubMed, CINAHL, and CENTRAL was conducted for RCTs published from inception up to March 31, 2024. RCTs focusing on SIJ pain as the primary diagnosis, treated with conservative interventions such as manual therapy, exercise, or modalities in adult patients, were included. Data on thoracolumbar spine screening methods were extracted, categorized, and reported with means and standard deviations and frequency counts. The Revised Cochrane Risk of Bias tool was used to assess each RCT. **Results:** A total of 2,719 articles were retrieved. After removing duplicates and screening title, abstracts and full texts, 43 RCTs were included for data extraction. Two trials (4.7%) performed a reasonable thoracolumbar spine screening process, while nine (20.9%) partially completed, and 32 (74.4%) performed no thoracolumbar screening process prior to coming to a SIJ diagnosis. **Conclusion:** Less than five percent of RCTs attempted to screen the thoracolumbar spine prior to a SIJ diagnosis, highlighting significant variability. The role of screening the thoracolumbar spine in diagnosing SIJ pain is underrepresented, weakening the conclusions drawn from the RCTs. This finding underscores the need for further research to establish a standardized clinical thoracolumbar screening process for SIJ pain to ultimately improve patient outcomes for this condition.

**Title:** Teratogens and Morality: A Catholic Approach to Responsible Procreation

**Author/Affiliation:** Angela Baalman (MS Bioethics), University of Mary, Bismarck, North Dakota

**Background/Purpose:** This essay explores concepts related to methods of pregnancy avoidance in females of child-bearing potential receiving medications which pose significant risk for teratogenicity to developing life. The medication isotretinoin, and the associated REMS program iPLEDGE is utilized as an example within this topic. It explores the morality of such methods for females patients, their spouses, prescribers providing care for such patients, and current policies mandated by US government agencies. Exploration centers on application of relevant Catholic teaching to guide members of this faith involved in such decisions. Ultimately, pregnancy avoidance methods constituting direct contraception are not morally licit according to Catholic teaching. Rather, natural family planning and abstinence are licit methods for individuals seeking to align with Catholic teaching. Utilizing these methods are fraught with challenges, yet the choice of which may positively influence current US healthcare culture.

**Title:** The Ability of Minors to Consent or Assent to Gender-affirming Care

**Author/Affiliation:** Rebecca Godbout (MS Bioethics), University of Mary, Bismarck, North Dakota

**Background/Purpose:** Determining a patient's ability to consent can at times be complex. This is particularly true when the patient is a minor is asking for medical treatments such as gender-affirming care. Can minors ever consent, or even assent to gender-affirming care? One consideration that increases the complexity of this topic is the vulnerability of the group in discussion. The aim of this analysis is to answer this question. Methods: Articles focusing on medical practice, faith and reason, law, policy, and biomedical sciences within the healthcare industry are analyzed in light of various ethical principles. Some of the ethical principles being considered in this review and analysis include the principles of autonomy, beneficence, and nonmaleficence, the principles of totality and integrity, and ideas such as dualism and paternalism. With a careful review of what the literature says and how these principles are applied or misapplied. Conclusion: The analysis demonstrates that minors do not have the developmental capacity to consent or assent to this care, especially given that gender-affirming care goes against the natural order of things. Given this information, and in effort to protect minors, healthcare staff and organizations should focus on caring and supporting the minor in a way that does not provide gender-affirming care. While such care can be extremely lucrative, it should not be provided at the expense of the vulnerable patient.

**Title:** The Associations Between Physical Activity Status and Simple Visual Reaction Time in People with Parkinson's Disease

**Author/Affiliation:** Aidan Harms (MS Clinical Exercise Physiology), University of Mary, Bismarck, North Dakota

**Background:** Reaction time measures how quickly the body responds to a stimulus and can indicate how well the body's central nervous system is functioning. **Purpose:** The primary aim of this study is to examine the association between self-reported physical activity and visual reaction time (VRT) in individuals with Parkinson's disease (PD). A secondary aim is to investigate the association between VRT and functional assessments. **Methods:** Individuals with PD from the Bismarck-Mandan community were recruited to attend a one hour-long session that included completing a health history questionnaire, the Parkinson's Disease Questionnaire Exercise questionnaire, grip strength, timed-up-and-go (TUG), the 4-stage balance test, and a simple visual reaction-time (VRT) test. Pearson Correlations were used to assess the relationship between VRT and weekly physical activity levels, TUG performance, 4-stage balance performance, and grip strength. **Results:** Participants were  $67.1 \pm 6$  years old ( $n=8$ ), had been diagnosed with PD for  $7.7 \pm$  years ( $n=6$ ), and completed  $576.4 \pm 305$  MET-minutes per week of physical activity ( $n=8$ ). There was a moderate effect for VRT-AVG and MET-min/week ( $r=.47$ ,  $p=.243$ ). Additionally, there was a negative correlation with VRT-AVG and left/right hand grip strength, with left ( $r=-.70$ ,  $p=0.54$ ) and right ( $r=-.73$ ,  $p=.042$ ). Finally, there was a negative correlation for VRT-AVG and single leg balance in the left ( $r=-.04$ ,  $p=.925$ ) and right ( $r=-.69$ ,  $p=.057$ ). The grip strength and single leg balance compared to VRT-AVG were trending towards significance. **Conclusion:** In individuals with PD, a faster VRT was significantly associated with increased grip strength and trending towards significance in single leg balance. Future research should focus on attaining a larger sample size and using objective assessments of physical activity.



**Title:** The Combined Effects of Caffeine and Beta-Blockers on Cardiovascular and Pulmonary Exercise Performance Biometric Variables

**Author/Affiliation:** Cortnie Mongeon (MS Clinical Exercise Physiology), University of Mary, Bismarck, North Dakota

**Background:** Caffeine is a known ergogenic aid that helps increase and improve exercise performance. It also has been known to lead to increases in heart rate and blood pressure in some. A beta-blocker medication however has the opposite effect. A beta-blocker can be used for different cardiovascular conditions especially high blood pressure. A beta-blocker causes a blunted or lowered heart rate response and lowered blood pressure response to activities especially exercise. There are no previous studies on how caffeine and beta-blockers taken together effect exercise performance and other biometric variables. **Purpose:** To study how a person on a beta-blocker medication responds to exercise with caffeine consumption. **Methods:** Participants taking a beta-blocker medication completed 2 submaximal NDKS treadmill protocol cardiopulmonary exercise tests (CPET). Subjects reported to the lab for three different sessions. Day 1 consisted of explanation of the study and signing informed consent, completing a health history questionnaire (HHQ), obtaining baseline measures of heart rate (HR) (bpm), blood pressure (BP) (mmHg), height (cm), weight (kg), and resting blood lactate (LA) (mmol/L), resting EKG, and familiarization with the treadmill and Hans Rudolph mask. Days 2 and 3, subjects completed the NDKS submaximal treadmill CPET, randomly assigned to complete the protocol with either consumption of a caffeine tablet (Nutricost Caffeine Pills 100mg) while on their beta-blocker medication or without caffeine ingestion. Volume of oxygen (VO<sub>2</sub>) (mL/kg.min) was measured throughout the submaximal test using ParvoMedics TrueOne 2400 gas analysis system as well as EKG analysis (with Mason Likar placement for exercise). Subjects were asked if they had any discomforts or cardiovascular symptoms throughout and after the test. **Results:** Resting SBP and DBP increased with caffeine compared to no caffeine ( $p=.091$  and  $p=.180$ ). HR was not as affected but max HR was increased with caffeine (Max HR +9.5bpm). HR in the fourth stage with and without caffeine showed a  $p=.024$ . Lactate levels post-exercise was 0.95mmol/L higher after caffeine ingestion ( $p=.250$ ). There are no statistically significant values due to sample size of this study being  $N=2$ . **Conclusions:** Results of this study show that HR is not as affected as BP with the ingestion of caffeine prior to the CPET. However, both were able to go longer on the treadmill and achieve a higher HR with caffeine ingestion. These results support that caffeine ingestion prior to a CPET with a beta-blocker medication can lead to an increase of HR, resting BP, and peak SBP. The results do not show any significant changes to lactate with or without the ingestion of caffeine.

**Title:** The Development of Occupational Therapy Clinical Skills During a Level 1 Fieldwork in Peru

**Authors/Affiliation:** Jillian Bechtold, Emily Bleicher, Nellie Skytland (Doctor of Occupational Therapy), University of Mary, Bismarck, North Dakota

**Background:** Healthcare programs must prepare students to thrive in culturally diverse settings. One increasingly popular approach being utilized in higher education is international service learning (ISL), which enhances students' ability to appreciate other cultures. However, limited research examines the clinical skills occupational therapy (OT) students develop during ISL experiences. **Purpose:** This study aimed to identify clinical skills OT students utilized during ISL as part of a Level I fieldwork. **Method:** Three focus groups were conducted with OT students who completed ISL in Peru during the summers of 2022, 2023, and 2024 (n=24). Each group included students from two different cohorts to enrich discussions. Transcripts were analyzed using constant comparison analysis. **Results:** Four key themes emerged: (1) Students reinforced classroom knowledge by applying OT clinical skills with real clients who had medical conditions they had studied. Clinical skills commonly reported were wheelchair seating and positioning, feeding, handwriting, therapeutic exercises, assessing home environments, providing training with ergonomics while transferring clients, and teaching self-care skills with adaptive equipment. (2) Teamwork and collaborating with others were essential for problem-solving and further increased their confidence with their OT clinical skills. (3) Language barriers challenged students to adapt their communication strategies, reinforcing the importance communication has on providing client-centered care. (4) Cultural exposure deepened students' understanding of how cultural factors influence occupations. **Conclusion:** ISL offers OT students valuable opportunities to apply the OT process in a collaborative environment, refine clinical skills while maintaining client-centered care, and build confidence in their abilities through problem-solving with peers.

**Title:** The Effect of Hearing Loss on Balance

**Authors/Affiliation:** Charlotte Culloton, Dallas Dowhanuik, Kristian Paulsen, Thomas Schmid (Athletic Training), University of Mary, Bismarck, North Dakota

**Background/purpose:** Hearing and balance are closely interconnected through the vestibulocochlear system, and previous research suggests that hearing impairments may negatively impact both static and dynamic balance. This study investigates the correlation between hearing ability and balance performance in an adult population, aiming to determine whether individuals with hearing deficits may benefit from proactive balance training to prevent injury or improve athletic performance. Using a correlational research design, balance was assessed through the Modified Clinical Test of Sensory Interaction in Balance (CTSIB-M) using the Sway Medical app, the Balance Error Scoring System (BESS), and the Lower Quadrant Y Balance Test (LQYBT). Hearing screenings were conducted by trained professionals to categorize participants based on their hearing status. **Outcomes:** Among the seven participants classified as having hearing impairment, a few did demonstrate poorer balance scores, but others performed within or above average ranges across all three balance assessments. Based on these results, this study suggests that while hearing loss may play a role in balance impairments, it is not the sole determinant. **Discussion:** The presence of hearing impairment does not necessarily predict poor balance, as individual variations in physiological factors likely contribute to postural control. Future research should explore the interplay between auditory function and other sensory systems to better understand the multifaceted nature of balance regulation.

**Title:** The Effect of Plank Position on Performance & Metabolic Response in Female Collegiate Athletes

**Author/Affiliation:** Rachel Gowin, Grace Stroh, Taylen Thomas (Exercise Science), University of Mary, Bismarck, North Dakota

**Background:** It is unclear whether the arm position of the plank influences metabolic demand and plank performance. **Purpose:** This primary research study aimed to examine the effect of plank position on metabolic response, performance, and area of maximal fatigue in female collegiate athletes. The collected plank performance and metabolic data may be used to determine if plank position needs to be standardized when using the prone plank for assessing muscular fitness. **Methods:** Eleven female collegiate athletes, with a mean age of 19.27 (SD = 1.27), from the sports of golf, soccer, and volleyball were randomly assigned a plank position, elbow or hand, for their first visit and asked to hold plank position until maximal fatigue. During the athletes' subsequent visit, they held the opposite position of plank until maximal fatigue. Oxygen consumption (VO<sub>2</sub>) and respiratory exchange ratio (RER) were measured while in the plank positions using a metabolic cart. **Results:** Paired-samples t tests showed no significant differences between metabolic responses examined comparing the two positions ( $p > .05$ ). The mean elbow peak VO<sub>2</sub> was 7.49 ml/kg/min (SD = 1.93), and the mean hand peak VO<sub>2</sub> was 6.65 ml/kg/min (SD = 2.63) ( $t(10) = .958$ ,  $p > .05$ ). The mean elbow peak RER was .86 (SD = .07), and the mean hand peak RER was .85 (SD = .06) ( $t(10) = 1.46$ ,  $p > .05$ ). Additionally, no significant difference was found in total plank time between the elbow position, 120 seconds (SD = 34.1), and hand position, 129 seconds (SD = 45.7) ( $t(10) = -.964$ ,  $p > .05$ ). **Conclusion:** Although no significant differences were shown in our results, a trend was seen showing that an elbow plank position may be more metabolically demanding compared to a hand plank position. Due to the small sample size of this study, further studies should be conducted and combined with this one to reach a more accurate conclusion.

**Title:** The Impact of Artificial Intelligence (AI): Perspectives of Occupational Therapy Practitioners in the United States

**Author/Affiliation:** Riley Alger, Paytyn Lenneman, Hannah Luna, Chelsey Morlock (Doctor of Occupational Therapy), University of Mary, Bismarck, North Dakota

**Background:** The integration of artificial intelligence (AI) in healthcare is rapidly expanding, yet its impact on occupational therapy (OT) remains largely unexplored. Understanding occupational therapy practitioners' (OTPs) perspectives on AI is essential for guiding its implementation in clinical practice. **Purpose:** This study explored OTPs' familiarity with AI, opinions on its use, perceived benefits and ethical concerns, and willingness to integrate AI into practice. **Methods:** A quantitative survey design was used to collect data from 50 OTPs across the United States via a 29-questions survey distributed through professional networks, social media, and email. Descriptive statistics and frequency analyses were conducted using SPSS version 29. **Results:** While all respondents were aware of AI, only 68% had heard of its applications in OT. Social media and colleagues were the most common information sources. Acute care was the most frequently reported practice setting. Perspectives varied by age, education level, and practice setting, with ethical concerns and adoption barriers identified. **Discussion:** AI offers opportunities to enhance OT practice efficiency and decision-making but presents challenges related to ethics, awareness, and implementation. Addressing these concerns through education and professional training may improve adoption and responsible implementation. **Conclusion:** OTPs demonstrate awareness of AI but have limited familiarity with its application in OT. Further research is needed to explore AI's impact on OT practice, patient outcomes, and best practices for ethical and effective implementation.

**Title:** Understanding How Sleep Affects Collegiate Athletic Performance: A Self-Reported Study

**Authors/Affiliation:** Ashlynn Dix, Tayler Feldman, Kaya Gayette, Kaitlyn Werner (Athletic Training), University of Mary, Bismarck, North Dakota

**Research Topic:** The effects of sleep on athletic performance and if there is a direct correlation. **Design:** The study is a quantitative self-reported study combining the following surveys: Pittsburgh Sleep Quality Index (PSQI), Epworth Sleepiness Scale (ESS), and Athlete Subjective Performance Scale (ASPS). **Participants:** Male and female collegiate athletes at the University of Mary participating in NCAA Division 2 and ACHA Division 1 sports. Excluding athletes not participating in NCAA Division 2 or ACHA Division 1 sports, injured athletes, and athletes from another university. **Methods:** The survey will be made known to and accessible to female and male University of Mary athletes via team meetings, flyers, and emails. **Data Analysis:** Data analysis will be done using SPSS and we will conduct a Pearson Correlation Coefficient for each sport and all sports combined. **Results:** According to our results from the data analyses, the athletes performed better on less sleep. Each sport, except for softball, had a strong negative correlation between better sleep and better performance. **Conclusion:** There was a weak direct correlation between sleep and athletic performance among the male and female athletes at the University of Mary. It is proven that sleep quality is not related to perceived athletic performance.