

# *Graduate Research Symposium*



**April 22, 2024**

*Showcasing graduate students' research, capstone projects  
and scholarship.*

**Sponsored by the William T. Daly School of General Studies &  
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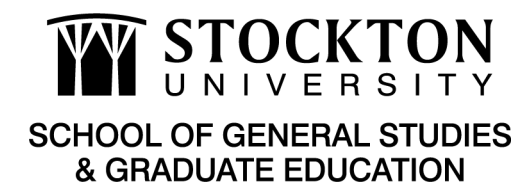
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*The Spring 2024 Graduate Research  
Symposium is proud to be Part of the  
University's Scholarly, Teaching, and Research  
Symposium (STARS) Celebration Week*



## Dean's Welcome

Welcome to the Graduate Research Symposium at Stockton University. Tonight, we celebrate the journey and accomplishments of our graduate students who have engaged in research within the past year. Designing and conducting research can be a challenging and rewarding part of this academic journey and tonight signifies the culmination of each person's thesis or other capstone experience. This quest that our graduate students have undertaken could not have been possible without the dedicated assistance of faculty mentors who have shared their own passion, curiosity, and knowledge with these distinguished scholars.

The Spring 2024 Symposium presenters include students from many programs: Two Doctorate programs, in Nursing Practice and Physical Therapy; two Master of Arts programs, American Studies and Holocaust & Genocide Studies; four Master of Science programs in Communication Disorders, Data Science & Strategic Analytics, Nursing, and Occupational Therapy; the Master of Social Work program; and the Professional Science Master in Environmental Science. The students' projects signify their commitments to academic excellence, either through practitioner-based research or archival research, and they are achieved through the oral and poster presentations listed within this booklet. We celebrate the diversity and innovativeness of the research presented this evening and promote interdisciplinary research conversations among the campus community. We honor Stockton University's commitment to the research projects presented here tonight.

We are proud of the presenters. We are grateful to all who contributed to the success of this event: our graduate student presenters, dedicated alumni/ae, faculty advisors, program directors, program faculty, deans, staff, friends, family, and all of our special guests. We encourage you to attend the sessions, view the posters, and ask these remarkable scholars about their personal journeys.

To end the evening, there will be a reading of a one act play by Alice Childress called *String*. The players will include members of the American Studies program, and prominent members of the Stockton community.

We are proud that the Spring 2024 Graduate Research Symposium is part of the University's Scholarly, Teaching, and Research Symposium (STARS) Celebration Week and we encourage you to attend more events throughout the week celebrating Stockton's commitment to academic excellence. In addition, please visit the MAIT & Digital Studies Expo on Wednesday, April 24, 2024 at 6:00pm in the L-Wing Art Gallery to view the Capstone Projects of our graduate students in Instructional Technology. Their project descriptions are included at the end of this booklet.

**Dr. Robert Gregg**

Dean, William T. Daly School of General Studies & Graduate Education

# Graduate Research Symposium

Campus Center Event Room, April 22, 2024

## -AGENDA-

- 4:00 p.m. Welcoming Remarks  
*Refreshments Served*
- 4:15 p.m. Poster & Presentation Session Begins  
*Doctor of Nursing Practice\*\**  
*Doctor of Physical Therapy*  
*Master of Arts in American Studies\**  
*Master of Arts in Holocaust & Genocide Studies*  
*Master of Science in Communication Disorders*  
*Master of Science in Data Science & Strategic Analytics*  
*Master of Science in Nursing*  
*Master of Science in Occupational Therapy*  
*Master of Social Work*  
*Professional Science Master's in Environmental Science*

- 6:30 p.m. American Studies Play Reading and Discussion  
*String by Alice Childress*

*\*Presentations for the American Studies Program are scheduled between 3:30pm – 6:30pm in L-112 or via [Zoom](#).*

*\*\*Presentations for the Doctor of Nursing Practice are scheduled between 4:15pm– 7:00pm in Campus Center Meeting Room 2 or via [Zoom](#).*

*The names in this program are those of graduate student presenters as of April 12, 2024.*

# **-Presentations-**

## **Doctor of Nursing Practice**

### **Amanda Dupras**

**Advisor:** Dr. Barbara Amendolia & Dr. Mary Padden | **Poster Presentation #1**

**Title:** The Impact of Self-Care Education on the Perceived Stress of Nursing Students

**Introduction:** Students pursuing nursing degrees experience increased stress levels due to didactic and clinical coursework. Prolonged exposure to elevated stress results in both physical and psychological manifestations. Research indicates self-care activities are clinically proven to decrease overall perceived stress.

**Objective:** To investigate the impact of self-care education on the perceived stress of undergraduate, accelerated, and graduate university nursing students.

**Methods:** An evidence-based initiative. The 10-question Perceived Stress Scale (PSS-10) was used to evaluate perceived stress immediately prior to self-care education and 30-days post-education. Statistical analyses were conducted using SPSS.

**Results:** The sample consisted of 28 university nursing students who completed the pre- and post-intervention survey. One outlier was identified. Data was analyzed both including and excluding outlier results. Including outlier, PSS-10 decreased from 22.57 to 20.75 (8.06% decrease) and excluding outlier, PSS-10 decreased from 23.11 to 20.56 (11.03% decrease). Data including outlier did not reach statistical significance. Data excluding outlier reached statistical significance with medium effect size [ $p=.024$ ,  $t=2.393$ , Cohen's  $d=0.46$ ].

**Conclusion:** Moderate to high levels of perceived stress are prevalent in university nursing students. Findings suggest self-care education decreases overall perceived stress. Continued self-care education and interventions for university nursing students may be beneficial in mitigating physical and psychological effects of perceived stress.

### **Katharine Flourney**

**Advisor:** Dr. Lia Ludan & Dr. Mary Padden | **Poster Presentation #2**

**Title:** Best Strategy to Combat Left Without Being Seen in the Emergency Department

**Problem:** Patients leaving the emergency department (ED) prior to being seen (LWBS) by a provider is a continual problem. Predictors of LWBS include overcrowded EDs, increased wait times, and patient dissatisfaction with care provided. Patients who LWBS are at risk for poor clinical outcomes.

**Purpose:** The purpose of this project was to utilize nurse driven protocols to improve patient throughput in the emergency department.

**Method:** To address this issue, this project implemented preestablished nurse driven protocol orders for patients that could not be seen immediately by a provider. These protocol orders were entered and completed by the protocol nurse to expedite care delivery.

This was an evidence-based practice quality improvement project which utilized secondary data collection post nurse driven protocol implementation. To assess the impact of this process change, LWBS frequencies and length of stay were monitored over a 28-day period at a regional medical center's ED for the month of February 2024.

**Results:** 5,101 patients were seen during the data collection period. Of these ED visits, 150 patients LWBS. The overall LWBS rate for February 2024 was 2.94% compared to the 4.14% LWBS rate from February 2023. The Mean LOS was 271 minutes, resulting in a 29-minute decrease from the mean LOS in 2023. During the time period from 1500 – 2100 in which the protocol nurse role was utilized, there was a 2.74% decrease in LWBS in comparison to the same time frame as in 2023.

**Implications for Practice:** The protocol role was only implemented during a six-hour window due to staffing constraints. For future implementation, staffing the protocol role for the entirety of day shift and night shift, a greater overall reduction of LWBS may be seen. Future studies can also focus on patient perception of the implementation of nurse driven protocols.

### **Krystal Goula**

**Advisor:** Dr. Regina Green | **Poster Presentation #3**

**Title:** Improving Compliance of Depression Screening in Coronary Artery Bypass Grafting Patients with Utilization of the PHQ-9 Screening Tool

**Problem:** The primary objective of coronary artery bypass grafting surgery (CABG) surgery is to enhance the patient's quality of life. Nevertheless, a common and unfavorable consequence, even after successful surgical procedures, is the onset of depression. This depression has been recognized as a condition that can manifest both before and after the operation, and it has been linked to suboptimal healthcare outcomes within this patient group. Presently, the literature strongly endorses the screening for depression following CABG, yet it has not become a standardized practice among healthcare providers caring for this patient population.

**Purpose:** The goal is to execute a standardized protocol for depression screening in patients post CABG in collaboration with an Electronic Medical Record (EMR) prompt to initiate compliance amongst the cardiothoracic providers.

**PICOT:** In cardiac surgery providers, how does the use of an EMR versus current practice influence patient depression screening rates?

**Design & Framework:** This is an evidence-based quality improvement project using the Iowa Model of Evidence-Based Practice.

**Method:** A protocol using the PHQ-9 for depression screening in patients six weeks post CABG was developed and IRB approval was given for data collection. The protocol entails patients self-administering the PHQ-9 screening tool in either English or Spanish based on their language preference. Those encountering difficulty will receive assistance from the NP. Subsequently, the NP will evaluate the scores obtained. Patients scoring 5 or higher will be directed to either their Primary Care provider or Behavioral Health. If necessary, the NP is empowered to commence antidepressant medication. Secondary data collection was used to track provider screening and referral rates. Data collection took place over a 30-day period.

**Intended Outcome:** This project is grounded in evidence-based practices and aims to boost depression screening rates within the cardiothoracic care field, and ultimately improve outcomes for this patient population.

### **Maryellen Miraglilo**

**Advisor:** Dr. Rose Scaffidi & Dr. Mary Padden | **Poster Presentation #4**

**Title:** Impact of QR Code Access on Hypertension Education

**Problem Statement:** Hypertension remains a significant healthcare burden despite evolving knowledge on management and treatment. Current educational materials provided to patients may be insufficient for education and have not progressed with the technological age.

**Purpose:** To improve the educational information on hypertension, implement a new access to the improved educational information for patients diagnosed with hypertension, and to determine impact on education access.

**Methods:** Access to patient education materials were provided via QR code and frequency of access was tracked via analytics via qr-codes.com

**Inclusion Criteria:** Adult patients over the age of 18 with a diagnosis of hypertension who have access to a smart phone or tablet.

**Outcomes:** 42 individuals were recruited to participate. Of those recruited, there were sixteen unique accesses to the QR code for an access rate of 38%.

**Implications for Practice:** Patients will have readily accessible hypertension education materials from a trusted source with the convenience of their mobile device. Clinicians will save time and have an additional trusted resource to provide to their patients. Accessible materials with improved readability also have the potential for improved clinical outcomes as patients may be able to retain more information. An additional added benefit would be cost-savings from the reduction of paper materials.

**Jamie Sosa MSN, CNM, RNFA, CBC**

**Advisor:** Dr. Rose Scaffidi & Dr. Mary Padden | **Poster Presentation #5**

**Title:** Combined Vaginal Misoprostol with Transcervical Foley Bulb for Cervical Ripening

**Background:** Induction of labor (IOL) is the process of stimulating labor before its natural onset. When the cervix is not ready for labor, cervical ripening improves the chances of a successful IOL. Cervical ripening can be accomplished with mechanical methods such as balloon catheters or with pharmacological methods known as prostaglandins. No single agent is superior to another; however, combining a pharmacologic agent with a mechanical method has a synergistic effect.

**Significance:** Utilizing only single agents contributes to increased rates of prolonged IOLs. Prolonged IOLs are associated with increased costs, length of stay (LOS), postpartum hemorrhage (PPH), cesarean section rates, venous thromboembolisms, and decreased patient satisfaction.

**PICOT:** In pregnant women, how does transcervical bulb and vaginal misoprostol compared with current practice affect intervention to delivery interval?

**Purpose:** This evidence-based, quality improvement initiative sought to determine if amending the cervical ripening policy and encouraging providers to combine vaginal misoprostol with a Foley bulb for cervical ripening decreased the intervention-delivery interval at a local hospital.

**Method:** Using secondary data collection, the baseline interval of time from first cervical ripening agent until birth was compared to the interval after the evidence-based practice (EBP), quality improvement (QI) initiative was instituted. Data collection occurred after IRB approval.

**Outcomes:** In the baseline group (n=103), the mean time from first cervical ripening agent until birth was 1524.72 minutes, compared to the group after the EBP QI (n= 97) initiative which had a mean of 1359.25 minutes. An independent samples t-test found the difference was not statistically significant (p= .156). Although not statistically significant, a difference of 165.47 minutes or 2.76 hours is a clinically significant reduction of time for the group after the EBP QI initiative. Secondary outcomes for the quarter after the EBP QI initiative showed shorter LOS, decreased postpartum hemorrhage, and decreased cesarean section rates.

**Keywords:** cervical ripening, induction of labor, misoprostol, Foley bulb

## Doctor of Physical Therapy

**Agnes Cancio, Jayda Issa, Hannah Macauley, Nikki Mooney & Marissa Primo**

**Advisor:** Dr. Mary Lou Galantino | **Poster Presentation #14**

**Title:** Impact of Aquatic Therapy and Rehabilitation for Children with Cerebral Palsy

**Background & Purpose:** Cerebral palsy (CP) is a group of movement disorders caused by non progressive damage towards a developing or immature brain and there are several interventions to address development throughout the lifespan. Aquatic Therapy (AT) as one option, is the use of water to promote healing and exercise. We investigated aquatic therapy as an effective intervention for pediatric clients diagnosed with CP (GMFCS levels I-V) for gross motor skills in comparison to standard physical therapy interventions.

**Methods:** PubMed, Cochrane Database of Systematic Reviews, COSMIN, MEDline, CINAHL, and Shirley Ryan AbilityLab were systematically searched for full-text articles published within 10 years. The following keywords were entered into these databases in an array of combinations: cerebral palsy, aquatic therapy, aquatic interventions, gross motor function, outcome measures, children, GMFM, PEDI, GMPM, and pediatrics.

**Results:** According to Sackett's level of evidence, the search yielded 5 systematic reviews (2a), 1 experimental study (2c), and 1 longitudinal study (2b). Literature regarding AT and its effect on gross motor function in children with CP, shows conflicting short and long term results. Short term effects show positive outcomes in the Gross Motor Function Measure (GMFM) but in the long term, there were no significant sustainable changes after 1 month of termination.

**Limitations:** There is limited evidence for the effectiveness of AT and CP. Several factors included small sample sizes, unclear protocols/prescription of AT, inconsistent applications of AT across all GMFCS levels, and inclusion of limited age ranges. The variability in age range and CP diagnosis limits the external validity of the results.

**Conclusion:** AT is an intervention that can produce short term positive effects but has limited long lasting effects on gross motor function. Further research is needed to establish guidelines for aquatic therapy programs.

**Abanilla V., SPT; Fulton K., SPT; Kunzler R., SPT; Meyer K., SPT; Oluchina S., SPT; & Galantino M.L., PT, Ph.D.**

**Advisor:** Dr. Mary Lou Galantino | **Poster Presentation #15**

**Title:** The Benefit of Physical Therapy And Yoga For Pregnancy Related Pain

**Purpose:** Low back and pelvic girdle pain is a common condition of pregnancy, which may impact 20% of pregnant women. The purpose of our research is to determine if prenatal yoga or physical therapy during pregnancy is superior in the management of low back pain (LBP) and pelvic pain.

**Methods:** The terms “yoga and/or physical therapy,” “pain management,” “lumbar and pelvic pain,” “pregnancy interventions” were searched in the PubMed, Medline, PEDro, and Cochrane databases. Inclusion criteria consisted of articles that included women of any age and ethnicity during pregnancy (antenatal/ prenatal), articles that included women during the postpartum period (up to one year after birth), and articles on the effect of either PT or yoga interventions during or after pregnancy. Exclusion criteria included articles not accessible through Stockton's Library, articles not translated in the English language, articles not written within the last 20 years.

**Results:** Using Sackett's levels of evidence, we retrieved and analyzed 7 articles (5 systematic reviews and 2 combined systematic reviews and meta-analyses, 2 were 1A level of evidence and 5 were 2A level of evidence). For postpartum lumbopelvic pain, physical therapy evidence was limited and included stabilization techniques, aquatic therapy, manual therapy and therapeutic exercise. For postpartum lumbopelvic pain, there was strong evidence of effectiveness for prenatal and postnatal yoga.

**Conclusion:** Yoga was beneficial in treating secondary issues that arise during pregnancy such as anxiety, depression and overall quality of life. Yoga allows pregnant women to perform the poses at home, unlike physical therapy where they are restricted to sessions focused in the clinic for modality centered treatment. While systematic review supported physical therapy approaches to mitigating pregnancy pain, the addition of yoga may enhance overall outcomes, given the strength of evidence.

**Clinical Relevance:** Physical therapists can utilize yoga during and after pregnancy to have a positive effect on women's activities of daily living, sexual activity, hobbies, and participation in society.

The implementation of prenatal yoga will help aid physical therapists in considering other treatment interventions for women with postpartum lumbopelvic pain to optimize patient outcomes.

**Michael Hutchison, Tyler Rzemek, Tyler Cruz, Michael Ofsanko, & Daniel Gutierrez Reyes**

**Advisor:** Dr. Mary Lou Galantino | **Poster Presentation #16**

**Title:** Blood Flow Restriction in Post-Operative Anterior Cruciate Ligament Rehabilitation: A Comprehensive Review

**Introduction:** Blood Flow Restriction (BFR) training involves applying pressurized cuffs to extremities during resistance exercise, creating a hypoxic environment. Initially developed for muscle strength and mass, BFR gained popularity in physical therapy. Despite evidence supporting its efficacy, controversy surrounds its application, particularly in specific populations unable to perform high-load resistance training.

**Objective:** This research aims to explore the potential benefits of BFR in enhancing postoperative anterior cruciate ligament (ACL) rehabilitation, considering limitations in high-load resistance training during early recovery phases.

**Methods:** The COSMIN database, PubMed, Stockton Library search tool, Cochrane Database of Systematic Reviews, and Shirley Ryan AgilityLab website were utilized. Search terms included Blood Flow Restriction, ACL, rehabilitation, resistance training, and post-operative. Articles in English, completed within the past 15 years, level of evidence of 2c or higher, and accessible through Stockton's database were included.

**Results:** This data included seven high quality research articles including three meta-analyses, two systematic reviews, & two randomized controlled trials. Despite conflicting evidence, BFR showed potential benefits in pain reduction, joint effusion, and muscle activation. Early-phase rehabilitation with BFR showed benefits in decreasing pain, joint effusion, and bone mass density loss. When supplemented with resistance exercise, BFR



increased muscular strength, endurance, hypertrophy, and cardiorespiratory capability. Major limiting factors regarding BFR use include the lack of standardization among procedural protocols when administered, lack of consistency within control groups, & use of EMG data to infer strong conclusions.

**Conclusion:** BFR, combined with resistance training, may compare to high-load resistance exercises during early-phase rehabilitation. Further research is needed to explore BFR's efficacy in later rehabilitation stages, determine optimal parameters, and assess neural adaptations over extended periods. Addressing the limitations and generalizability of current studies is crucial for establishing the role of BFR in post-operative ACL rehabilitation. However, research on its effectiveness in populations unable to complete high-load resistance training remains inconclusive.

**Linda Cherkaoui, Emma Crewe, Jessica Rafalko, Emily Scala, Olivia Schuck, & Kayla Singiser**

**Advisor:** Dr. Mary Lou Galantino | **Poster Presentation #17**

**Title:** The Effects of Exercise Interventions vs. Standard Care for Pediatric Patients with Acute Lymphoblastic Leukemia

This research explored the impact of exercise on improving quality of life (QOL) and managing fatigue side effects of cancer treatment for Acute Lymphoblastic Leukemia. After an exhaustive literature review from PubMed, Cochrane Database, and Health and Human Service Public Access, six articles met the inclusion criteria of children between 0-21 years old and articles published over the last 15 years. Exclusion criteria were articles not written in English and not accessible through Stockton's library. There were consistent limitations throughout the articles such as small sample size, heterogeneity of multiple interventions, and outcome measures including different treatment durations, lack of blinding bias, low level of evidence, and lack of updated research on the subject. The literature search revealed clinical significance for exercise programs compared to standard care, but only the cohort study showed statistical significance. According to Sackett's levels of evidence, three received 2a, one 2b, and one 3a including systematic reviews, randomized controlled trials, and a pilot study were used. The International Pediatrics Oncology Exercise Guidelines (iPOEG) discussed no specific parameters for interventions, however, the articles in this study included strength, endurance, mobility, aerobic, balance, and alternative exercises. The research suggests that more robust studies need to be done in order to provide guidelines, have less heterogeneity and multiple interventions consistently used to positively impact the QOL of this patient community and increase survivorship.

**Bryan Vasquez, Jesus Rufino, Frederick Fulper, & Blaise Lawson**

**Advisor:** Dr. Mary Lou Galantino | **Poster Presentation #18**

**Title:** Meniscal Tears: Physical Therapy vs. Surgery for Optimal Rehabilitation

**Purpose:** The knee is one of the major sites of musculoskeletal pain, yet conflicting strategies are offered for patients with meniscal tears. Our objective was to compare the effectiveness of physical therapy intervention or surgery in improving quality of life (QOL) and daily functions in middle-aged individuals with meniscal tears. By examining these two treatments, it aimed to provide valuable insights into the optimal approach for managing meniscal tears.

**Methods:** To address our clinical question, we used PubMed, MEDLINE, and Cochrane databases. Two separate searches were conducted to obtain information to answer our question. Searches used keywords in a variety of combinations: meniscus, repair, surgery, middle age. Inclusion criteria: articles from years 2013-2023, available in English, meta-analysis or systematic review and middle age participants ranged from 45-65 years of age. Exclusion criteria: RCTs with low level research via Sackett's category tables, duplicate studies, and studies not applicable to the clinical question.

**Results:** The search yielded 14 suitable studies via Sackett's level of evidence, including 5 studies with level 1A evidence, 4 meta-analyses and systematic reviews, and 1 systematic review. Nine studies were level 2A evidence, including 5 systematic reviews, 2 meta analysis and 2 systematic reviews and meta analysis. Results suggest health care providers are advised to limit the use of arthroscopic partial meniscectomy (APM) for treating patients with degenerative meniscus tears, as it does not offer significant advantages over non-surgical treatments like physical therapy. Multiple systematic reviews on knee arthroscopic surgery highlight challenges such as inconsistent definitions, variable outcomes, lack of standardization in control treatments, bias from crossover, and

limitations in meta-analysis, underscoring the need for caution in interpretation and improving confidence in the evidence.

**Conclusion:** Based on the levels of Evidence, long-term outcomes reveal no significant difference between surgical and conservative treatments for middle-aged individuals with meniscal tears. Short-term benefits are seen with arthroscopic partial meniscectomy (APM) combined with medical exercise therapy. Initially, nonoperative management is recommended, but about 30% may opt for surgery due to misconceptions. Future research should identify subgroups benefiting more from surgery and refine treatment recommendations. Defined treatment options are crucial for patients choosing nonoperative routes to enhance evidence-based practice and outcomes.

**Gregory Sousa, Tim Blaney, Justin Donnataria, Jessica Abrahams, Quinn Daniel, & Zach Huber**

**Advisor:** Dr. Mary Lou Galantino | **Poster Presentation #19**

**Title:** Conservative vs Surgical Care Post-Anterior Cruciate Ligament Rupture: An Analysis of Treatment Approach within Young Athletic Populations

**Introduction:** The anterior cruciate ligament (ACL) is a connective tissue structure that restricts anterior displacement of the tibia in the femoral-tibial joint complex. The ACL is susceptible to injury during high velocity movements that cause anterior femur-on-tibia translation, with the majority of ACL injuries being non-contact.

**Purpose:** This research investigated the difference between conservative and surgical rehabilitation for an ACL Rupture within young athletic populations to discern the optimal treatment path for return to sports.

**Methodology:** A full data analysis utilizing PubMed and Medline with inclusion criteria used: ACL tear, surgical, conservative, return to play, outcome; whereas exclusion criteria included articles published more than 10 years ago, population outside adolescents up to the age of 18, and inaccessible via Stockton library resources.

**Results:** Surgically treated patients had improved knee stability vs. non-surgical patients at the time of examination follow up (short-term), early ACL surgery was not proven superior to primary rehabilitation, and both treatments had 90% MCID on Knee Injury and Osteoarthritis Outcome Score (KOOS) at 2 year follow-up. Return to sport was 78–100% after acute ACLR, 84–100% after delayed ACLR, 41–100% after ACLR with an indeterminate injury-to-surgery time interval, and 0–52% after non-operative treatment of ACL tear. The articles included 2C, 2A, 1A, two 2B, and two 1B.

**Conclusion:** The literature shows conflicting evidence for the optimal method of ACL rupture treatment. Conservative care may not be the best choice for athletes and surgical reconstruction produces a higher likelihood of return to sport. Adolescent athletes who desire to return to sport should consider reconstruction as their method of treatment.

**Clinical Relevance:** Patients who desire to return to competitive sports, particularly pivot based, will benefit more from an acute Anterior Cruciate Ligament Reconstruction (ACLR). Regarding patients that do not have a high-activity lifestyle, ACLR will not be clinically necessary.

**North Runk, SPT**

**Advisor:** Dr. Thomas Nolan | **Poster Presentation #20**

**Title:** To Contract or Not To Contract? A Comparison of Quadriceps Contraction Force Generation During NMES with and without Concurrent Volitional Contraction

The purpose of this study is to compare muscle contraction force generation during neuromuscular electrical stimulation (NMES) of the quadriceps when volitional contraction occurs concurrently with NMES vs. NMES without concurrent volitional contraction. The hypothesis is concurrent volitional muscle contraction during NMES of the quadriceps will decrease muscle force generation compared to NMES alone. Twenty subjects without known knee pathology or history of knee surgery were utilized. Each subject was alternately assigned to one of 2 groups: NMES with electrical contraction only and NMES with concurrent volitional contraction. Each subject sat on the end of a treatment table and a dynamometer was placed on the subject's right lower leg with an inelastic strap around the table leg and the dynamometer. Subjects performed one 12-second volitional maximum isometric contraction of the right quadriceps (without NMES) as a baseline measurement. Two large electrodes were the attached to the anterior thigh. Subjects were instructed to either not contract their quadriceps during

NMES, or contract during NMES, depending on assigned group. NMES was activated and amplitude was increased to maximum tolerance, followed by activation of the on/off cycle for a total of 3 cycles. Amplitude was increased during each cycle. Maximum contraction force, amplitude, and verbal analogue pain scale (VAS) for each of the 3 cycles was recorded. The average maximum force of contractions during NMES concurrent with volitional contractions was 81.0 lbs. compared to 35.4 lbs. with NMES alone. Contracting during NMES enabled subjects to achieve an average of 87.9% of their baseline, whereas relaxing during NMES enabled subjects to achieve an average of 35.4% of their baseline. Subjects who performed a volitional contraction of their quadriceps during NMES achieved greater contractile force compared to subjects who did not perform a volitional contraction during NMES.

Keywords: NMES, dynamometer, muscle contraction force

## Master of Arts in American Studies

### Cynthia Anstey

**Advisor:** Dr. John O’Hara | **Presentation in L-112**

**Title:** *Petey Wheatstraw, the Devil's Son in Law*; Faulty Faustian Folly

*Petey Wheatstraw, the Devil's Son in Law* (1977), Rudy Ray Moore's third film, a “blaxploitation” film regarded mostly as an achievement of guerilla filmmaking but not as an artwork worthy of critical inquiry, deserves considerable attention as a complex amalgamation of folklores. The ninety-five minute “horror-comedy” (Mustafa 11) has been cast as “a dreg of the blaxploitation genre” (Mitchell 221). However, a close examination of the film’s use of African and Haitian mythology shows that Petey Wheatstraw is a distinctive Black cultural hero, a persona standing at the crossroads of conflicting yet complementary legends.

### Shannon Griffin

**Advisor:** Dr. John O’Hara | **Presentation in L-112**

**Title:** Chardi Kala: Always Rising. Sikh Representation in Media, Pop Culture and Publishing Post 9-11

Sikhism is the youngest of the major world religions, numbering 26-30 million worldwide. Roughly a million Sikhs reside in North America, and over a half million in the United Kingdom, yet adherent[s] to this religion are often mistaken for adherents of other faiths, or at worst stereotyped as members of extremist or terrorist groups. After the September 11, 2001 attacks on the World Trade Center and Pentagon, racially and religiously motivated violent incidents against Sikhs increased, and were widely covered in news and print media. Over the next decade, media and publishing efforts were made to educate North Americans about Sikhism. The success of these efforts, in response to the religiously motivated violence against Sikhs, is evident in an increase of positive representation of Sikhs in pop culture, popular media and publishing over the last 23 years – although there is still progress to be made. This presentation will include timelines and examples of growing Sikh representation in North America from 2001-2024 as well as contextual information about the Sikh religion and culture."

Keywords: Asian Philosophy – Asian Religion – Sikhism - Sikhi – India – Art – Culture – Media

### Sarah A. Messina

**Advisor:** Dr. John O’Hara | **Presentation in L-112**

**Title:** Art in the American Experience

This work focuses on research that showcases art and its interaction with gender, sexuality, and race. Here we discover how communities within specific groups, such as LGBTQIA+ and African Americans, have created vital visual expression and creativity through the American experience. This exploration can be found in times of joy, everyday communication, protest, activism, genocide, slavery, and empowerment. For the last two years, I have researched archives, courses, taken independent studies, and completed an internship that allowed me to dive deeper into these perspectives. Results ensured a commonality that art has always been and continues to be a vibrant outlet within these communities. Also, throughout this time, you will find I took a widened feminist approach to the various ways gender, sexuality, and race give us a deeper view into the intricate dynamics of this work.

### Alexa Novo

**Advisor:** Dr. Kristin Jacobson | **Presentation in L-112**

**Title:** Defining the ‘Speculative Archive’: The Future-Histories and Narrative Records of *American War & Gold Fame Citrus*

The archive’s definition productively broadens when a speculative novel, specifically one with a future-oriented story, is read as an archive. This consideration has not yet found its way into the ample discourses on literature and archives, nor has the flexibility of both narratives and records and their relationship’s potential. Speculative novels as archives rely on the connection, though it may not be readily apparent, between the genre’s characteristics and our understanding of archives as a form of recordkeeping for the future. If we understand a traditional archive as a repository that preserves historical records, then a future-oriented speculative novel is a textual repository of future possibilities—a *speculative archive*. These stories are narrative records indicating what ‘exists’ between the reader’s reality and the novel’s future setting—a *future-history*.

The intersection of archives and speculative literature offers a unique lens through which we can explore novels, archives, records, and past and future narrative constructions. While interdisciplinary approaches to archival studies broaden our understanding of archives, recordkeeping modalities, and repository forms, literary analysis reveals how future projections within the speculative genre, specifically cli-fi, relate to or represent real historical and contemporary issues and events. Because cli-fi bridges present concerns about climate change and speculative futures, the genre invites reflection on our past actions and the potential dystopic consequences of our current trajectory. Omar El Akkad’s *American War* (2017) and Claire Vaye Watkins’s *Gold Fame Citrus* (2015), two contemporary American cli-fi novels, demonstrate how archival characteristics and the speculative genre’s qualities are fundamental to the speculative archive’s inception. In line with American Studies engagements with archival and literary studies, a ‘speculative archive’ is a necessary term that more fully theorizes future-oriented speculative fiction and the abstraction of archives.

Keywords: speculative archive; speculative fiction; archives; cli-fi; climate fiction; science fiction; postmodernism; American Studies

### Jennifer Rios

**Advisor:** Dr. John O’Hara | **Presentation in L-112**

**Title:** Building Stockton: A Photographic Journey

This project is a photographic research book detailing not only the current state of Stockton University, but also its past and its future. This book not only utilizes archival photos from Stockton’s special collections archive, but also the personal and professional input from members of Stockton University’s staff and faculty. This book will detail not only the current state of the campus, but also many locations which are no longer used, have fallen into disuse and disrepair, or simply no longer exist. The cultural impact of Stockton in the form of locations that the university has affected and in turn has been affected by, will be discussed and an entire chapter in this project. It is the intent of this project to illustrate the many architectural, aesthetic, and cultural locations throughout Stockton University's Galloway campus. This project will also serve to illustrate the many locations that have been affected by Stockton University's presence, as well as its student body and faculty. Extensive hours of archival research, as well as the selection and preservation, digitally, of the many photos featured in this book we're needed in order to not only properly illustrate the intent of the book, but also to provide the reader with a comprehensive understanding of the locations being described, and helped to elicit an emotional attachment and investment not only in the campus as it was, but as it is now and will be in the future. Is the hope of the author of this book that the locations featured, as well as the personal accounts of several members of Stockton University staff and faculty, will serve to inform decisions that will be made in the future pertaining to the campus’s evolution and expansion.

## **Summer Hill Seven**

**Advisor:** Dr. John O'Hara | **Presentation in L-112**

**Title:** Kennedy Center Poemedy (Voice of the Black Man: A paradigm shift)

This presentation discusses Summer Hill Seven's concept of Poemedy, an expressive form emphasizing the distinctiveness of Black male voices in performance art traditions of the United States. It will feature clips from a Poemedy performed by Summer Hill Seven at the Kennedy Center's staging of *The Bard & the Beat* (directed by Leeanét Noble & Travis Xavier) in November 2023. This performance embodies Poemedy's relationship to hip-hop, jazz, blues and other African American art forms.

## **Daniel Tidcombe**

**Advisor:** Dr. John O'Hara | **Presentation in L-112**

**Title:** Teaching Bob Dylan: New Methods in Literary and Cultural History

American singer-songwriter Bob Dylan has been a figure of academic interest since his early career. The Swedish Academy elevated Dylan further when they awarded him the Nobel Prize in Literature in 2016, and dozens of colleges across the country have begun to offer classes on Dylan's work to undergraduates. However, while most of these courses approach Dylan as a literary figure, focusing on analyzing his songs for their literary merit, other ways of approaching Dylan in the classroom turn his work instead into a vehicle for lifelong learning about history and culture.

While past "single-author" courses have typically focused analysis inward on an author's work through a purely literary and biographical framework, courses on a single-author or artist can instead choose to "look outwards" at the wider culture in which it was produced. Through Bob Dylan's career as a songwriter, students can learn about the history and culture of the times in which these songs were written, as well as the cultural forces behind Dylan's musical stylings and changes throughout his career. Through the adoption and integration of Dr. L. Dee Fink's Significant Learning Model, students of Stockton's GAH 2373 course "Bob Dylan" are given the opportunity to learn about American history and culture through the lens of Dylan's work in music and literature.

This project looks at past iterations of the "Bob Dylan" course to evaluate student success under this type of methodology and demonstrate Fink's Significant Learning Outcomes in the classroom. It will also show how students learn about utilizing the resources available through universities and the wider community. Through this research, we can see new ways of teaching that can be applied to the works of other authors and artists that also nurture lifelong learning and the development of skills useful in life outside the classroom.

Keywords: Bob Dylan, Significant Learning, literature, history, pedagogy, experiential learning, student learning outcomes.

## **Master of Arts in Holocaust & Genocide Studies**

### **Ren Bell & Ermioni Vlachidou**

**Advisor:** Dr. Raz Segal | **Table Presentation #13** — **Live Streamed via [Zoom](#)**

**Title:** No Haven to be Found: The Historical and Contemporary Neglect of the United States in the Face of Mass Displacement

This paper places Puerto Rico as a US territory in conversation with the European Jewish refugee crisis. Specifically, we consider the legacy of colonialism in Puerto Rico as exhibited in the wake of Hurricane Maria in 2017, as well as the United States' negligence regarding European Jews in the 1930s and '40s. In doing so, we scrutinize the United States' response to the movement of people and discuss what can be done to avoid a repetition of the human loss seen during World War II. Hurricane Maria is one example of many in which climate violence led to the destruction of lives and livelihoods; such storms will increase in frequency and intensity as climate change continues to disrupt meteorological patterns. Natural disasters have led and will continue to lead to the forced displacement and flight of people escaping the climate violence, both within national borders and across international lines.

By using the Holocaust as a paradigm, we consider the United States' historical neglect of Jewish refugees and contemporary disregard of internally displaced people (IDPs) in the aftermath of Hurricane Maria. We argue that the United States should adopt a new legislation protecting climate refugees, both within and beyond national borders, as "climate refugees" are not recognized, and therefore not protected, by international legislation. In considering the United States' past neglect with the displacement of people, we urge for an adoption of such measures in order to act preemptively rather than retroactively with regards to the rising urgency of the climate crisis and the violence that accompanies it. New legislation would help facilitate safer and smoother migrations on a large scale while simultaneously ensuring that all nations, including the US, provide equal and adequate care to the territories to which they are already bound.

Key words: Climate refugees, Jewish refugee crisis, Hurricane Maria, colonial migration

## **Master of Science in Communication Disorders**

### **Natalie Bernard, Sarah Kunkle, Eric O'Brien, & Alexis Santoferraro**

**Advisor:** Dr. Monika Pawlowska | **Table Top Presentation #23**

**Title:** Uncovering CAPD: Diagnostic Challenges and Academic Support for School-Aged Children

Central Auditory Processing Disorder (CAPD) is a poorly understood condition that affects an individual's central auditory nervous system. School-aged children diagnosed with CAPD often struggle with paying attention due to their difficulty with understanding verbal discourse and getting easily distracted. It is not uncommon for symptoms of CAPD to be mistaken for other disorders, which can lead to CAPD being ignored, overlooked, and misdiagnosed. While there is no cure for CAPD, teachers can use various strategies to assist children academically and to provide them with the necessary support to enhance their learning. The research question that will be addressed in this project is, "How is CAPD mistaken/misdiagnosed in school-aged children, and how can we support/supplement these children's learning?" To find articles, the Stockton Library FlashFind was searched using the keywords: CAPD, ADHD, misdiagnosis, and school-aged children. The search was narrowed by utilizing scholarly, peer-reviewed articles from open access databases. Initially, the research criteria included =articles within a ten-year span. The time span was then broadened to include articles most relevant to the topic. The final articles selected all addressed aspects of the research question. After reviewing and analyzing these articles, several current findings were identified. First, the misdiagnosis of CAPD may occur as a result of professionals' unfamiliarity with the disorder due to overlapping characteristics with different disorders. It is not uncommon for teachers to mistake children who have difficulties understanding classroom instructions and struggle with recognizing phonemes, decoding, encoding, and using grammar and vocabulary for having developmental language disorder, when it is actually CAPD. Additionally, characteristics of CAPD overlap with ADHD due to many shared challenges inside the classroom. While teachers know these symptoms, proper referrals to audiologists and speech-language pathologists are crucial to ensure academic success and additional student support.

Keywords: CAPD, misdiagnosed, school-aged children

### **Kristina Jogno, B.S., SLPA; Margaret Hyde, B.S.; & Monika Pawlowska, Ph.D.**

**Advisor:** Dr. Monika Pawlowska | **Poster Presentation #27**

**Title:** College Students' Awareness of and Motivation to Choose the Speech-Language Pathology (SLP) Profession

Purpose: The purpose of this study was to analyze the awareness and perceptions of SLP among Stockton students, as results could guide future public awareness and recruitment efforts. This study sought to explain why college students select (or do not select) SLP as a major, and determine awareness of the SLP profession among college students.

Methods: This study surveyed 134 Stockton University students, comprising 82% undergraduate students across various majors and 18% graduate students, primarily in the communication disorders program. Participants completed a Qualtrics survey with multiple-choice, open-ended, and Likert-scale items. Data analysis included descriptive statistics and thematic analysis using Qualtrics and Excel, highlighting group differences and emergent

themes.

Results: Results propose that students select SLP as a major primarily because they are interested in helping others, they are interested in the subject/courses and they can work with various settings/populations. Students do not select SLP as a major primarily because they are unaware of the major/career and/or are interested in a different subject/career. Regarding awareness, a majority of students were somewhat or very familiar with the SLP profession, with health science students being more familiar than others. Students learned about the field primarily from a friend/family member, the media/internet, and/or a prior experience receiving speech therapy.

Conclusion: This study will provide important information regarding future recruitment efforts and public awareness about the field of speech-language pathology.

Keywords: speech-language pathology, career, awareness, profession, survey

### **Kelsey Tirpack, Liz Olesky, Grace Curry, & Jeff Gatton**

**Advisor:** Dr. Monika Pawlowska | **Table Top Presentation #28**

**Title:** Social Presentation of Autism in Females and Its Impact on Diagnosis

Males are three times more likely than females to be diagnosed with autism. The goal of our research project is to identify the autistic traits in females compared to males. Our research question is: What are the differences in social presentation of autism between males and females and what is the impact of these differences on diagnosis rates? A database search was conducted using the keywords “autism+female”, “gender differences+autism”, and “female+autism+presentation.” The keywords were put into the PubMed search engine to identify peer-reviewed sources that provide information on gender differences within the autistic population. Among more than 6,000 results, filters were applied to only show peer-reviewed articles within 10 years of publication to ensure relevant information. Eight articles were selected for analysis to compile a literature review of autism presentation in women compared to men and the rate the differences in presentation have on diagnostic rates.

Keywords: “autism,” “female autism,” “autism in females,” “diagnostic rates,” “female autism presentation,” “literature review”

### **Jessica Caiazzo, Allison Dilks, Georgianna Gentile, Veronica Guillen-Herrera, Sean Pedersen, & Jordan Pursell**

**Advisor:** Dr. Monika Pawlowska | **Table Presentation #29**

**Title:** Childhood Apraxia of Speech

Background: Childhood apraxia of speech (CAS) is a motor-based disorder characterized by deficits in phonological planning, motor planning, and oral motor control which impact speech intelligibility (Shakibayi et al., 2019). CAS affects one to two out of every thousand children alone, but has a higher comorbidity with other neurodevelopmental disorders (Chenausky et al., 2020). Many individuals are not aware of the symptoms that arise with CAS or the impact this disorder can have in the future.

Objective: This project will answer the question: What signs and symptoms are present in CAS and how do they influence speech and language development in children?

Method: The following databases were used to find relevant articles to answer our research question: EBSCOhost, CINAHL Complete, Taylor & Francis Online, Linguistics and Language Behavior Abstracts, PubMed. Criteria of research used were peer reviewed articles based on the topic of childhood apraxia of speech. The following keywords were used: childhood apraxia, motor speech disorder, diagnosis, characteristics, symptoms, treatment, speech, language. Researchers focused on the most recent articles available, within a 10-year span, for the most relevant information.

Expected findings: CAS can present as disruptions or inconsistencies in the production of speech sounds causing the child to be hard to understand. Signs and early indicators used to identify CAS will be explored. Treatments available for CAS will also be reviewed. The hope for this project presentation is to spread awareness about CAS and the factors, signs, or symptoms that are associated with it.

Keywords: childhood apraxia, motor speech disorder, diagnosis, characteristics, symptoms, treatment, speech, language

### **Jenna Braun, Celeste DeRose, Alexa Romano, & Emily Thompson**

**Advisor:** Dr. Monika Pawlowska | **Table Presentation #30**

**Title:** School Speech-Language Pathologists Matter

School speech language pathologists (SLPs) have expertise in the area of language and literacy. They can use this knowledge to ensure that students are provided with the most efficient and effective language programs to maximize their learning. As professionals with our skill, SLPs can help prevent language disorders from occurring and worsening over time. Teachers and administrators may not be aware of the significant impact SLPs can have on students and their learning. The objective of our presentation is to investigate: What roles do SLPs play in advocating for evidence-based practice language/literacy programs to school administrators?

The references used were found through the Stockton Library database using EBSCO, PubMed, and ASHA. The keywords used when searching for articles were SLP, collaboration, school-based services, administration, IEP, literacy, language. The articles needed to focus on the roles and effects SLPs have on the school community, the academic improvements due to evidence-based language programs, and the importance of SLP and teacher collaboration.

Based on the literature reviewed, we will discuss SLPs’ knowledge and instruction strategies that they can contribute to interprofessional collaboration in the schools. We hope that school professionals and administrators will gain a better understanding of what SLPs do and will be able to use our knowledge to improve language/literacy services for all students. The services that SLPs provide are critical to young children’s language and literacy development.

Keywords: SLP, collaboration, school-based services, administration, IEP, literacy, language

### **Brianna Chavez, Kim Chavez, Chrissy LaPlaca, & Martha Rivera**

**Advisor:** Dr. Monika Pawlowska | **Table Presentation #31**

**Title:** Assessing Language Skills in Bilingual Spanish-English Speaking Children

Assessing language skills is critical for speech-language pathologists (SLPs) to accurately differentiate between language disorders and language differences, especially in bilingual children. While bilingualism itself does not cause language disorders, understanding language development in bilingual children is important for an effective diagnosis and for intervention. This includes being able to understand the influence of cultural and linguistic backgrounds on language development and skills. This research will explore how assessing language skills aids SLPs in distinguishing between language disorders and differences and raise awareness about evidence-based assessment methods.

The objective is to answer the research question: How do SLPs assess language skills to determine language disorder versus language difference? This literature review will focus on various methods used in assessing language skills, including standardized tests, language samples, and dynamic assessment techniques.

To address this question, a literature search was conducted using keywords such as “language assessment”, “bilingualism”, “language disorders”, and “cultural competence.” Databases including PubMed, ASHA, EBSCO-host Education, and the Stockton library database were searched for relevant articles. Criteria for article selection included information regarding the research question, publication dates, and empirical research evaluating the different assessment approaches.

Expected findings include insights into advantages and disadvantages of different language assessment methods in identifying language disorders in bilingual children. This information will be helpful for speech-language pathologists, educators, and other health professionals who want to improve their diagnostic accuracy and effectiveness of assessment practices with bilingual children.

Keywords: language assessment, bilingualism, language disorders, speech-language pathology, cultural competence, language difference



**Marissa Berkowitz, Sabrina Kratochwill, Natalie Radano, Lexie Snajkowski, Meghan Sooy, & Nikita Torres**

**Advisor:** Dr. Monika Pawlowska | **Table Presentation #32**

**Title:** Exploring the Different Types of Service Delivery Methods for Language-Based Learning Disabilities

Background Information: Speech-language pathologists (SLPs) can choose from a variety of service delivery methods to provide in-school services to students. These service delivery methods consist of pull-out and push-in services that include co-teaching, general education classrooms, and special education resource rooms. Our research explores each method by examining its advantages and disadvantages for students with language-based learning disabilities.

Objective: To answer the research question: In school-aged students with language-based learning disabilities, is the push-in or pull-out method more effective?

Methods: Keywords included in the search criteria include: “RTI”, “service delivery methods”, “SLP”, “language”, “learning disabilities”, “push-in”, “pull-out”, “school-aged”, “adolescents”, “students”, etc. The Stockton FlashFind research engine was utilized to find relevant articles. The use of this research engine allowed databases such as EBSCOHost, PubMed, CINAHL, Linguistics and Language Behavior Abstracts (LLBA), etc. to be searched. This search also utilized Google Scholar. Most of the articles selected were published in peer-reviewed journals. However, some resources are a Master’s thesis or a dissertation. In addition, there is one source that provides student perspectives on this matter. The date of publication was not stressed as most of the available articles were from around 10 years ago, but the information remains pertinent.

Findings: Schools currently utilize the push-in and pull-out methods depending on the child and their needs along with the availability of school resources. Response to Intervention helps to determine what approach is best for the child. Multiple service methods can be utilized because each child is unique and presents differently. We hope that families, teachers, special educators, occupational therapists, and school administrators will benefit from this information.

Keywords: pull out, push in, RTI, students, learning disabilities, language

**Alyssa Reavy, Ashley Fillmore, & Madison Donnelly**

**Advisor:** Dr. Monika Pawlowska | **Easel Presentation #33**

**Title:** Expressive and Receptive Language Skills of Children Who are Deaf/Hard of Hearing and Use Spoken Language

The first few years of a child’s life are the most vital period of language development. If a child misses hearing speech sounds, their language development may be compromised. Hearing loss can occur at any point in a child’s life. Parents should become aware of what their child’s development may look like compared to children with intact hearing and know what resources are available to help their child’s language development. The objective of this research is to answer the following research question: “How are receptive and expressive language skills affected in children who are deaf/hard of hearing and use spoken language?” A database search was conducted utilizing the Linguistics and Language Behavior Abstract (LLBA), Academic Search Complete, and MEDLINE (Ovid) databases. While conducting our search, some search terms that we used included “deaf/hard of hearing children, hearing screens, language skills, and hearing aids”. This narrowed down the search and as a result, provided us with articles relevant to our research question. In order to ensure that the articles found were valid and reliable, only peer-reviewed articles were selected. Research suggests that Universal Newborn Hearing Screening is vitally important to conduct before the baby is discharged from the hospital so intervention can be provided as early as possible. This can include speech and language therapy or receiving hearing devices such as a cochlear implant or hearing aids.

Keywords: Deaf, hard of hearing, community, ASL, receptive language, expressive language, grammar

## Master of Science in Data Science & Strategic Analytics

**Poorva Patel**

**Advisor:** Melissa Laurino & Dr. W. Clifton Baldwin | **Poster Presentation #35**

**Title:** Seasonal Rhythms: An Exploratory Analysis of Human Behavior

Globally, criminal activity varies in variation, volume, and frequency throughout the year. The rhythm of the seasons appears to play a role in shaping human behavior, as evidenced by varying patterns of crime rates across different times of the year, also known as crime seasonality. Crime seasonality has been studied since the mid-nineteenth century as it is an important source for predictability of crimes. This exploratory data analysis (EDA) investigates the relationship between the four seasons and crime incidences, seeking to uncover patterns that could offer insights of human behavior. This project will use a combined crime dataset from New Jersey and Massachusetts from 2018-2021 with a focus on violent crime, property crime, and motor vehicle accidents as identifiers of human behavior. These include murder, rape, aggravated assault, motor vehicle accidents, and burglary. The results of the EDA will allow for understanding regarding the effects of seasonality on human behavior. Further understanding of crime seasonality serves as insight for law enforcement and policy makers to develop targeted strategies aimed at crime prevention and public safety enhancement, with the goal to improve community well-being.

Keywords: Exploratory Data Analysis, Crime Seasonality, Human Behavior

**Kahlyll Wilson**

**Advisor:** Dr. W. Clifton Baldwin & Melissa Laurino | **Table Presentation #36**

**Title:** Book Trends Overtime

The perception of great stories has evolved over time. In the 1980s, avid readers cherished works like *The Handmaid's Tale* by Margaret Atwood, *The Bourne Identity* by Robert Ludlum, and *You're Only Old Once* by Dr. Seuss. Fast forward to the 2000s, and titles like *The Da Vinci Code* by Dan Brown, *Harry Potter and the Sorcerer's Stone* by J.K. Rowling, and *The Hunger Games* by Suzanne Collins captured readers' imaginations. However, just like the film critic reviews do not hold the same opinions as the public, the same can be said for the literature community. Which makes identifying the best books of the year can be challenging amidst a plethora of *New York Times* bestsellers. Enter Goodreads, a platform that offers insight into readers' preferences.

Goodreads serves as a hub for passionate readers, providing a platform for rating, discussing, and discovering new books. Each year, Goodreads compiles a list of the best books based on user votes and ratings. Creates the list by sorting the books by what is the rating of the book, how many people voted for the book and what is the score it received. I decided to take the information from this site and analysis the data see what I can discover by analyzing and visualizing the data.

To finish the project, I employed Python for coding and SQL for queries. I began by scraping web pages to collect best-of-year results, then stored this data in a database. After organizing the data into separate tables, I queried it for specific insights, such as top-rated books in the 1900s and recurring top authors. Using Pandas and NumPy, I analyzed the data and visualized it with Matplotlib and Seaborn.

Keywords: data science, web scrape, books, user ratings

## Master of Science in Nursing

### Caitlin Faralli

**Advisor:** Dr. Barbara Amendolia | **Table Presentation #6**

**Title:** Implementing Nurse Practitioner Home Visits to Reduce Postpartum Depression

Postpartum depression (PPD) is a serious health condition that has a significant impact on mothers and their infants. PPD can greatly affect the mother-infant relationship, mothers' health and infant growth and development. Postpartum home visits by a nurse practitioner can reduce the incidence of postpartum depression. The purpose of this study is to evaluate if implementing nurse practitioner home visits reduces postpartum depression. A randomized clinical trial will be conducted by providing postpartum health care at home on the fifth and fifteenth day after delivery. The nurse practitioners within the study will be educated and attend a workshop to identify what their duties within the study will entail. On the 60th day the Edinburg Postnatal Depression Scale (EPDS) will be completed and the intervention group will be compared to the control group. It is believed that providing postpartum health care at home will result in a reduction of EPDS scores. If the hypothesis is supported by this research study, it would be beneficial to implement postpartum home visits to reduce PPD.

Keywords: Postpartum Depression, PPD, Nurse Practitioner Home Visit, Edinburg Postnatal Depression Scale, EPDS

### Juan Garcia

**Advisor:** Dr. Barbara Amendolia | **Table Presentation #7**

**Title:** Does Photography Aid Pressure Ulcer Healing

Background: Pressure ulcers can lead to longer hospital stays, lowered quality of life, pain, and risk for serious complications. Photographic interventions were designed to help reduce discrepancies in assessment and treatment and to accurately follow pressure ulcer progression. Evidence supports ongoing observation as a strategy to improve the rate of pressure ulcer healing.

Objective: The purpose of this study is to evaluate the effectiveness of digital photography in assessing pressure ulcers that are stage 3 or greater and rates of healing.

Methods: Patients admitted to a medical/surgical in-patient unit at a hospital in Southern NJ with a confirmed diagnosis of a pressure ulcer at stage 3 or higher on admission will be included in the study. Clinical intervention will consist of daily ulcer photographs being obtained and uploaded to the patient's electronic medical record (EMR) for assessment and progression of healing. Criteria for participation in study will require patients to be age 18 or older with the presence of a pressure ulcer that is stage 3 or 4, and able to agree to consent. Patients with the presence of deep tissue injuries (DTIs), surgical wounds, pressure injuries related to medical devices, and patients under custody of the law will be excluded. Documentation of the progression of healing will include daily photographs and documentation of wound condition including standard measurements, color, drainage, and/or odor. Throughout the hospital stay, photographs will be compared for changes in the overall status of the wound as various treatments are implemented. After discharge, descriptive statistics will be analyzed for summarization and inferential statistics will be conducted to identify trends between numerical data, assessments, and photographs. Data from this study may add to the growing body of evidence supporting the use of digital photography to aid in the assessment and progression of healing in pressure ulcers.

Keywords: Pressure ulcers, digital photography, photograph, staging, healing

### Erica McKenzie

**Advisor:** Dr. Barbara Amendolia | **Table Presentation #8**

**Title:** TNK-Related Intracerebral Hemorrhage in Acute Ischemic Strokes

Acute ischemic strokes occur when there is a blood clot that is blocking blood flow to an area of the brain, which can lead to permanent injury, disability and even death. Time is of the essence when treating a patient with acute ischemic stroke, as blood-thinning medication can be administered intravenously within the first four and a half hours of symptom onset. Traditionally, the standard blood-thinning, or commonly called "clot-busting," medication administered is called recombinant tissue plasminogen activator (tPA). A new medication called tenecteplase (TNK), which has a higher affinity for breaking down clots, is being used. Intravenous clot-busting medications can lead to serious complications including bleeding in the brain. The purpose of this of this study is to compare the rates of intracerebral hemorrhages in patients with acute ischemic strokes that receive TNK with those that receive tPA. This open-label randomized controlled clinical trial will include patients in emergency departments in comprehensive stroke centers in New Jersey who are having an acute ischemic stroke with symptom-onset within four and a half hours. Patients will be randomly assigned to either the control group and receive 0.9 mg/kg of tPA, or to the experimental group and receive 0.25 mg/kg of TNK. Patients will be monitored closely for 24 hours to determine the outcome of the medication. Repeat CT scans will be performed for any negative physiologic or neurologic change after receiving the therapy, and at 24 hours post-intervention to look for bleeding in the brain. Current data suggests similar rates of brain bleeding between the two medications, but data is limited.

Keywords: Tenecteplase, recombinant tissue plasminogen activator, embolic stroke, acute ischemic stroke, disability, NIH

### Emily Olsen

**Advisor:** Dr. Barbara Amendolia | **Table Presentation #9**

**Title:** Does Continuous Glucose Monitor Use Impact Depression in Older Adult Patients with Type 2 Diabetes?

Over the past few decades, technological advancements in diabetes management have improved overall patient care. With the development of the Continuous Glucose Monitor (CGM), patients who live with diabetes have the flexibility and availability to check glucose readings with the click of a button, eliminating the need for numerous finger sticks a day. Patients have been using the device to manage their disease since 1999 when the first CGM was introduced. The goal of the CGM is to help patients analyze their blood glucose trends and make more informed decisions about insulin deliveries.

Diabetes can cause multiple comorbidities. One aspect of the disease that seems to be overlooked is its impact on mental health. Patients living with diabetes are forced to monitor their blood sugar closely to ensure their health and safety and this can be stressful. The goal of this study is to identify if there is an association between depression and method of glucose monitoring. Patients with type 2 diabetes from an endocrinology clinic in NJ will be invited to participate in the study. Patients managing their diabetes with a CGM will be compared with patients utilizing the traditional finger stick management to evaluate differences in rates of depression. All participants will be asked to complete the Geriatric Depression Scale. Rates of depression will be compared to evaluate whether mode of testing glucose levels impacts mental health. Results of this study could support the use of a CGM as a method of glucose monitoring that could positively impact mental health.

Keywords: Diabetes, Continuous Glucose Monitoring, Type 2 Diabetes, Depression

## **Maitri Patel**

**Advisor:** Dr. Barbara Amendolia | **Table Presentation #10**

**Title:** The Fall Contract in Orthopedic Units

Falls are one of the most adverse events that occur in the hospital setting. A patient fall can lead to life-threatening serious injuries, like hip fractures or even death. To decrease the number of falls, orthopedic units have begun adopting a new method that involves getting all post-operative patients to sign a fall contract before ambulating them out of the bed. Current evidence suggests that patient and staff education can reduce the number of falls within the hospital setting; however, there is a lack of evidence examining the effectiveness of the fall contract within orthopedic units (Morris et al., 2022). The fall contract is an essential tool that allows nurses to educate and inform patients about the increasing risk of falls after surgery. The purpose of the study is to investigate whether implementing a fall contract can decrease the number of falls within the geriatric population in an orthopedic unit. One hundred patients will be recruited from a 31-bed in-patient orthopedic floor. The study design involves a before-and-after approach, comparing fall rates six months before and six months after implementing the fall contract. Statistical analysis will be performed to determine whether there are differences in the fall rates before and after implementing the fall contract. A level of  $p < 0.05$  will be considered statistically significant. The results of this study will highlight the effectiveness of implementing a fall contract as a strategy to reduce falls among orthopedic patients and can potentially help improve patient safety in other orthopedic units.

Key words: Falls, Orthopedic Unit, Patient Safety, Fall Contract

## **Laura C. Portillo**

**Advisor:** Dr. Barbara Amendolia | **Table Presentation #11**

**Title:** Exercise and Its Impact on Patients with Lupus

Systemic Lupus Erythematosus (SLE) is a chronic autoimmune disease that is characterized by inflammation of the organs and tissue damage, which presents significant challenges to patients' physical and psychological well-being. Treatment is usually associated with immunosuppressants and corticosteroid medication. Studies suggest that exercise may be a factor in the reduction of symptoms in patients with Lupus. The purpose of this observational study is to evaluate the impact of introducing exercise as a therapeutic intervention for reduction of symptoms for SLE patients. A total of thirty patients recruited from a rheumatology clinic in NJ will be divided into 2 groups. Group one will be patients who enroll in an exercise program and group two will be patients who do not exercise. Both groups will complete a questionnaire. It is believed that the introduction of exercise will improve SLE symptoms over the 3-month timeframe. Exercise interventions may show improvements in patients' cardiovascular fitness and muscle strength, which are usually compromised in patients with lupus due to their chronic fatigue and joint discomfort.

## **Ari Rubinson**

**Advisor:** Dr. Barbara Amendolia | **Table Presentation #12**

**Title:** In Mechanically Ventilated Patients, Does Adherence to Ordered RASS Goal of Negative One to Positive One Impact Survivability?

In intensive care units, patient sedation is examined closely to protect against unnecessary deep sedation. Past research suggests deeper levels of sedation are associated with increased mortality. The Richmond Agitation-Sedation Scale (RASS) is a widely used tool for assessing the level of agitation and sedation in critically ill patients. The RASS score is a ten-point scale, with positive four indicating a violent patient, zero indicating no agitation or sedation and negative five indicating a coma. The RASS has been shown to be a valid and reliable tool for assessing agitation and sedation in critically ill patients. A cohort observational study will be conducted in a Medical Intensive Care Unit (MICU) with the purpose of analyzing the effect of positive one to negative one RASS score on mortality. Every consenting patient that enters the MICU within a three-week period will be followed through their ICU stay. If the patient themselves cannot consent, their appointed decision maker will be approached regarding the study. Every four hours each nurse who assumes care of the patient will record their assessed RASS score, and the ordered goal RASS score. The nurse who is present for either patient death or discharge will record the time and date of the event. Patients who score negative four to negative five will be excluded from the study given their statistically increased chance of mortality. If the hypothesis is supported, there will be better survivability in more alert patients.

## **Master of Science in Occupational Therapy**

**Gabrielle Petrucelli, Michelle Pascrell, Isabella McLaughlin, Jenna Lee, Cassandra Farnung, & Jobelle Alconis**

**Advisor:** Rebecca Mannel MOT, OTD, OTR | **Poster Presentation #21**

**Title:** Impact of Mental Health Education and Fieldwork Experiences on Graduate Level Occupational Therapy Students' Perceived Comfort Levels when Working with the Mental Health Population

Occupational therapists work intimately with the mental health population in a variety of settings throughout the lifespan. Current research notes that graduate level occupational therapy students do not have much experience working with the mental health population and often stray from working with this population post-graduation. This research study depicts how occupational therapy students' participation in mental health education courses impacts their comfortability and clinical experiences when working with individuals with mental health diagnoses. To answer this question, a mixed method design was used to analyze pre and post survey results of occupational therapy students (N=30 for pre-test surveys and N=28 for post-test surveys) at a small university in New Jersey. Prior to answering survey questions, students signed informed consent. Surveys were posted on qualtrics based on the Opening Minds Stigma Scale for Health Care Providers (OMS-HC) using a 5 point Likert and open-ended questions, which displays both qualitative and quantitative data. Data was analyzed using a paired two tailed T-test to determine whether mental health based academic courses are effective in increasing comfort during interactions with individuals living with mental illnesses. Results yielded no statistical significance within the quantitative data. However, qualitative data depicted an increase in students comfort while working with the mental health population after engaging in community fieldwork opportunities. Therefore, limitations of this research study included participant drop out, and the use of a convenience sampling method to obtain participants. Thus, further research is needed to identify the effectiveness of mental health based academic courses on graduate level students because mental health is a key component of occupational therapy's scope of practice.

**Mackenzie Brennan, Carly Demarco, Janine Jastrzebski, Steysi Lara, & Jessica Pisano**

**Advisor:** Rebecca Mannel MOT, OTD, OTR | **Poster Presentation #22**

**Title:** The Impact of Integrating Interprofessional Multicultural Learning Activities on Cultural Competency in Graduate-Level Occupational Therapy Students

Working with clients from a variety of cultural backgrounds is essential for occupational therapist practitioners (OTPs) to accomplish client-centered care, which is a fundamental aspect of their practice. Current literature indicates that there is a lack of cultural competence in education. Research suggests that acquiring cultural awareness and sensitivity enhances clinical judgment and decision-making skills to ensure clients receive the highest quality of care. This mixed methods study explores the impact of cultural education and experiences in Stockton's Master in Science of Occupational Therapy (MSOT) program on occupational therapy students' (OTS) cultural competency. To determine if there was a change in participants' cultural competency throughout the two-year MSOT program, pre-and post-tests were administered. Data was collected from 31 students enrolled in a graduate-level occupational therapy program using the pre-and post-tests from an assessment of the Development of Competencies for Global Engagement. Attrition occurred as two students dropped out before participating in the post-test and one student completed a pre-test twice. Results indicated that there was a change in the level of cultural awareness and competence following exposure to cultural education and experiences in a graduate-level occupational therapy program. A two-tailed T-test determined that the data collected on the students' dispositions regarding culture was not significant ( $P=0.117$ ), however, data collected regarding knowledge demonstrated a significant change in students' cultural competency ( $p=0.00055$ ). These findings provide evidence that educational experiences of cultural competency have a positive impact on the quality of services provided by OTPs and suggest that integrating cultural competence into OT programs is beneficial for future practice, which is consistent with students' self-reported beliefs.

**William Taylor, OTS; Brandon Iskandar, OTS; Cassandra Iazzetti, OTS; Melissa Zou, OTS; Melissa Watson, OTS; & Kylie Goffredi, OTS**

**Advisor:** Rebecca Mannel MOT, OTD, OTR | **Poster Presentation #24**

**Title:** Perceived Stress Levels and Life Balance of MSOT Students

This study assessed how the demands of a northeastern university's MSOT program has affected overall stress and life balance of graduate students throughout the didactic years. The students (N = 28) completed a survey that included two stress-related questions and the Life-Balance Inventory (LBI) to assess their perceived life balance. Data analysis derived numerous qualitative themes and led to the determination that overall stress levels decreased. Additionally, there was no statistical significance to overall life balance, indicating there were no significant changes to the students' life balance during the time of the study. The results of the study indicate that the students developed effective coping mechanisms to adapt to the stress of the graduate program.

Keywords: stress, balance, graduate students, occupational therapy

**Amy Oliva, Samantha Vanhorn, Sarah Wallace, Jan Bayanin, De-Anna Davis, & Justin Monisit**

**Advisor:** Rebecca Mannel MOT, OTD, OTR | **Poster Presentation #25**

**Title:** Impact of Clinical Mental Health Experiences on MSOT Students' Comfort Working with the Psychiatric Disability Population

The stigmatization of mental health can impact healthcare outcomes and therapeutic relationships between the client and practitioner. Examining future occupational therapists professionals' knowledge, attitudes, and behaviors towards patients with mental illness are vital for inclusive and effective care. The current research reflects that students across various principles lack awareness of mental health and feel uncomfortable working with individuals with psychiatric disabilities. Research suggests that a lack of mental health education results in discomfort and stigmas towards mental health populations. According to the studies, knowledge about mental health improves the attitudes and perceptions one has toward people with mental illness. However, the current research does not consider how real-life experiences combined with education can influence students' opinions toward mental health and comfort with such populations. Using a pretest- posttest study design, this poster aims to determine how education with clinical experience can improve 30 students' views of individuals with psychiatric disabilities. All 30 students were part of the 2024 Cohort in the Master of Science in Occupational Therapy (MSOT) program at Stockton University. Questionnaires in the tests attempt to elicit qualitative and quantitative data regarding students' viewpoints and comfort levels on this subject before and after participating in a mental health fieldwork experience with concurrent enrollment in a mental health education course. A two-tailed paired T-test of the quantitative data demonstrated a statistical significance in increased levels of comfort in working with individuals with psychiatric disabilities and knowledge about the population. Qualitative data was analyzed through coding and supported the significance. This information is vital in the design of occupational therapy (OT) programs as the lack of education and experience students enter limits their ability to excel to their fullest potential as future clinicians.

Keywords: Mental Health, Psychiatric Disability, & Stigmatization

**Calyn Conway, OTS; Remi Christensen, OTS; Adrian Sia, OTS; Theresa Sanzone, OTS; Brianna Lagroteria, OTS**

**Advisor:** Rebecca Mannel MOT, OTD, OTR | **Poster Presentation #26**

**Title:** Impact of Exposure to International Collaboration and Cultural Diversity within the MSOT Course Curriculum on Students' Opinions as Future OT Practitioners

Purpose: This study analyzes the effects of including international collaboration and cultural diversity within a Master of Science in Occupational Therapy (MSOT) curriculum.

Methodology: A mixed method pretest-posttest design utilizing Qualtrics online survey tool was chosen for this study. Convenience sampling method was used among MSOT students from a small, rural, northeastern university. Research surveys were provided during their first and last semester of the 2.5-year program. Participants provided written consent before completing the survey on Qualtrics XM.

Results: 31 pre-test and 28 post-test responses were recorded. Results indicated a statistically significant improvement in student's ability to develop international partnerships and sustainable practices. Common themes found throughout the Post-Test responses include a positive impact on practice, improved cultural competence, broadened cultural perspective, expanded knowledge through improved collaboration, understanding of cultural differences, and improved client-centeredness.

Conclusion: Although minimal research analyzes how cultural competency improves outcomes for MSOT students, the data gathered in this study suggests positive outcomes for students exposed to cultural diversity throughout educational curriculums. However, future research is needed to verify the effects of increased student exposure to cultural diversity during MSOT curriculums.

Clinical relevance: Cultural competence is an important skill in ensuring equity across the continuum of patient care, as health disparities across populations are an ever-present issue within healthcare. As future occupational therapists (OTs), therapeutic use of self is important when working with diverse clients. Adaptability and open-mindedness are critical skills to build rapport with patients to ensure satisfaction and overcome health disparities across various populations.

Key Words: International Collaboration, Occupational Therapy Students, Cultural Competency

## Master of Social Work

**Christine Conaghy**

**Advisor:** Dr. Loretta Mooney | **Table Presentation #37**

**Title:** Training Students Athletes on the Suicide Prevention Gatekeeper Training 'QPR' (Question, Persuade, Refer)

Suicide is the second leading cause of death for young adults between the ages of 18 and 25, the typical age range for college students. College student athletes experience added risk factors for suicide, including higher levels of stigma related to mental health compared to non-student athlete peers. Additional risk factors experienced by college student athletes include depression, anxiety, and low self-esteem. The mission of QPR is to save lives, reduce suicidal behaviors and train participants to be suicide gatekeepers. QPR stands for question, persuade, and refer. The QPR training helps participants to recognize a crisis and refer peers to supportive services. The purpose of this poster presentation is to examine the effectiveness of QPR on college student athletes using a pre-posttest design. This poster presentation addresses a gap in the research on QPR effectiveness on college student athletes. The student athletes were offered the training through Stockton University's Athletic program. Data was analyzed using descriptive statistics and a paired samples t-test. The findings support previous research on QPR which found that participants increased their knowledge of suicide, warning signs, and risk factors as well as felt more comfortable and confident in persuading someone to get help.

Keywords: QPR, college student athletes, suicidal ideation, pretest-posttest

**Stephanie R. Ward, Rashod Martin, Isabelle Sanger-Johnson**

**Advisor:** Dr. Guia Calicdan-Apostle | **Table Presentation #38**

**Title:** The Effects of Social Media on 13-17 Year Olds' Drug and Alcohol Use

With the rise in social media use among adolescents and the lack of long-term studies on the effects, this research aims to discuss whether social media affects adolescent drug use. Social media exposes new generations to information quicker than it has spread in older generations. In addition, this information is not fact-checked before it is spread. This can cause ethical issues concerning an adolescent's rights concerning their ability to make their own decisions. These negative influences have a profound impact on the young developing minds of adolescents and can contribute to maladaptive behaviors that manifest later in adulthood. Cognitive behavioral therapy is a widely used therapeutic model and intervention aimed at reducing psychological stress by exploring how an individual's thoughts and feelings contribute to the presenting problem. CBT interventions have been successful in treating social media addiction among adolescents. These interventions could be adapted to a harm reduction model regarding the influence of social media on adolescent drug and alcohol use. Forms of activism such as policy reform and creating psychoeducational groups can be used to address the role of social media and drug use.

Keywords: Adolescents, Cognitive behavioral therapy, social media, drug and alcohol use



**Traiana Battle, Maria Palma-Lopez, Melissa Dreby, & Kara Brown**

**Advisor:** Dr. Guia Calicdan-Apostle | **Table Presentation #39**

**Title:** Long-Term Effects of Adolescents who Experience Domestic Violence

Several studies focused on the long-term effects adolescents experience after witnessing domestic violence. Witnessing domestic violence has shown to cause many negative effects on adolescents that last well beyond into adulthood. A high percentage of youth having witnessed domestic violence correlate with building relationships, an increase in behavioral issues, and criminal activities. Additionally, trauma caused by witnessing or experiencing domestic violence, has been linked to physical and mental health concerns. Cognitive behavioral therapy (CBT), and its effectiveness on decreasing negative effects on youth has been proven to be effective, with positive results when implemented. With the high success rate of CBT, we suggest advocacy in high schools. Implementation of CBT focused support groups in high schools, for youth ages 13-18 that have experienced or witnessed domestic violence.

**Gladys J. Green, Miranda J. Silva, & Tara Curtin-Clark**

**Advisor:** Dr. Guia Calicdan-Apostle | **Table Presentation #40**

**Title:** Barriers to Early Intervention & Delayed Diagnosis Amongst Black and Brown Male with Autism

Autism is a complex diagnosis. There are barriers that Black and Brown male children with autism face, and its causes are immeasurable e.g. racial disparities, lack of access, lack of knowledge, and misdiagnosis, and delayed diagnoses, and lack of institutional and financial support for improving overall service delivery. Some parents and/or guardians of children with autism usually do not have enough information to make the best decisions for their children. This shows that children may develop negative coping skills or a more chronic diagnosis when they are misdiagnosed and/or obtained late diagnosis at an early age. Findings show how psychoeducational group-work as an intervention proves to be beneficial to parents and/or guardians in understanding Black and Brown males with autism. Advocacy groups such as Faces for Autism, Black Autism Networking, and Black Autism Coalition. can help support families of black and brown male children with autism.

**Evan Zurawski, Grazel Dusauzay, & Deonna Joyner**

**Advisor:** Dr. Guia Calicdan-Apostle | **Table Presentation #41**

**Title:** Homelessness Barriers and Interventions for Black Indigenous People of Color (BIPOC)

There is an evident need for individuals in addressing the challenges surrounding the homelessness in New Jersey. Within New Jersey, disproportionate effects clearly show the struggles of individuals seeking affordable housing and the availability, resources, and process in obtaining affordable housing. Not only is there a lack of housing availability, but the population of persons who are homeless are exponentially growing due to increasing unmet expectations in program and service delivery, policies, and interventions. Unfortunately, individuals of color or the BIPOC community who significantly make up homelessness, are faced with tremendous struggles in navigating in their struggles. Although there are an abundant number of resources available within New Jersey, the programs, organizations, and interventions set in place have surpassed capacity thus, impacting stability of individuals challenged by homelessness. In addition, the BIPOC community continue to experience barriers in obtaining adequate housing. Monarch Housing Associates and other collaborative groups work to address the gaps in legislation to better support individuals struggling to access affordable housing. Funding, awareness, and education are critical in formulating a strong advocacy in responding to the housing needs of the BIPOC community.

## Professional Science Master's in Environmental Science

**Kelly Glenn**

**Advisor:** Melissa Laurino & Dr. W. Clifton Baldwin | **Poster Presentation #34**

**Title:** Ecological influences on the abundance of Bottlenose dolphins (*Tursiops* spp.) off Cape May, New Jersey

Understanding the biological, social, and environmental variables that contribute to migratory marine mammal species throughout the year is an essential conservation tool, especially given the impact of climate change on ecosystems across the globe. The Northern stock of coastal bottlenose dolphins (*Tursiops* spp.) is migratory, with the northernmost extent of their range reaching the shores of Long Island, New York during the warmer summer months and Cape Lookout, North Carolina in the winter months. Dolphins in Cape May, New Jersey exhibit high site fidelity, with the area serving as a feeding, mating and birthing ground. Data collected with Cape May Whale Watch and Research Center from 2017-2023 will be analyzed to explore different variables including water temperature and depth, group size and calf presence with the number of dolphin observations per month off Cape May, New Jersey. Improved understanding of the variables influencing the abundance of dolphins in our study area can help us determine how changing environmental factors influenced by climate change may affect this population, particularly in terms of seasonal distribution and migration.

## Master of Arts in Instructional Technology

*The MAIT + DIGI Capstone Expo, taking place on Wednesday, April 24, 2024 from 6:00pm—8:00pm in the L-Wing Art Gallery, provides graduate students in the MAIT Program the opportunity to showcase their capstone projects. Below, please find the names of the presenters and information about their projects. Join us on April 24th to celebrate their accomplishments!*

**Nicholas Brennan**

**Title:** Teaching Iterative Development to Solo Game Developers with the Case Method

To help solo game developers, this research aimed to provide effective instruction on iterative development using the case method of instruction. First, I developed three goals of iterative development model based on iterative design theory. Secondly, I applied the case method to inform the creation of case-based instruction in the goals of iterative development. Finally, I created an online instructional module teaching case-based iterative development that presented realistic game development cases to demonstrate three goals. The main research questions were if the case-based iterative development instruction: a) was effective at teaching fundamental concepts of iterative development; and b) was effective at changing the attitudes of developers toward their ability to plan development; and c) was a positive learning experience for developers. Online resources included a pre-assessment, instructional module, and post-assessment. The content was made available to developers for a period of 8 weeks and was composed mainly of realistic cases of game development stories. Weekly reminders were sent to participants and their progress was tracked. Data included assessment results and responses to open-ended questions within the module. The results showed that solo developers learned the basic ideas of the three goals of iterative development, had slightly less confidence in their planning, and reported a positive experience with the instruction. Conclusions were made about the possible explanations for results, limitations, and future improvements to the ideas of iterative development and the instruction.

**Erin Ctoni**

**Title:** Implementing Inquiry-Based Learning to Increase Student Engagement and Motivation

I implemented Inquiry-Based Learning (IBL) to a group of high school psychology students to determine if their engagement and motivation in the course would increase. Research showed that student-led teaching models, like IBL, could be used to increase engagement and motivation.

This study was conducted over the developmental psychology unit and took approximately 3 weeks to complete. An instructional intervention guide was created that outlined IBL lessons for each stage of the developmental psychology unit, infancy, adolescence and adulthood. Using the 5E Model of IBL, Engage, Explore, Explain, Elaborate and Evaluate, the instructional guide contains five lesson plans to be conducted over a course of 3

weeks. The guide also provides teachers with four formative and two summative assessments to track student progress and understanding throughout the unit.

The post-survey showed that students were more engaged and motivated to learn about developmental psychology when they were leading the research. The summative assessment showed that students understood key concepts that were taught throughout the unit. The student engagement tracker showed that some students could work well within the assigned groups, but many of the students needed teacher guidance to reach the higher levels of thinking required for the IBL model. Future research on this topic would include students choosing their own question of inquiry to answer when given a unit of study.

### **Ashley Davies**

#### **Title:** The Effects of Manipulatives and Math Discourse on Evaluating Word Problems in a Middle School Math Setting

Research shows an apparent disconnect between student ability to solve skill-based questions versus their ability to apply their knowledge in word problems leading to Math anxiety. I conducted an action-based research study to discover the impact manipulatives and Math discourse have on evaluating word problems and combatting Math fears in a middle school classroom. This study focused on fifteen sixth grade students in a general education Math class from Barnegat, NJ and took place from January 2024 – April 2024. I designed a series of lessons in an Algebra unit, which heavily involved hands-on activities using Algebra tiles and promoted collaboration within the class. Students were taught how to implement manipulatives and given practical strategies and tools to carry out meaningful conversations with their peers during the daily lessons.

To monitor and evaluate the effectiveness of the study, I used a pre/post attitude survey, one-on-one student interviews, and a performance task. Results from these tools indicate most students found the visual and hands-on approach from manipulatives helpful. A few students even noted how manipulatives gave them a sense of peace and security when faced with a daunting word problem. The results on Math discourse, however, were not as strong. When it came to “Math Talk,” it appeared students at varying learning levels had differing opinions from being bored to more overwhelmed, although there were many students who still enjoyed the communication with peers, regardless.

Overall, the increase in student engagement shows it would be beneficial to incorporate these tools into future lessons to not only help find accurate solutions, but also help ease anxiety.

### **Tiffany Gipson**

#### **Title:** Enhancing Information Literacy through Social Media and AI Technology

In the fast-paced digital age where misinformation spreads rapidly, the content of information literacy (IL) taught during library sessions for students needs to be updated to match the growing pace of 21<sup>st</sup> century. As an employee at an academic library, I proposed an innovative approach to enhance IL instruction by strategically integrating social media platforms and artificial intelligence (AI) technologies.

Using the Technological Pedagogical Content Knowledge (TPACK) framework, the study aimed to use an online learning module through Google Classroom that introduced students to real-world scenarios involving misinformation disseminated through social media channels. Through interactive activities, students learned to analyze information and write detailed prompts through AI -powered tools like ChatGPT. They also gained an understanding of the role algorithms played in content curation.

An online learning module consisting of eight topics was developed to assist participants in distinguishing credible information from misinformation. Utilizing Google Classroom students assessed slideshows, YouTube videos, hands-on activities and facilitating convent self-paced learning. The module content emphasizes the evaluation of information sources on social media networks and introduced students to AI tools and their potential applications in IL.

A study involving eight Stockton University student’s pre-questionnaire highlighted the necessity for targeted interventions to enhance information evaluation skills. Subsequent post-feedback survey indicated positive outcomes in preparing students with essential skills and strategies to navigate today's dynamic information landscape more effectively.

### **Diandra Laielli**

#### **Title:** Building Foundations for Mathematical Success: A Fact-Family Approach

This study addressed the challenge of establishing strong foundational math fluency among kindergarten students. Based on my experience in mathematics education, the instructional problem is the lack of fluency in basic mathematical operations, focusing on addition and subtraction. This deficiency often leads to disengagement and frustration in the classroom, hindering students’ overall mathematical proficiency.

To tackle this problem, the proposed solution involved implementing the fact-family approach during small-group instruction for kindergarten students. This method emphasized the interconnectedness of addition and subtraction within a set of related facts. The intervention focused on enhancing students’ fluency in basic mathematical operations while building a positive attitude toward mathematics. Through carefully designed activities and exercises, students understood how numbers interact in addition and subtraction.

Implementing the fact-family approach aimed to address the lack of fluency in basic mathematic operations among kindergarten students while also tackling negative perceptions of mathematics. The approach sought to deepen students’ understanding at an early developmental stage by focusing on the interconnectedness of addition and subtraction. Thus laying a strong foundation for future mathematic concepts.

Evaluation was conducted through two assessment tools: the Student Behavior Assessment Tool and the Post-Instruction Assessment Tool. The behavior assessment monitored individual behavior, engagement, and participation before and after instruction. This assessment revealed significant improvements in fluency and confidence in mathematics. The Post-Instruction Assessment combined pre and post-tests along with qualitative interviews. This provided a comprehensive understanding of the fact-family approach’s impact on students’ mathematics proficiency and attitude toward learning.

### **Elizabeth Rivera**

#### **Title:** Enhancing Online Course Accessibility Through Simulation-Based Learning

Inaccessible online courses that do not comply with standards such as the Americans with Disabilities Act (ADA) pose significant academic, legal and financial risks for higher education institutions. This project aimed to enhance the knowledge and attitudes of higher education faculty about online course accessibility. By utilizing Adobe Captivate and SurveyMonkey, I developed simulation-based e-learning intervention. It had 5 different versions, each focusing on a specific disability-type umbrella: (1) Learning, (2) Psychiatric (mental illness), (3) Chronic (chronic illness), (4) Communication (speech and language disorders), and (5) Sensory Disabilities (hyposensory, hypersensory, and mixed sensory disabilities). All versions began with interactive elements exhibiting the research-supported and ethical importance of online course accessibility. Then, these versions displayed their unique multimedia simulations surrounding the e-learning challenges of a fictional student with a disability. Finally, all versions’ interactive sections described how their e-learning challenges overlapped and how these interventions benefitted non-disabled learners. Sixteen faculty members participated in this online instructional module and evaluations. Despite technical, test error, and volunteering issues, results showed simulation-based learning’s enhancement and reinforcement of faculty members’ knowledge as well as attitudes towards online course accessibility. This encourages more simulation-based learning projects in nonscientific realms and growing conversations of creating inclusive higher-education environments.

### **David Ward**

#### **Title:** Critical Cases: EMS Education with Case-based Learning

The requirements of the New Jersey EMT course changed dramatically in that decade between 2010 and 2020. The amount of time required to become certified increased and EMTs were asked to do much more within their scope of practice.

This posed an instructional problem, because EMTs needed to be trained effectively. To meet this educational issue, I developed sets of Case-based Learning modules for EMTs. Case-based learning emphasizes student learning through direct instruction followed by scenarios or cases that enable learners to practice skills in a team setting. Case-based Learning has been found to be especially effective for the medical field.

Using Case-based Learning, EMT instructional modules were created that include two components: direct instruction and scenarios that apply the use of the target skill in practice cases. In each module, participants view direct instruction on the state protocol, the administration of the medication/skill, and the steps to follow for best care outcomes. After direct instruction, students work in groups of three or four to work through a case that features visuals, vitals, and other information that allows them to make patient care decisions by applying the new care procedure they have learned.

The created training module was launched in two stages. The first stage included three EMT participants who experienced online format modules. The second stage included ten participants and was completed in an in-person format. Both stages generated positive results that participants gained knowledge, confidence, and hands-on experience with the training focused on in the modules they worked on.

## **Join Graduate Student Council**

The Graduate Student Council (GSC) is an organization of "graduate students who are diverse individuals with unique skills, experiences, and talents. We value this diversity as it enriches our lives and educational experiences. We are committed to our education, our professions, and the advancement of graduate students at the University. We also value the opportunity to meet with fellow graduate students, faculty, administration, and alumni. We desire an organization that is committed, responsive, efficient, and engaging to carry out these desires and to act on our behalf

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