



Program and Presentation Abstracts

28 March 2017

Sykes Student Union

**Organized and Sponsored by the
Office of Research and Sponsored Programs**

Invited Speakers

When: 9:00am-10:00am

Where: Sykes Student Union Theater

WCU Faculty and Student Speakers: Diabetes, Nutrition and Healthcare Management

Patricia Davidson (Nutrition)	9:00am-9:10am
Melissa Reed (Kinesiology)	9:10am-9:20am
Cheryl Monturo (Nursing)	9:20am-9:30am
Simon Condliffe (Economics/Finance)	9:30am-9:40am
Speaker Questions and Answers	9:40am-10:00am

Dr. Patricia Davidson

Assistant Professor

Nutrition

Reaching Underserved Adults with Diabetes Through Interactive Technology: Mobile Diabetes Detective (MoDD)

Health care professionals encourage people with diabetes to participate in self-management and take ownership of their health. Regular blood glucose monitoring provides a wealth of data, but without a clinician to help interpret the data, many patients seek other resources to assist them in decision-making. The development and implementation of Mobile Diabetes Detective(MoDD), a web based, patient-centric decision making, intervention to promote problem solving was evaluated in underserved adults with diabetes. MoDD focuses on decision making and overcoming barriers, which leads to intentional change of behavior. The structure and components of the knowledge base were created in participatory design with academic diabetes educators using knowledge acquisition methods. Practicing diabetes educators and individuals with diabetes (18-65 years of age) were recruited from Community Health Centers (CHCs) serving economically disadvantaged communities and ethnic minorities in New York City to participate in knowledge based validation using a scenario-based approach. A combination of theory-driven and participatory design approaches led to a theoretically grounded the knowledge base, which includes eight glycemic control problems, over 150 behaviors known to contribute to these problems coupled with contextual explanations, and over 200 specific action-oriented self-management goals for correcting problematic behaviors. Delivering diabetes self-management education using health information technology could improve access to the medically underserved as they adapt to new technologies. MoDD is a decision-support tool assisting individuals to make daily self-management decisions. Its overall structure and composition may be generalized to other chronic conditions.

Dr. Melissa Reed
Associate Professor, Assistant Chair
Kinesiology, Exercise Science Division

The Reversal of Type 2 Diabetes Following Gastric Bypass Surgery: Potential Mechanisms

Studies have shown that Roux-en-Y Gastric Bypass (RYGB) can lead to the remission of Type 2 Diabetes Mellitus (T2DM). What is not known is the mechanism behind the reversal of T2DM. This talk is an overview of potential mechanisms that lead to reversal of T2DM following RYGB. It appears that the manipulation and rearrangement of the gut, specifically the duodenum and jejunum, may lead to the reversal of T2DM following RYGB. It is possible that the rearrangement of the gut alters glucose and insulin metabolism. In a study that examined lean, severely obese diabetic and severely obese non-diabetic, it was discovered that one week after RYGB, diabetes was resolved in spite of continued insulin resistance (insulin sensitivity approximately 50% of lean controls) and reduced insulin secretion during an intravenous glucose tolerance test (AIRg approximately 50% of lean controls). Fasting insulin decreased and was no different from lean control in spite of continued elevated glucose in the type 2 diabetic patients compared to lean. After RYGB, fasting insulin decreases to levels like those of lean control subjects and diabetes is reversed. This led us to propose that 1) exclusion of food from the foregut corrects hyperinsulinemia and 2) fasting insulin is dissociated from the influence of fasting glucose, insulin resistance and BMI. The mechanism(s) for reversal of diabetes in the face of reduced insulin remains a paradox.

Dr. Cheryl Monturo
Professor
Nursing

Translational Research

According to Louis Pasteur “There are not two sciences. There is science, and the application of science, and these two are linked as the fruit is to the tree.” Biomedical research is just that; the systematic evaluation of a subject or phenomenon and then the clinical or therapeutic application to the public. Translating findings or putting evidence into practice as part of the scientific research process, is key to moving our science from the bench to the bedside. Often we find that the majority of clinical practice is guided by tradition vs evidence. The goal of transition to evidence based practice is to improve the quality of care and patient/family healthcare outcomes. In this brief presentation, I will discuss translational research, evidence based practice and the need not only for bench researchers but for those who would translate the research into patient care initiatives.

Dr. Simon Condliffe
Associate Professor
Economics and Finance

How do we motivate students to improve their exercise habits? An investigation into the efficacy of incentives to promote healthier lifestyles.

By Dr. Simon Condliffe, Dr. Ebru Isgin, Dr. Matt Saboe, Amanda Flynn and Joanne Dyba

Deteriorating health conditions, lost productivity, and rising health costs are a matter of great concern. In this project, we use behavioral economics to modify student exercise habits. Incentives such as a weekly prize draw reward students that achieve a certain amount of exercise (e.g. two gym visits in a week). Additional motivation is applied by providing such things as (a) team incentives, (b) information about peers' actions and (c) goal setting. We then analyze the relationship between exercise habits and the type of incentive applied. Preliminary results suggest that incentives are effective in motivating behavior change relative to the control group and that efficacy differs by incentives.

Student Research and Creative Activities (SRCA) Awards Presentations

When: 10:15am-11:15am

Where: Sykes Student Union Theater

Mary Weese (Theater/Dance)

10:15am-10:30am

Margo Duey (Language/Cultures)

10:30am-10:45am

Cristina Seffrin (Sports Medicine)

10:45am-11:00am

Beth Ward (Sports Medicine)

11:00am-11:15am

Mary Weese

Theater/Dance

speakEZ

The author investigated the cultural/social impact of the 1920s and examined how these happenings manifested in the dance language of the Charleston, Cake Walk, and Black Bottom. She studied and embodied the integrated movement language to physicalize an understanding of the period.

After deconstructing these dances to take them from traditional partner ballroom dance to the large group concert stage, she created *speakEZ* and presented its first version in the spring of 2016 as part of the WCU Dance Company's Spring Dance Concert.

The author will speak to her process of creating and inspiration - including photos of her work and historical images of the 20's. She will ground her research by showing clips of some of the historical and emerging artists she examined. Additionally she will show clips of her work to demonstrate the complex movement layers.

Margo Duey

Language/Cultures

For language learners, gaining pragmatic competence is crucial for successful communication. Pragmatics deals with matters such as implicature (implied vs literal or explicit meaning), back-channeling (signals that show a listener is paying attention), and turn-taking (the back and forth between the participants). In particular, turn-taking is an aspect of pragmatics that has been considered a basic feature of speech and the main form of conversational organization (Sacks, Schegloff, & Jefferson, 1974). The current research examines how people take turns in a professional setting. More specifically, this study describes different types of linguistic devices used by participants to self-select and make contributions to the ongoing discussion during a workplace meeting. Data collection is ongoing, but this study uses video-recordings (approx. 3 hrs) of an ESL department faculty meeting at a local school district. The participants include a superintendent, a district department leader (also a teacher), and seven teaching faculty members from elementary, middle, and high school buildings in the district. The video-recordings were transcribed and analyzed using Conversation Analysis as the research methodology.

The study identifies turn-taking devices employed by participants to self-select, and shows how the participants orient to their self-selected turns as interruptions or competitions. The most frequently used turn-taking devices include apologies and transitional phrases. The study has implications for teaching pragmatics to language learners to ensure successful communication in the workplace.

Comparison of various outcomes following instrument-assisted soft tissue mobilization treatment: a systematic review and meta-analysis

Purpose: Instrument-assisted soft tissue mobilization (IASTM) is a form of manual therapy using hard tools to manipulate tissue that is often used with corrective exercise. As no comprehensive systematic review exists on IASTM, the purpose of this study was to critically organize, summarize, and analyze existing IASTM literature to: determine overall effectiveness in improving range of motion, strength, functionality and/or pain; provide recommendations for use; and guide future research.

Methods: A systematic search used databases accessible through the West Chester University library using a Boolean string and preset inclusion/exclusion criteria. Studies were compared and appraised for key characteristics and outcomes, as well as methodological quality and levels of evidence using PEDro, CEBM, and SORT guidelines. Reported data was used in a meta-analysis comparison calculating Cohen's *d* effect size of pre- to post-test outcomes following treatments.

Results: Thirteen articles were included in the systematic review, while twelve were included in the effect size analysis. The average PEDro score was 5.86 with CEBM and SORT levels of 2, indicating moderate-quality evidence. Eight studies reported IASTM-treated groups to have statistically significant improvements compared to control groups. Overall effect sizes ranged from -2.21 to 2.48, with ten studies yielding moderate to large improvements in at least one of the measured outcomes.

Conclusion: IASTM treatments show promising benefits in improving pain, range of motion, strength and/or functional outcomes, in healthy and injured patients. More high-quality research on a larger variety of subjects is needed to further substantiate and allow for generalization of these findings.

The Difference in Core Temperature and Heart Rate Between Collegiate American Football Backs and Linemen During Pre-Season.

Ward BP, Fowkes Godek S, Chlad PS, Fearheller DL, Morrison KE

Context: Current literature suggests that core temperature (T_c) and heart rate (HR) are positively correlated and that anthropometric variables influence each. Patterns for these variables during pre-season have not been widely examined.

Objective: To evaluate the differences in T_c and HR in American football BKs and LM.

Design: Observational cohort.

Setting: Data was collected at an NCAA Division III University.

Patients or Other Participants: Twenty DIII football players: 11 BKs [age: 20.2 ± 0.75 y, mass: 90.2 ± 6.9 kg, height: 180.6 ± 5.9 cm, BSA/mass: 233.9 ± 10.8 cm², VO_{2peak} : 48.9 ± 4.9 ml/kg \cdot min] and 9 LM [age: 20.6 ± 0.7 y, mass: 110.6 ± 13.2 kg, height: 182.6 ± 4.7 cm, BSA/mass: 209.9 ± 12.9 cm², VO_{2peak} : 42.4 ± 5.4 ml/kg \cdot min].

Interventions: VO_{2peak} was measured before pre-season. We monitored T_c and HR via ingestible sensors and Polar $\text{\textcircled{C}}$ heart rate straps during practices on days 2-5 and on day 11. The primary aims were analyzed using repeated measures ANOVA, independent and paired t-tests, and Pearson's correlations ($\alpha=0.05$).

Main Outcome Measures: T_{cmax} , BSA/mass, VO_{2peak} , HR_{max} , ΔT_c (max-min), ΔHR (max-min).

Results: There was a significant difference in BSA/mass (cm²) between BKs (233.9 ± 10.8) and LM (209.95 ± 12.99), $p < 0.005$. VO_{2peak} (ml/kg \cdot min) was higher in BKs (48.9 ± 1.5) vs. LM (42.4 ± 5.4), $p = 0.012$. Overall T_{cmax} (D1-5) was higher in LM ($39.1 \pm 0.19^\circ\text{C}$) vs. BKs ($38.8 \pm 0.36^\circ\text{C}$), $p = 0.036$. There was a significant group by day (D1-5) interaction in ΔT_c $F(3.09, 3.11) = 3.63$, $p = 0.017$. With groups combined there was a positive correlation on D2 between the ΔT_c ($2.64 \pm 0.66^\circ\text{C}$) and ΔHR (80.2 ± 14.2 bpm), $r = 0.516$, $p = 0.02$.

Conclusions: These results suggest that the LM position may impose greater thermoregulatory demands once full pads are worn, compared to BKs, particularly due to their anthropometric characteristics.

Poster Presentations

Session 1:

When:

11:00am-12:00pm

Where:

Sykes Student Union Ballrooms A-C

POSTER PRESENTATION ABSTRACTS

EASEL #1

Margaret Ervin, Andrew Heller (English)

Presenters: Staff, Student

Title: An Analysis of Assignments Brought to the Writing Center

Keywords: education, curriculum, pedagogy, writing instruction

For directors of Writing Across the Curriculum (WAC) Programs (such as the “W” course sequence at WCU), one of the key questions in assessment concerns is “genre.” What genres are students actually encountering when they take their writing intensive courses in disciplines? How can first-year composition programs anticipate how best to prepare students for writing in Year 2 of college, and on? One way to get at this question is to rely on WAC research on genre from institutions nationally, a second is to interview professors at one’s own institution and to review their syllabi, and a third option, at this time underutilized, is to find out from the Writing Center at one’s institution (and nationally) what genres students bring to the writing center. The writing center is an important player in closing the feedback loop in the assessment of WAC programs. In this study, the Writing Center, Margaret Ervin, WCU Writing Center Director (PI) and Andrew Heller, a senior English major at WCU, analyzed data from three semesters of writing center tutorials. Data from student appointment forms indicating the nature of the assignment and qualitative data in tutor reflections written post-appointment were analyzed and coded. Results indicate that nearly 30% of assignments brought to the writing center across three semesters were “analytical research papers.” Data from the tutor reflections suggests that the features of the analytical research paper vary a great deal across these 30% of tutorials. In other words, the finding is that the “analytical research paper” assignment does not represent a stable genre with one set of attributes, thus indicating that students at WCU may be confused about expectations when moving from one course to another in the course of their career as a writer at WCU.

EASEL #2

Laura Feeley (Criminal Justice)

Presenter: Student

Faculty Mentors: Sami Abdel-Salam, Michael E. Antonio

Title: Effects of Staff on Inmate Progress and Achievement

Keywords: Corrections; Rehabilitation; Prison Environment; Staff Interactions

Whether an individual has positive versus negative relationship in his or her daily life generally influences how that individual behaves. While past studies generally revealed that negative staff-inmate relationships were associated with an overall negative effect on inmates' attitudes and behaviors, the strength of these effect sizes varied widely. Moreover, recent research findings have shown the importance of the correctional environment on treatment outcomes; specifically, that inmates respond better to prison programming goals when their treatment environment reflects a more "social" atmosphere than a "sterile" brick and mortar setting.

The present analysis reports findings from a qualitative study conducted with inmates housed in a state correctional institution on the eastern coast of the United States. All inmates participated in a one-on-one structure interview which lasted approximately 30-45 minutes in duration. Each inmate was in the final stage of a three month therapeutic community setting. Overall, this study examined perceptions of inmates, who were housed in a prototypical correctional setting, related to their interactions with treatment staff their motivation for change and therapeutic engagement. This study provides critical information concerning the importance of inmate-staff relationships and how environmental factors impact the effectiveness of treatment outcomes. Policy implications will be discussed.

EASEL #3

Nikole Gray (Business Management)

Presenter: Student

Faculty Mentor: Ilknur Sancak-Marusa

Title: White Privilege: A Study on Awareness and Its Impact

Keywords: White Privilege, Racism, Discrimination, Institutional Racism

Racism was constructed to dehumanize people of color in early America so that white people could legitimize slavery. Over the years and today, activists have protested issues regarding racial injustice in America, and laws have been passed to give citizens equal rights, regardless of race. In theory, people of color have the same opportunities as do whites. In practice, racial oppression against America's minority citizens is far from abolished. Denying that having white skin is beneficial to the success, assumptions, stereotypes, and access to upward-mobility in our society is problematic. In a summer-long study (2016) including scholarly research, observations, interviews and surveys, white privilege emerged as a profound obstacle in achieving racial equality. As a result, the average West Chester University student appears to lack the self-awareness to acknowledge the benefits of white privilege. As such, this study's implications clearly identify a need for more student workshops and curricular studies to better reveal the impacts of white privilege upon its student body.

EASEL #4

Abigail Heller, Christopher Canfield (Counselor Education)

Presenters: Students

Faculty Mentor: Karen L. Dickinson

Title: Helpful Harmony: The Collaborative Relationship Between School Counselor and Music Educator

Keywords: School Counseling, Music, Collaboration, Guidance Curriculum

Music education plays an integral role in the emotional development of students in the K-12 setting. Because development is a cornerstone of the school counseling profession, the researchers conducted a systematic review to highlight the importance of collaboration between music educators and school counselors.

The theory of Multiple Intelligences (MI) and current literature regarding the effect of music on reducing stress provide rationale for the inclusion of music in school counseling programs (Gardner, 1983; Rickard, 2001). Following a careful examination of the ASCA National Model and relevant ethical codes, the researchers discovered several collaborative models that were conducive to the implementation of classroom guidance lessons related to music. Such lessons can include activities with a music and mindfulness emphasis that appeal to both students with an affinity for music and students whose primary strengths lie within areas differing from music. The researchers also examined the benefits of using a collaborative model when developing a comprehensive school counseling program (American School Counselor Association, 2012).

This poster presentation uses a review of the literature on music and stress to propose strategies for collaboration with music educators. Through the collaboration of counselors and music educators and the implementation of music-related interventions in K-12 schools, student development will be enriched and stress management will be promoted. Suggestions for strategy evaluation are included.

Christina Chiarelli-Helminiak, Kara McDonald (Graduate Social Work)

Presenters: Faculty, Student

Title: The School Counselor's Role in Addressing Bullying Behaviors

Keywords: Burnout among Social Work Educators from an Eco-logical Systems Perspective

Purpose: Burnout in the social work field receives significant attention as it is a familiar topic across various practice settings. Yet, a review of the literature confirms that social work educators are overlooked as a group struggling with burnout. This research utilizes Bronfenbrenner's eco-logical systems perspective to explore and understand contributing factors of burnout among social work educators.

Methods: The study was driven by the question: What factors are associated with burnout among social work educators? A cross-sectional electronic survey design gathered information from social work educators from Council of Social Work Education-accredited programs in 18 randomly selected states. The 535 respondents resulted in a 21% response rate; out of which 215 participants (40%) responded to a final open-ended question. Qualitative data were manually analyzed for themes.

Results: Our results confirm contributing factors on various systemic levels lead to burnout among social work educators. Respondents spoke to the reality of overwhelming job demands; insufficient time and funds to fulfill teaching, research, and service obligations; and interactions with faculty, staff, and students contributed to burnout.

Conclusion: Our findings suggest that social work educators are suffering from burnout due to multi-systemic problems. There is a need for more research on this subject to develop a fuller understanding of burnout in the academy and what strategies may be most effective for mitigating the demands of the job. Additionally, institutions of higher education require administration and faculty leaders willing to advocate for policy and practices that will alleviate contributing factors to burnout.

Wan-Yi Chen, Yookyong Lee, Amber Holbrook, Nichole Michalik (Graduate Social Work)

Presenters: Faculty, Students

Title: Maternal victimization and harsh parenting: The mediational role of drug abuse

Keywords: Community Victimization, Intimate Partner Violence, Maternal Drug Use, Harsh Parenting

Purpose: Despite established evidence linking the adverse impact from exposure to community violence to harsh parenting practices (Mitchell et al, 2009; Mitchell et al, 2010), very little is known about the pathways connecting maternal community victimization, drug use, and harsh parenting practices. Deeper understanding of the potential etiologies for maternal harsh parenting is needed to devise effective intervention strategies to assist mothers raising children. This study intends to fill this gap in our knowledge.

Methods: Three waves of data from the Fragile Families and Child Wellbeing study were used in this investigation (n = 2,151). Harsh parenting was measured by maternal psychological aggression, physical aggression, and spanking. Community violence exposure was measured by direct experience and witnessing violence. Intimate partner violence was measured by maternal psychological and physical victimization by child's father. Drug use was measured by a dichotomous response (yes = 1). The indirect influence of community violence exposure on maternal harsh parenting through drug use was examined via a PROCESS mediation analysis (Hayes, 2013).

Results: Approximately 37% of mothers reported witnessing community violence whereas only 7% of mothers reported direct victimization. The results from multivariate analyses showed that witnessing community violence, drug use, and parenting stress were independent risk factors for harsh parenting. Furthermore, the mediation analysis found an indirect effect of witnessing violence on harsh parenting behavior through maternal drug use.

Conclusions: Findings from our study highlight that community violence exposure exacerbated maternal harsh parenting. Above all, mothers who witnessed community violence are more likely to use substances, which would affect their subsequent parenting behavior.

EASEL #7

Amber White, Eric Frans (Learning Assistance Resource Center)

Presenters: Students

Faculty Mentor: Gerardina Martin

Title: Athletic Team Group work

Keywords: Group Dynamics, Student Athletics, Communication Barriers

To conduct our research, we will be holding 60-minute group counseling sessions over a fifteen (15) week period with West Chester University's Women's Softball Team as well as the Men and Women's Tennis Teams. The populations consist of team members of different ages, backgrounds and academic status'. In each session, personal stories are shared, small group activities are conducted, and open group discussions take place. The purpose is to see which factors impact team cohesiveness and dynamic. We will measure these factors by looking at communication barriers, personality differences, and conflict resolution skills. The methods we will be using to collect our data will be observation, feedback from the team, and surveys (pre/post). Our research will not be fully completed until the end of the semester but we intend to present in conjunction with our ongoing research.

We predict the group cohesion level of both the Women's Softball and Tennis Team will increase with the help of these group sessions.

EASEL #8

Mary A. Houser, Charlotte F. Fontenot (Special Education)

Presenters: Faculty

Title: iPad, Technology Integration, Instructional Development, Delivery of Instruction, and Collaboration, P-12

Keywords: iPad, technology integration, instructional development, delivery of instruction, collaboration, P – 12

For decades, education has been using technology in P-12 schools. The connections among students' achievement, teacher development linked and 21st Century Skills remain unknown. The introduction of the iPad as an educational tool emerged after much of the initial research about the integration of technology was completed. P-12 administrators, general educators, and special educators were surveyed to determine the implementation and effectiveness of the iPad for teaching and learning in today's classrooms. Findings revealed the level integration of the iPad into classroom instruction; process used by educators for the selection of applications for the iPad; use of the iPad in the delivery of instruction; effectiveness in the delivery of instruction; impact of the iPad in achieving skills and content knowledge; and uses for collaboration and professional development. This study has significance for P-12 education as the conditions in which the iPad usage is successful will provide a foundation for others to follow. As technology continues to be incorporated into teacher preparation programs at the higher education level, the relationship with earlier efforts of Preparing Tomorrow's Teachers for Technology (PT³) will be revealed.

Chris Penny, Heather Schugar, Jordan Schugar, Laquana Cooke (Professional & Secondary ED, Literacy, English)

Presenters: Faculty

Title: Run, Jump, Code. Everyone Can Do It?

Keywords: Coding, Education, iPad, Swift

We haven't seen a smash hit app like "Pokémon GO" in a long time. When it was released the smartphone game from Niantic immediately topped the app charts and sent people scurrying outside in search of mythical Pokémon creatures. But how easy is it to develop apps? Can anybody really code? And, what impact does coding have on other aspects of teaching and learning?

Organizations like Code.org are promoting the idea that everyone should, and can, learn to code. Tech companies like Google and Apple are working hard to actively encourage a new generation of coders. However, a study carried out in 2015 paints a bleak picture in U.S. schools, showing that currently, only one in four offer computer programming or coding classes.

Apple is all in with the idea that everyone can—and should—learn to code. Apple's free iPad app, Swift Playgrounds, is based on an open-source programming language. Users learn how to issue commands, create functions, perform loops, and use variables.

Did Apple just launch the best way to teach coding? Can everyone really code? We are a diverse team of humanities and education professors at WCU interested in helping prepare current and future teachers for the classroom of the future. So using the Swift Playgrounds app, and the accompanying lessons, we have designed a study that asks these questions and more. This poster will share a first glimpse of the results from this study and give attendees an opportunity to experience the Swift Playgrounds app.

EASEL #10

Matin Katirai, Whitney Katirai, Harry Holt, Luke Rosanova (Geography, Health)

Presenters: Faculty, Student

Title: Availability of Medication-Assisted Treatment for Opioid Addiction in Rural and Urban Pennsylvania

Keywords: GIS, Rural Pennsylvania, Opioid treatment

Substance abuse disorders (SUDs) impact the lives of millions of Americans in the general population. More people died from drug overdoses in 2014 than in any year on record. The majority of drug overdose deaths (more than six out of ten) involve an opioid (CDC, 2016). In 2014, Pennsylvania had 2,732 (21.9 Age Adjusted Rate) of drug overdose deaths, of which opioids are the main driver (CDC, 2016). From 2013 to 2014 the overdose death rate increase was a statistically significant 12.9 percent in Pennsylvania (CDC, 2016).

This study uses empirical data from the Pennsylvania Department of Insurance, Pennsylvania Department of Health, Centers for Disease Control and Prevention, and key informant interviews to estimate the current number of treatment programs across the state and individuals receiving medication-assisted treatment (MAT) in rural and urban Pennsylvania. The goal is to identify geographic service areas of the MAT treatment facilities and geographic access at the county level.

The objective of this study is to identify populations in rural and urban locations of the state that have limited access and geographic isolation and would be good candidates for mobile clinics and new treatment facilities. This data then can be used to identify if these locations that have limited access to MAT services have similar population and geographical characteristics. This will help identify barriers and opportunities for MAT services in rural and urban areas.

Melissa Fleck (Nutrition)

Presenter: Student

Faculty Mentor: Kimberly E. Johnson

Title: SNAP Simulation and Cultural Competence of Emerging Health Professionals and Students

Keywords: SNAP Benefits, Poverty, Health Care Professionals, Cultural Competency

Background: The USDA's Supplemental Nutrition Assistance Program (SNAP) provides food and nutritional benefits to families in need, serving more than 40 million Americans. However, research shows that there are barriers to participating in SNAP, including a lack of compassionate service. This pilot study will add to the educational research of health professionals and improve awareness of food insecurity, poverty, and SNAP using online simulation.

Purpose: The purpose of this pilot study is to develop an online educational tool and to pilot and investigation of its efficacy in increasing cultural competence for emerging healthcare professionals.

Methods: In this pilot study, researchers will: develop an interactive, animated, online educational simulation of the SNAP experience; develop a pre-test/post-test to assess awareness before and after simulation; and adjust the simulation too using data from focus groups with participants. Our hypothesis is that an online, interactive SNAP simulation experience will increase awareness and understanding of emerging health professionals regarding food insecurity, poverty, and SNAP.

Results: Incorporation of simulation experiences of food insecurity will help health professionals gain a better understanding of the many barriers faced by people living in poverty. It may also change any existing negative views or attitudes towards those who rely on SNAP benefits and in turn, this is predicted to decrease barriers to SNAP.

Conclusion: Researchers will be gathering data for this project in late March through April. Researchers plan to publish pilot results in a nutrition or online education journal and expand the project to a larger study, and other simulations.

Jennifer Vattimo (Nutrition)

Presenter: Student

Faculty Mentor: Mary Beth Gilboy

Title: The effect of a nutrition education afterschool program on the nutrition knowledge of elementary and middle school children.

Keywords: Nutrition Education, Elementary and Middle School Children, Afterschool Program, Nutrition Knowledge

Purpose/Objectives: Overweight and obese children and adolescents are at a greater risk than healthy weight children for developing chronic diseases. Children often lack nutrition education which is not usually a part of an elementary and middle school's curriculum. However, afterschool programs create an opportunity to provide nutrition education. The purpose of this project was to increase nutrition knowledge of elementary and middle school children participating in a West Chester afterschool program.

Methods: Six nutrition topics were identified: My Plate- Fruits and Vegetables, My Plate- Dairy and Protein Foods, My Plate- Grains, Building a Healthy Meal, Reducing Sugar Intake, and Making Healthier Choices When Eating Out. Activity-based lesson plans, nutrition display boards, take home handouts, and weekly snacks were provided with each topic. Graduate and undergraduate students of West Chester University presented the nutrition curriculum to children in grades K-8 during the fall and spring of 2016. 32 children on average participated in both semesters. Pre and posttests were administered to measure the children's nutrition knowledge.

Results: In both fall and spring sessions, the scores increased from pretest to posttest. On average, 17 children took the pre and posttests. The test analysis showed that each question in both semesters had either an improved score or remained the same indicating an increase in knowledge. These results show that nutrition education provided in an afterschool setting can be effective in improving the nutrition knowledge in elementary and middle school students.

Ellie Kmiec, Katya Wolf (Nutrition)

Presenters: Students

Faculty Mentor: Christine Karpinski

Title: Impact of Text Message Support on Body Composition Goals of Football Players

Keywords: Nutrition Education, Social Media, Body Composition, Dietary Behavior

Student athletes (n=63) on the football roster of West Chester University of Pennsylvania (WCU) participated in this randomized, controlled study. All athletes completed baseline anthropometric measurements, established a body composition goal, and received a tailored summer nutrition program. Athletes were randomly assigned to two groups: control and intervention. The intervention group received weekly text messages between May and August 2016, while the control group received no electronic support. Body composition measurements were performed post-intervention. From baseline to post-intervention, there was no significant difference in mean change in total weight or body composition between the intervention and control groups. From baseline to post-intervention, there was no significant difference in mean change in total weight or body composition between the intervention and control group based on their goal. Regardless of their goal, 13 (39.4%) of the athletes in the intervention group achieved their goal, while 10 (33.3%) in the control group achieved their goal. This was not significantly different. Text messaging may not be sufficient to change behaviors.

EASEL #14

Tayler Davis, Katie Gunter, Carly Linus, Alindon Smith, Katie Stec (Nutrition)

Presenters: Students

Faculty Mentor: Christine Karpinski

Title: Impact of an Eight-week Snack Bag Program on the Dietary Intake of Collegiate Athletes

Keywords: Nutrition Education, Dietary Intake, Dietary Behaviors, Body Composition

Objective: Assess the impact of a snack bag program on the dietary intake of collegiate female field hockey players.

Methods: One-group, pretest-posttest design. Participants received snack bags weekly for eight weeks. Dietary intake and body composition data were collected at baseline and week nine.

Results: The sample consisted of 23 female athletes. From baseline to post-intervention, there were significant decreases in absolute intakes of energy, fat, saturated fat, vitamin D, iron and calcium ($p < 0.05$). Protein and carbohydrate intake significantly decreased ($p < 0.05$). There was a significant decrease in sodium and a significant increase in vitamin C intake ($p < 0.05$). Body weight did not significantly change; however, lean body mass significantly increased from baseline to post-intervention ($p < 0.001$).

Conclusions and Implications: Despite satisfaction with the program, the provision of healthy snack bags did not significantly improve dietary intake. The impact of the snack bag program needs to be further explored.

Amanda Tome, Meghan Smith, Ericha Grace, Amir Golmohamadi, Margo Loggia (Nutrition)

Presenters: Students, Faculty

Title: Relationship Between the Level of Nutrition Education and Opinions Regarding Elective Gluten-Free Diets

Keywords: Health beliefs, attitudes, and opinions, Nutrition education, Gluten-free, Diet trends

Introduction: Elective Gluten-Free Diets (EGFD), avoiding gluten consumption by individuals without celiac disease, have tripled since 2009. However, limited studies have characterized the opinions about EGFD.

Objective: The aim of this cross-sectional study was to explore whether a correlation between the level of nutrition education and support of EGFD exists.

Methodology: Opinions about EGFD, level of nutrition education, and demographics were assessed by a 17 question survey emailed to the entire College of Health Sciences at West Chester University. The number of nutrition courses taken at an institution of higher education was used to assess the level of nutrition knowledge. The survey was completed by 150 participants (87 undergraduate, 42 graduate students, and 20 faculty members).

Results: Participant characteristics were non-uniformly distributed; the majority being Caucasian (91%), female (85%), students (87%), aged 18-24 years (55%), and having taken one nutrition course (59%) or less. More than half (53%) disapprove of EGFD. A small, significant, and negative correlation ($r=0.144$; $p=0.001$) between the number of nutrition courses and the ability to correctly identify gluten-containing products was detected. The correlation between the number of nutrition courses and opinions on EGFD was weak and positive ($r=0.158$; $p=0.053$) but nonsignificant ($p<0.05$), which suggests that a larger sample size is needed.

Conclusion: This study detected a small correlation between nutrition education and EGFD. A detailed survey and larger sample size with higher inclusion of faculty and postgraduate students are needed to confirm a correlation. A nutrition education intervention with pre/posttest measures could be a complementary study.

EASEL #16

Mikaela Kostrubiak, L. Ashley McCorkle, Sarah Padilla, Keri A. Palasz (Nutrition)

Presenters: Students

Faculty Mentor: Amir Golmohamadi

Title: The Effects of Social Media on College Students' Food Choices

Keywords: Social media, food choices, young adults, nutrition knowledge

Introduction: Young adults regularly use the social media websites and applications. Unlike the traditional media effects on individuals' food choices, the effects of social media are lesser known.

Objectives: The purpose of this cross sectional, mixed methods, and, preliminary study (approved by the IRB committee at West Chester University) was to identify whether the use of social media has any effect (positive or negative) on food choices for young adult students (age 18-29) at West Chester University of Pennsylvania (WCU).

Methods: The effect of social media, level of nutrition education, and demographics were assessed using a 19-item qualitative and quantitative survey. The questionnaire was completed by 44 participants (18 males, 25 females, 1 transgender male), who were recruited randomly from the diners of Lawrence Dining Hall on WCU campus during the lunchtime hours in February 2017. The descriptive responses were coded to identify the effect of common social media on selecting a special diet.

Results: The research team members are working on the data coding and analysis. The office of Research and Sponsored Program has permitted the authors to submit their in-progress abstract. The results and conclusion will be presented during the poster presentation session of the research day.

Tentative conclusion: Social media websites had significant/insignificant influence on the surveyed participants.

Stephanie Binder, Sarah Kelly (Nutrition and Dietetics)

Presenters: Students

Faculty Mentor: Amir Golmohamadi

Title: Sensory Evaluation of a Teff- and Dairy-Enriched Flatbread to Address Calcium Deficiency and to Increase Sustainability in the Middle East and North Africa (MENA)

Keywords: Calcium Deficiency, Teff Flatbread, Pregnancy, Sensory Evaluation

Objective: Teff, a grain rich in calcium and protein, along with dairy products, can be utilized to enrich flatbread, a highly-consumed food in MENA, and reduce the prevalence of calcium deficiency among pregnant women in the region. This pilot study was conducted to evaluate the acceptance of an ivory teff and dairy-enriched flatbread.

Methods: A 9-point hedonic scale was used to evaluate the texture, taste, moisture, and aftertaste of three flatbread samples: a regular (0% teff), a teff and milk (TeM) enriched (15% teff dry basis), and a teff and yogurt (TeY) enriched (15% teff dry basis). Participants (n=34) were recruited from the students, faculty, and staff of the College of Health Sciences at West Chester University. The calcium concentration of samples was estimated using Food Processor Nutrition Analysis Software.

Results: Of those surveyed, 82.5% were white, 59% were female, 41% were male, and 82% were between the ages of 18-30 years. The majority of participants (97%) was familiar with and liked flatbread. There was no significant ($p<0.05$) difference among texture, taste, and aftertaste of all samples. However, the moisture of the TeM Bread was liked more ($p<0.05$) by the participants. Overall, 44% of participants preferred the TeM bread, which increased the level of calcium the most (6.7 times).

Conclusions: Consumption of TeM bread may increase the calcium intake of pregnant women in MENA, and locally-produced teff and milk could be used to create a sustainable, shelf-stable product and increase local income. Further research is needed to warrant these conclusions.

Emily Bradley (Sports Medicine)

Presenter: Student

Faculty Mentor: Sandra Fowkes-Godek

Title: Dietary Sodium Intake and Sweat Sodium Losses in Division II Collegiate Football Players During Pre-Season Training Camp

Keywords: Electrolyte balance, Hypovolemic Hyponatremia, Sodium, and American Football

Purpose: To calculate daily sodium intake of football players over three consecutive days and make comparisons to their measured sweat sodium losses during practices. Additionally, to evaluate players' blood electrolytes, percent change in plasma volume (% Δ PV), urine osmolality, and changes in body mass from baseline measures.

Design: Observational field study.

Setting: Collegiate football team.

Participants: Fourteen players (age=21 \pm 0.9, mass=107.0 \pm 24.7kg, height=182.1 \pm 21.3, BSA=2.2 \pm 0.3m², and BSA/Mass= 222.0 \pm 22.0cm² · kg⁻¹).

Interventions: Blood and urine samples were taken on 3 consecutive days. Blood was analyzed for Hb, Hct, and electrolytes. Urine was analyzed for osmolality, and body weight was recorded. Sweat rate was calculated by change in body weight adjusted for fluid consumed and urine produced. Sterile sweat patches were used to collect sweat samples. The patches were removed during practice, placed in sterile tubes and centrifuged. Sweat was analyzed for sodium by ion-selective electrode. Diets were analyzed using a common nutrition analysis software.

Results: WBGT was 79.5 \pm 3.4°F on experimental days. On all experimental days, Na⁺ intake exceeded Na⁺ loss. Individual sweat rates varied ranging from 0.59-5.96 L/hr. Mean sweat sodium concentration was 35.4 \pm 13.8mmol/L and ranged from 14-77 mmol/L. % Δ PV was higher than baseline (p \leq 0.05) on Day1 (9.1 \pm 17.9%) and Day2 (10.1 \pm 10.1%). No differences existed across days in blood electrolytes, body weight or urine osmolality.

Conclusion: All player's dietary sodium intake was greater than measured sweat sodium losses. The expansion of PV, no changes in blood sodium, urine osmolality or body mass indicates that players maintained sodium and fluid balance during these practices.

EASEL #19

Nicholas April (Sports Medicine)

Presenter: Student

Faculty Mentor: Daniel Baer

Title: The Effects of a Health Career Summer Academy on Positive Youth Development in Underrepresented Minority Students

Keywords: Healthcare, diversity, education

Background: As the U.S. population becomes more diverse, the population of students entering healthcare fields must be equally diverse in order to provide culturally competent care. To address this issue, college recruitment measures must consider the psychosocial issues that underrepresented minority (URM) students face. The West Chester University Health Career Summer Academy (HCSA) is a one to two-week interdisciplinary program designed to introduce URM youth students to a variety of academic and professional opportunities in healthcare.

Purpose: To evaluate the effectiveness of the HCSA program in increasing middle and high school students' interest in attending college, doing well in school, and pursuing healthcare careers, and increase participants' overall self-confidence and appreciation for healthcare professionals.

Methods: Thirty-seven middle school and high school students (19 females, 18 males; mean age: 13.83) participated in the 2016 West Chester University HCSA. 86% of participants came from a URM background. Participants completed a pretest-posttest survey, which included close-ended and open-ended questions.

Results: From pretest to posttest, participants reported increased interests in attending college (84%) and pursuing a healthcare career (74%), increased motivation to do well in school (90%), improved confidence (73%), and increased appreciation for healthcare professionals (87%). Qualitative themes in student learning included valuing basic life support skills, understanding healthcare career options, and appreciating healthcare providers.

Conclusions: These findings support the effectiveness of the HCSA in motivating students to succeed in and out of school, and as a potential recruitment strategy for URM students, especially in healthcare fields.

Leah Kuntz (Biology)

Presenter: Student

Faculty Mentor: Patricia Davidson

Title: Factors Related To Diabetes Medication Adherence at a Full Service Open Admission Health Center: Community Volunteers in Medicine

Keywords: medication adherence, diabetes, community clinic, disparities

Currently there is no structured method for tracking and assessing medication adherence for patients who attend community-based clinics. Taking medication as prescribed is one of the diabetes self-management skills that influence clinical outcomes. Despite improvements in education and access to care, only 18.8 percent of the diabetes population achieve clinical recommendations, with an even lower rate for all minorities and those taking a combination of medications, including insulin. This FaStr grant pilot study assessed medication adherence and the barriers or factors related to medication adherence among patients at the Chester County Community Volunteers in Medicine (CVIM) clinic. A convenience sample of 35 adults with Type 2 Diabetes, aged 27 to 61 (mean of 44), and 70% females participated. A survey was completed while waiting for their appointment; the higher the score indicating non-adherence. Demographic and clinical data, trends of adherence barriers, and medication adherence scores were recorded. The majority of the medication lists, as reported by participants, did not correspond with the documented clinic lists. Demographic and clinical data and medication adherence score showed an association between poor medication adherence and prescription complexity, limited health/numeracy literacy, income, and treatment for depression. Further research is needed to develop rapid assessment for barriers to medication adherence; leading to more informed recommendations to address the health disparities in this population.

Maria Crossan, Lisa Drusedum (Counselor Higher Education)

Presenters: Students

Faculty Mentor: Gerardina Martin

Title: Affects of the Achieve! Program on First Year Student Success

Keywords: Student retention, First year transition, Learning support, Higher education resources

The purpose of this research is to evaluate the impact of the Achieve! program on student retention by providing academic and social support for FY4/at risk first year higher education students. The population of the study is focused on first year traditional higher students at West Chester University. These students have been identified as FY4 students. The research looks at data on GPA of FY4 students before the introduction of the Achieve! program in contrast to the GPA of students who have successfully completed the Achieve! program requirements. The study is to evaluate the effectiveness of the Achieve! program in helping these first year, FY4 students earn 15 credits while maintaining or increasing their average GPA in relation to previous FY4 cohorts. The method used is a Qualtrix survey and West Chester University GPA data. The results of this data show that students in the Achieve! program have earned an increased average GPA compared to previous FY4 cohorts. The conclusion is that Achieve! program is instrumental in helping FY4 students on average maintain or improve their GPA average while earning more credits.

Chris Matusik (Educational Services)

Presenter: Student

Faculty Mentor: Gerardina Martin

Title: Supplemental Instruction: Improving Student Academics Through Tutoring

Keywords: Supplemental Instruction, Learning Assistance, Tutoring, 100-200 level Chemistry and Biology course

My name is Chris Matusik and I work as the Supplemental Instruction Peer Tutor Coordinator at the Learning Assistance and Resource Center (LARC) on campus. I am analyzing data gathered through the LARC over the past few years. We have tracked student attendance to tutoring sessions throughout the semester and correlated it with final grade received in the course. I will show the impact Supplemental Instruction tutoring is having on student's academics on campus. I will be investigating the effectiveness of tutoring at increasing student GPA and decreasing the DFW (earned a D, F or withdrew from the course) rate for the 100-200 level biology and chemistry courses that we tutor.

EASEL #23

Allison Bentz (Educational Services)

Presenter: Student

Faculty Mentor: Gerardina Martin

Title: Live Laugh LARC!: Professional Development of Learning Assistance and Resource Center Tutors

Keywords: Learning Assistance, Professional Development, Tutor Certification, College Reading and Learning Association

I am researching the professional development of Learning Assistance and Resource Center (LARC) tutors. All tutors must complete the first level of College Reading and Learning Association (CRLA) training, but three levels are available to all tutors. I hypothesize tutors who opt in to additional training will have better approval ratings on the end of the semester tutor evaluation completed by tutees.

EASEL #24

Helena DeBald (Learning Assistance & Resource Center, Early Alert Program & Achieve!)

Presenter: Student

Faculty Mentor: Gerardina Martin

Title: Outcomes of the LARC's Fall 2016 Academic Success Workshops

Keywords: Academic Success, Workshops/Presentations, Academic Support, Study Skills

The purpose of this research project is to evaluate the outcomes of the Academic Success Workshops (ASWs) on attendees during the 2165 semester. Using pre- and post-tests responses, attendance, and feedback from program evaluations, we will look to assess how to harness successes and challenges to plan future programming. We hypothesized program feedback might indicate too much instruction and not enough collaboration or emphasis on other University resources, but successful information related to the specific topics. Research results and conclusions will be explained upon presentation of the information.

Jared James (Learning Assistance & Resource Center)

Presenter: Student

Faculty Mentor: Gerardina Martin

Title: Academic Development Program: The Effect of Tutoring on Academic Achievements

Keywords: Academic Improvement, Tutoring, Attendance Rates, Grade Point Averages

As a Peer Tutor Coordinator here at the Learning Assistance and Resource Center, I will be conducting research on the comparison of attendance rates on students enrolled in the Academic Development Program here at West Chester University over the past two years. I am going to run data analysis based off of the statistics of students who attended tutoring versus those who were dropped from tutoring and see what the average GPAs were for those students and compare. I hope to find tutoring has a positive impact on those students who attend tutoring and an increase in their academic development versus those students who dropped out of tutoring.

EASEL #26

Jon Godwin (Learning Assistance & Resource Center)

Presenter: Student

Faculty Mentor: Jake Maxwell

Title: WCU's Early Alert Program's Impact on Student Academic Performance

Keywords: Early Alert Program, Student success, academic resources, student retention/graduation

The University's Early Alert Program is a proactive system of communication and collaboration of professors, program staff, academic advisors, and University students. The program looks to provide early intervention through early indicators to students identified through multiple collegiate channels as needing additional academic and social support. The program works by identifying students, contacting them, and scheduling regular meetings to allow them to achieve their academic goals as well as improve WCU's retention and graduation rates. Any student with a C- or below can be referred to the program. Our goal will be to examine program data from the past two semesters and establish a link from attendance and enrollment in the program and academic success, as defined by an increase in GPA.

Danielle Skaggs (Library Reference)

Presenter: Faculty

Title: The Research Process of Distance Students

Keywords: distance education, libraries, writing

Do distance students conduct research differently than on campus students? Much of the current research on students' research process and challenges has been gathered through studies such as Project Information Literacy & the ERIAL Project that have focused on traditional students – in age and mode of instruction. This project focuses on students who take classes online or at branch campuses (out of the traditional university setting) and who are often part-time, returning students instead. Distance students were surveyed to learn more about their research process and research pitfalls. Results include the first three steps most distance students take during research, what steps instructors and librarians can take that students feel are most helpful, and how much time students are devoting to research. Common problems and frustrations identified from the survey and preliminary analysis of follow-up interviews will also be presented.

Catered Lunch for All Attendees

Research Information Presentation for Students

Presentation: Research and its Impact - Furthering your Future

Panelists:

WCU Faculty, Students, and Alumni (Corporate Recruiters)

When:

12:15pm-1:15pm

Where:

Sykes Student Union Ballroom C

Poster Presentations

Session 2:

When:

1:30pm-2:30pm

Where:

Sykes Student Union Ballrooms A-C

POSTER PRESENTATION ABSTRACTS

EASEL #28

Taria Rivera-Montes (Anthropology & Sociology)

Presenter: Student

Faculty Mentor: Michael A. Di Giovine

Title: Cultural Assimilation and Language: Summer with the Cowichan and Lyackson

Keywords: Linguistic Relativity, Assimilation, Language, Rites of Passage

In Canada and the United States, there still is a lack of understanding of how language impacts the lives of the Indigenous community. This is not only the First Nations in their own cultural lives but also when new interracial kinship ties that are created. Based on two years of ethnographic research among the Cowichan and Lyackson bands in Vancouver Island, British Columbia (Canada)—including interviews, involvement with community members, readings from various sources on the Indigenous community, foreign policy, government laws, court summaries, and lastly living on site for an extended period—this power shows how a community with outwardly foreign linguistic and cultural concepts introduces these concepts to others of ethnic backgrounds. Thus, changing the newcomer's role from "company" to "kinfolk". It also points to broader implications of how marital traditions would play a role in such cultural transmission, what should the "children" of interracial parents teach their children, what language should be implemented, and lastly, how will these issues affect the family unit. However, it is important to recognize that language affects all humans in many ways. In this particular case, it is important to recognize the language which is Hul'q'umi'num, of the Cowichan and the Lyackson is not only universally shared in the community, but varies from family units.

Gabrielle Longreen (Anthropology & Sociology)

Presenter: Student

Faculty Mentor: Michael A. Di Giovine

Title: Social Impacts, Organized Looting, and Countermeasures in Cambodia

Keywords: Cambodia, “Artifact looting”, “Heritage Destruction”, “Countermeasures against looting”

This poster examines the ways in which looting affects modern Cambodia, paying attention to the political atmosphere of the late 20th century and Cambodia’s more recent countermeasures to combat this practice. Since the French colonial era, looting has plagued Cambodia, impacting the social community and future tourist endeavors by its destructive principles. These problems have since grown by the recent power vacuum left from both the Khmer Rouge and Vietnamese occupancy. The poster argues that the aspect of the looting itself assumes a social hierarchy, categorizing those who are opportunistic or those looking to pull themselves out of poverty and starvation with those actively partaking in the practice and have their own connections for the selling of artifacts. Another effect the looting has is on its local populations themselves, as many of the people still worship or visit these shrines. These looted sites sometimes are specific to these local populations as it is out of the “public eye” and therefore not as regulated or protected as more popular sites. The research was based on archival research and case studies focusing on local populations, sellers or venues of stolen artifacts, and others in the compliance of various organizations. This including museums, into regaining these artifacts and the methods of protecting future artifacts from being stolen. It also discusses Cambodia’s efforts to keep this issue within its borders and to not allow it to become international, although Cambodia has accepted the assistance of other nations in order to prevent these disasters.

Easel #30

Caitlin Seaman (Anthropology & Sociology)

Presenter: Student

Faculty Mentor: Dr. Michael Di Giovine

Title: The Influence of Intangible Cultural Heritage at the Dakota Access Pipeline Project

Keywords: Anthropology, DAPL, Social Media, Heritage

This poster examines the ways in which cultural heritage was deployed—in discourse and practice—to raise awareness of, and ultimately protest, the Dakota Access Pipeline Project by diverse groups. It argues that the influence of intangible cultural heritage supports the impacts of the success of the #NoDAPL protest at the Dakota Access Pipeline Project. The indigenous rights and destruction of heritage of Native Americans have been viewed worldwide from various social media platforms—Facebook, Twitter, Instagram to enhance awareness. The #NoDAPL protest transformed Standing Rock Sioux's affirmation of traditional values through social media, to become a catalyst for social change, as well as a nationwide identity crisis for human rights and cultural heritage. The poster ultimately argues that, if it was not for international recognition as a driving force for the cultural diversity, the use of intangible heritage might have not helped the tribe successfully gain awareness for #NoDAPL.

Elizabeth Strauss (Anthropology & Sociology)

Presenter: Student

Faculty Mentor: Heather Wholey

Title: Non-invasive Archaeology at an Historic Quaker Cemetery in Southwestern Chester County, PA.

Keywords: archaeology, archives, geo-reference

The Sadsbury Friends Meeting is a historic peace church comprised of people who practice the Quaker faith. Dating back to the early 1700s, this meeting house has many historic attributes, including its cemetery. While the cemetery is beautifully kept, its records have become disorganized over the years. Through an internship offered by the Meeting, I am working with another West Chester University student to re-document the cemetery. This involves using a GPS camera to photograph and geo-reference each existing headstone, along with recording information including name, date of birth, date of death, and epitaph. This information is cross referenced with the Meeting's documents to collect the maximum and most accurate information about each individual buried in the cemetery. The georeferenced data is then uploaded to ArcMap GIS software in order to create a cemetery layer. A public version of this will be made available through the Sadsbury Friends Meeting's website so that community members may search for and visit their loved ones. The project also involves using ground penetrating radar (GPR) to search for approximately 400 unmarked graves. Up until the mid-19th century it was common for Quaker's to practice green burials which involved wrapping the deceased in canvas and burying them without a coffin or headstone. The Sadsbury Friends Meeting has paper documentation of this style of burial, but no way to determine their actual location. We are attempting to use an historic cemetery survey and remote sensing GPR to identify the location of these unmarked graves, so that Meeting members and the public may honor their legacy of these founding members.

Sapana Gupta (Biology)

Presenter: Student

Faculty Mentor: Aliza Richman

Title: Intersectional Sociodemographic Effects of the Great Recession on Body Mass Index

Keywords: Biomarkers, Socioeconomic class, Race/Ethnicity, and Gender, The Great Recession

The U.S. economy severely weakened during the Great Recession of 2007-2009, exposing many Americans to significant social and economic stress. Prior research indicates that individuals may adopt both positive and negative health behaviors in response to stressful circumstances. Although the economy has since rebounded, the effects of the recession on body mass index remain unclear. To further understand how the economic downturn affected various demographic subgroups on account of socioeconomic status, race/ethnicity, and gender, we examine body mass index before, during, and after the recession. Utilizing data from the National Health And Nutrition Examination Survey (NHANES), we conduct ordinary least squares regression models to analyze how body mass index fluctuates within demographic subgroups on account of the recession. Preliminary findings reveal significant variation in the relationship between body mass index and the recession across demographic subgroups, further elucidating the relationship between the Great Recession and health.

Danielle Adams (Biology)

Presenter: Student

Faculty Mentor: Jennifer Maresh

Title: How environmental productivity simultaneously promotes and constrains maternal investment strategies in mammals

Keywords: Marine Mammal, Reproductive Energetics, Maternal Investment, Gestation/Lactation

Compared to other animal groups, mammals invest substantial amounts of energy in their offspring via gestation and lactation. Despite this unifying characteristic, strategies of maternal investment – i.e., reproductive energetics —differ considerably across species. Indicators of maternal investment strategies include gestation time, fetal and offspring growth rates, mass at birth, litter size, lactation time, and mass at weaning. While these indicators are known to scale with maternal body size, comparisons among groups indicate maternal investment strategies may differ between terrestrial and aquatic mammals. In this study, we synthesized multiple datasets from the scientific literature of approximately 3000 placental mammals, with the specific aim to compare marine and terrestrial mammal maternal investment indicators. Our results show that after correcting for maternal mass, investment indicators tend to be higher in marine mammals than terrestrial mammals of similar size. These include faster fetal and offspring growth rates, as well as larger mass at weaning, despite shorter gestation and lactation times. These results indicate that marine mammals invest a larger amount of energy in their offspring, and more quickly, compared to their terrestrial counterparts. We posit these differences to be driven by the very different forcing factors inherent in their respective environments, such that increased environmental productivity of the marine environment promotes large investments while, simultaneously, the large spatial and temporal dynamics of seasonal migrations between feeding and breeding grounds constrains aquatic mammals to invest a lot of energy in their offspring quickly.

Alaina Bertoline (Biology)

Presenter: Student

Faculty Mentor: Dr. Jessica Schedlbauer

Title: Ecological integrity of edge and interior environments at West Chester University's Gordon Natural Area

Keywords: forest ecology, edge effects, deciduous forest, Gordon Natural Area

Compared to forest interiors, forest edges are often degraded in habitat quality and ecological integrity because of edge effects. The recent clearing of a power line right-of-way in West Chester University's Gordon Natural Area (GNA), a protected eastern deciduous forest in southeastern Pennsylvania, has increased the forest area exposed to potentially harmful edge effects. A modified Rapid Upland Forest Assessment (RUFA) method was used to assess differences in ecological integrity between edge and interior environments of the GNA. This assessment was performed in five 50 m transects per environment and two 0-10 cm soil samples were collected per transect. Forest interior RUFA scores were almost two points higher than edge RUFA scores on average, a significant difference ($p < 0.05$) indicating lower ecological integrity in the edge environment. Interior transects scored higher in most RUFA metrics assessing forest structure and were the only transects with low presence or total absence of non-native plants. Unexpectedly, edge transects tended to score higher in measures of native forest composition. Soil pH was significantly higher ($p < 0.05$) and closer to neutral in the forest edge relative to the interior, which may promote plant growth and survival in the edge environment through increased nutrient availability. Overall, these findings suggest degraded environmental quality in both edge and interior environments, with worse conditions at the edge. Future management activities should focus on preventing the spread of non-native plant species into the forest interior and possibly reducing deer browsing pressure on understory plants,

William Gough (Biology)

Presenter: Student

Faculty Mentor: Frank Fish

Title: Physical Properties and Anisotropy in the Central Tissue Layer of Cetacean Tail Flukes

Keywords: Biomechanics, Material Testing, Cetacean, Swimming

During swimming, cetaceans generate hydrodynamic thrust with dorso-ventral oscillations of flexible tail flukes. These flukes do not contain rigid skeletal structures. Instead, the majority of the fluke is composed of a densely packed collagenous matrix with collagen fibers running in a crisscrossing pattern along the chordwise axis. Flukes from six species of odontocete cetaceans were examined to compare the morphology and orientation of fibers in relation to the physical properties of the flukes. All species were found to have the same generalized morphology, but the pygmy sperm whale (*Kogia breviceps*) was found to have additional fibers running perpendicular along the span of the fluke. Compression tests were performed at 10%, 40%, and 70% of the span on the flukes of each species in three orientations: spanwise, chordwise, and dorso-ventral. In all species, the spanwise direction was found to be the most rigid, while the chordwise and dorso-ventral directions were found to be more pliable. Anisotropic deformation of the fluke samples always occurred in the spanwise direction when compressed in either the chordwise or dorso-ventral directions, and very little deformation was observed when the fluke samples were compressed in the spanwise direction. These results are consistent with the three-dimensional structure of the flukes that were comprised of two-dimensional sheets of material aligned tightly in a plywood-like configuration along the span of the flukes. The anisotropic properties imparted by this unique internal structure help the flukes to maintain their spanwise rigidity while allowing partial flexibility during swimming.

Enzo Kerr (Biology)

Presenter: Student

Faculty Mentor: John Pisciotta

Title: Organic Waste breakdown using Oyster Mushroom Fungi

Keywords: organic waste disposal, upcycling, bioremediation, oyster mushrooms

Fungi are prime candidates for alternative waste disposal methods. Fungi are able to convert various types of undesirable organic waste into useful biomass; namely valuable mushrooms and garden compost. The purpose of this project is twofold: 1) to develop a sustainable, effective method for upcycling WCU organic waste, and 2) to produce a valuable source of organic matter in the form of oyster mushrooms (*Pleurotus ostreatus*) plus mushroom-compost for the campus gardens.

During the course of this experiment triplicate batches of waste substrates (coffee grounds, corn husks, paper, sawdust) were autoclaved and then inoculated with mushroom spawn. Fungi were cultivated in transparent autoclave bags compared to perforated PVC pails. Moisture loss was monitored and adjusted during growth to maintain favorable conditions. Water loss was found to be greatest from paper waste (6.28 ± 1.29 g/day/kg) in PVC pails. Bag cultivation proved superior to PVC pails, which were more contamination prone.

Jebadiah Hickman (Biology)

Presenter: Student

Faculty Mentor: John Pisciotta

Title: Effect of Photosensitizers and Light on Microorganisms

Keywords: microbiology, bacteria, photosensitizers

This work tested the antimicrobial efficacy of light plus light-sensitive chemicals called photosensitizers. It was hypothesized that light plus photosensitizers would optimally inhibit microbes. The combined effect of light and 4 different photosensitizers on bacteria growth was evaluated. Photosensitizers tested included: Rose Bengal, Erythrosin B, and 5,10,15,20-Tetrakis(1-methyl-4-pyridinio)porphyrin tetra(p-toluenesulfonate)). Well plates were inoculated with normalized concentrations of *E. coli*, *S. aureus*, *P. aeruginosa*, or *P. fluorescens*. Photosensitizer effect was compared to no-drug controls. Plates exposed to light were compared to dark controls to test light activation. After 1 hour exposure to blue LED light and subsequent 6 hour incubation, optical density (OD) analysis determined optimal photosensitizer concentration to be: 100 uM Rose Bengal and 500 uM Erythrosin B against *S. aureus* and 500 uM Rose Bengal against *P. aeruginosa*.

Kelsey Tennett (Biology)

Presenter: Student

Faculty Mentor: Frank Fish

Title: Terrestrial Locomotion of a Massive Amphibious Mammal: Constraints of Northern Elephant Seals on Land

Keywords: Terrestrial, Locomotion, Kinematics, Pinniped

In the transition from terrestrial to aquatic habits in marine mammals, there has been a change in morphology that has placed constraints on the ability of these animals to continue to function on land. The amphibious northern elephant seal, *Mirounga angustirostris*, is the second largest phocid seal reaching 2,300 kg. Although elephant seals are proficient swimmers and deep divers, their extreme size can limit terrestrial movement. The kinematics of terrestrial locomotion in northern elephant seals were analyzed from video recordings of animals observed on the beach of Año Nuevo State Reserve, CA. The seals moved by dorsoventral spinal flexions. The traveling spinal wave moved anteriorly along the body with the chest, pelvic region, and foreflippers serving as the contact points with the ground. The hind flippers were not used. The spinal wave and foreflippers were used to lift the chest off the ground as the body was pushed forward from the pelvis and the foreflippers were retracted to pull the body forward. Seals moved over land at 0.36–2.55 m/s. Frequency of spinal flexions displayed a direct significant relationship with speed. Contact with the ground differed between the foreflippers and pelvic region as the duty cycle ranged from 0.55–0.96 and 0.12–0.53, respectively. The duty cycle for both foreflippers and pelvic region decreased with increasing speed. The trade-off for the northern elephant seal has been that its massive size and morphology have well adapted it to an aquatic existence, but limited its locomotor performance (i.e., speed, endurance) on land.

Jacob Browell, Dominica DeFelice (Earth & Space Sciences)

Presenters: Students

Faculty Advisor: Tim Lutz

Title: Effects of climate change on U.S. energy demand: Analysis of 120 years of degree day data

Keywords: climate, climate change, energy

About 15% of the energy consumed in the U.S. each year is used to space condition (heat and cool) buildings. Climate is a primary factor that determines the amount of space conditioning required and the proportion of energy consumed in heating vs. cooling. The heating degree day (HDD) index and cooling degree day (CDD) index quantify the energy demand to heat and cool residential and commercial buildings. We use 122-year (1895-2016) sets of HDD and CDD data from 344 climate divisions spanning the continental U.S. to explore geographic and temporal changes in demand. We also combine CDD and HDD to find total degree days (TDD), indicating total demand throughout the year.

Our analysis shows that on average HDD dominates CDD throughout most of the U.S. We use a series of eleven overlapping 20-year trend estimates to reveal the combined spatial and temporal patterns of change around the average. Before the 1970's, trends in CDD and HDD varied regionally. Since then, change has been more uniform across most of the U.S.: CDD are increasing and HDD are decreasing, a pattern consistent with widespread warming in both winter and summer. The net effect is that TDD, and thus space conditioning demand, is decreasing across most of the U.S., except for the extreme south. However, if the present-day trends continue, increased demand for cooling will exceed decreased demand for heating in more of the U.S., leading to increasing energy demand for space conditioning.

Wahida Toomey (Physics)

Presenter: Student

Faculty Advisor: Tianran Chen

Title: Monte Carlo simulation of magnetic properties of L10 FePt

Keywords: magnetic recording, data storage, Monte Carlo simulation

Heat-assisted magnetic recording (HAMR) is a promising approach for increasing the storage density of hard disk drives. To increase data density, information must be written onto small grains, which requires materials with high anisotropy energy such as L10 FePt. On the other hand, high anisotropy energy implies high coercivity, making it difficult to write the data with locally existing recording heads. This issue can be overcome by a new technique called HAMR, where a laser is used to locally heat the recording medium to reduce its coercivity while retaining good thermal stability at room temperature due to the large anisotropy energy. In this poster, we will discuss a Monte Carlo simulation tool that can be used to study the microscopic magnetic properties of L10 FePt, a promising candidate for HAMR technique. Specifically, we will discuss the Ising and Heisenberg model our simulation is based on, and the critical temperature and size effect of a single L10 FePt grain.

EASEL #41

Ellen Farmer (Physics)

Presenter: Student

Faculty Mentor: William H. Sawyer

Title: Nanocrystal Ghosting in ZrO_2

Keywords: Radiation Damage, ZrO_2

Recent theoretical research suggests that ZrO_2 nanocrystals and compounds containing ZrO_2 nanocrystals placed in an intense high energy radiation environment may exhibit enhanced resistance to structural disintegration compared to their bulk counter parts. The mechanisms through which this radiation will lose energy results in a very large flux of low energy electrons. We report direct evidence of extensive radiation damage in ZrO_2 nanocrystals due to intense bombardment (2×10^2 electrons/nm² sec) by electrons with beam energies between 60 keV and 120 keV. We present an explanation based on the Knotek-Feibelman process.

Eleanor Brown, Mallory Garnett, Ashley Labrador (Psychology)

Presenters: Faculty, Staff

Title: Music Program Benefits Social-Emotional Skill Development for Economically Disadvantaged Preschoolers

Keywords: psychology, emotions, education, music

The present study examined the impact of MacPhail's Learning with Music program on social-emotional skill development for economically disadvantaged children. The Learning with Music program involves visiting artist-teachers, who spend time in preschools using music to support children's early development and training early childhood teachers to do the same. MacPhail professionals model how to integrate music into the classroom including by adding songs, chants, and musical stories to aid transitions, help children modulate emotions, and support pre-literacy and numeracy development.

Participants in the present study included 183 economically disadvantaged children ages 3 to 5 years who attended one of three preschools (A, B, and C) during one of three study years. Preschool A had received the Learning with Music program prior to the start of the study, whereas Preschool B and C had not. In year 1, only Preschool A received the program. In year 2, Preschool B additionally received the program, and in Year 3, all of the preschools received the program. Child emotion regulation and inhibitory control were measured at the start and end of a year of program attendance.

Results of a repeated measures analysis of covariance (ANCOVA) revealed significant differences for children who received learning with music versus those who did not. Those who received the program showed greater growth across a year of program attendance in emotion regulation as well as inhibitory control. Results speak to the potential for using music to support social-emotional skill development for children at risk via economic hardship.

EASEL #43

Janet Chang, Kristina Rowshan, David Reyes-Farias (Psychology)

Presenters: Faculty, Students

Title: Cultural Perceptions of Psychological Well-Being in Peru

Keywords: Peruvians, cultural norms, psychological well-being, coping

There has been very little research conducted on cultural perceptions of psychological well-being in Peru. In Ventanilla, Peruvian residents encounter a number of stressors, including poverty, a high crime rate, the lack of running water, and limited medical and psychological resources. Therefore, the purpose of this community-based study is to examine the cultural perceptions of psychological well-being among Peruvians. Participants will be asked about their behaviors and problems related to their well-being, personal and community beliefs, relationships with family and friends, and cultural values. Participants will be community members who attend events and utilize services at Voices4Peru, a non-profit organization that offers many opportunities and services for the people of Ventanilla. Participants who volunteer for the study will be given the opportunity to complete a survey and participate in an interview (both options will be administered in Spanish). Participants may participate in both phases or either component of the study (an estimated 50 surveys and 10 interviews in March 2017). The presentation for the WCU research day will focus on these qualitative and survey data, which will be coded for key themes and analyzed. The present study will provide new insights into the well-being, attitudes, and coping behaviors of Peruvians living in a rural, impoverished community. This research will help Voices4Peru understand the views of the Ventanilla community members and inform the development of new programs designed to address coping with stressors in the community. Research insights will also enhance our cultural understanding of coping rooted in Ventanilla.

Kyle Ross, Melissa Bene, Lisa Edwards, Rebeca Chlebnikow, Alexandra Dolla, Deanne Zotter (Psychology)

Presenters: Faculty, Students

Title: The Body Image Culture Within Sororities: A Qualitative Study

Keywords: body image, sororities, college women, thematic analysis

The goal of the present research was to investigate the body image culture of the WCU sororities involved in the Sister to Sister Peer Mentor program. The Sister to Sister program is designed to improve body image, increase self-esteem and feelings of empowerment, and reduce problematic eating behaviors and attitudes. Using qualitative methods, focus groups were conducted within sororities to examine their experiences around body image. Results from a thematic analysis revealed themes of *societal ideals*, *sorority expectations*, and *internal pressures*, which led to an overarching theme of *women must be attractive*. The additional themes of *acceptance and support from sisters*, *personality and values over appearance*, and *healthy lifestyle behaviors* led to an overarching theme of *sorority as community*. Results showed that although the women reported a high level of appearance-related pressures, the sense of community within the sorority serves as a protective factor against unhealthy thoughts and behaviors, and promotes relationships based on values (as opposed to appearance). Through its teachings, the Sister to Sister program may be providing a foundation for a healthier body image culture within sororities. The present findings may have implications for other eating disorder prevention programs.

Eleanor Brown, Mallory Garnett, Lauren Burlew, Peter Ippolito, Julie Belling, Masataka Mitsuzuka, Anna Di Stefano (Psychology)

Presenters: Faculty, Staff, Alums, Students

Title: Stereotypes about Boys of Color: Information about Race/Ethnicity and Socioeconomic Status Biases Ratings of Boys' Behavior

Keywords: psychology, stereotypes, biased judgments, child behavior

In the United States, Boys of Color face multiple risks to healthy academic and socio-emotional functioning. These risks relate to the intersection of male gender with minority racial/ethnic group membership, and correlated interpersonal, socio-cultural, and structural oppression. Boys of Color are disproportionately likely to grow up in families of low socioeconomic status (SES). Boys of Color also face negative stereotyping and biased judgments. The present study asks: Does information about race/ethnicity and socioeconomic status bias ratings of boys' behavior?

The 288 WCU college student participants were randomly assigned to view one of six video clips focused on different children who were all male, of varied racial/ethnic backgrounds, and displaying similar levels of problem behavior as rated by experts. Participants were randomly assigned to receive cues indicating the target child was of low or middle SES. After viewing the clips, participants completed ratings on a well validated measure of child behavior as well as a manipulation check and were debriefed as to the purpose of the study.

Results of a multivariate analysis of covariance controlling for rater race/ethnicity and SES indicated significant differences in ratings of boys' behavior based on their race/ethnicity and perceived SES. Ratings of problem behavior were higher for boys who were of Color compared with White and for those perceived to be of low SES versus middle SES. The interaction between race/ethnicity and SES was not significant. Implications concern reducing the impact of negative stereotypes on Boys of Color, and promoting accurate judgments about child behavior.

Amarachi Akwarandu, Elizabeth Raymond (Psychology)

Presenters: Students

Faculty Mentor: Jasmin Tahmaseb McConatha

Title: Older Immigrants, Family Connections, and Anxiety in an Age of Intolerance

Keywords: Ageism, Social inclusion, Isolation, Anxiety

This study explores the well-being and social integration of older immigrants. In a time when social toleration is being challenged, older immigrants are at risk for increased feelings of anxiety, isolation, and alienation (Fokkema & Naderi, 2013). Regardless of level of integration and citizenship status, living in a social and political environment where one feels unwanted, even discriminated against, can lead to a sense of alienation, feelings that threaten health and well-being in later life. Anti-immigration narratives can result in increased isolation and anxiety. This presentation focuses on an analysis of qualitative interviews with a non-random sample of 22 older Middle Eastern immigrants over the age of 65 (16 women and 6 men). Participants were citizens of the United States. Interviews focused on their well-being including life satisfaction, feelings, anxiety, feelings of social integration and isolation. Consistent with the goals of qualitative research (Patton, 2002) we developed a theoretical framework in response to thematic analysis of the interviews. The majority of the participants, more than 90 percent stated that recent social and political narratives had resulted in anxiety, decreased life satisfaction, and an increase in feelings of alienation. Finding are discussed in relation to social capital theory which postulates that among other factors, a sense of reciprocity, trust, a belief in the equality of citizens, and confidence in political institutions leads to grater social capital (Putman, 2000). A decline in these components of social capital can save as a measure of a decline in social integration (Putnam 2000).

EASEL #47

Corinne Boyce, Samantha Trumbo (Psychology)

Presenters: Students

Faculty Mentor: Dr. Vipanchi Mishra

Title: Analyzing the Job of a Psychology Professor

Keywords: job analysis, job specification, job description

Job analysis is defined as the process of analyzing the tasks, knowledge, skills, abilities and other characteristics (KSAOs) required to complete a specific job. This resulting job analysis contains two sections, a job description which includes information regarding the job title, location, job summary, working conditions, etc., and a job specification which includes information regarding the minimum qualifications, experience, training, skills, responsibilities and physical demands for successful performance on the job. The purpose of this study was to conduct a job analysis for the job of a professor of General Psychology. Research started with the Occupational Information Network (O*NET), created by the U.S. Department of Labor, to gather background information related to the tasks and KSAOs of the job. Next, Subject Matter Experts (SMEs) interviewed and asked to describe a typical day on the job, highlighting important tasks and KSAOs. This data, together with the O*NET data was used to create a job analysis questionnaire, which included statements pertaining to the relevant tasks and KSAOs for the job. A second set of SMEs completed this questionnaire, rating the statements on frequency of use and importance to the performance of the job. After analysis of the data, a cutoff score was determined with help from O*NET values, and only the tasks and KSAOs rated higher than the cutoff were retained. The retained KSAO statements were then linked to corresponding task statements and these retained items were used to develop a job description for the job of a Professor of General Psychology.

EASEL #48

Morgan Reimers (Sociology)

Presenter: Student

Faculty Mentor: Jacqueline Zalewski

Title: Comparing the College Experience for Military Students at Two Universities

Keywords: Military Students, College Experience, Satisfaction

This is a qualitative research study comparing the college experience for active military and veteran students at two universities: Blue University and Purple University (both pseudonyms). Observations were made of interactions between military students and staff at NROTC meetings and informal social gatherings of military students in the Veterans Centers at both campuses. The researcher also spoke directly with military staff and students in both offices about supportive programs and about their college experience. Finally content analysis was done of printed information available to military students at both of the Veterans Centers.

There are differences in the size of the military student population at the two universities. While the basic services available to military students was the same at both universities, there were differences in the formality of the programs at each school (e.g., mandatory attendance for some programs). The researcher found the level of formality in military programs has implications for how satisfied military students were with the college experience at the two universities.

Oral Presentation Session #1

When:

2:45pm—4:00pm

Where:

Sykes Room 209

Oral Presentation Abstracts

Presentation #1

Amber Holbrook (Graduate Social Work) (Sykes 209, 2:45 - 3:00 pm)

Presenter: Faculty

Title: Evaluation of Dialectical Behavior Therapy Implementation in a Residential Setting: Staff Knowledge Retention

Key Words: program evaluation; evidence-based practice; implementation research; social service delivery

Background: Dialectical Behavior Therapy (DBT) is an evidence-based practice (EBP) that reduces self-harm and substance use, while improving treatment retention. However, substantial training is required to successfully implement DBT. Many residential settings employ individuals without advanced formal education as Direct Service Professionals (DSPs). These workers provide the majority of care to the more challenged clients, often leading to poorer quality of client care and high staff turnover rates. The use of EBPs has the potential to mitigate poor client and staff outcomes in such settings when appropriate training can support fidelity to the intervention model. This paper describes a process evaluation designed to assess DBT implementation. Results from the first phase of staff training are presented.

Methods: Five residential programs participated in the training initiative from 2013-2015. Staff received 24 hours of DBT training. Staff knowledge retention was measured post-training through administration of an 18-question assessment of principles and skills associated with the four DBT modules: emotional regulation, distress tolerance, interpersonal skills, and mindfulness.

Results: Fifty-eight staff completed a knowledge retention quiz. Staff were predominantly female (82.8%), African-American (72.7%), and with a mean age of 34.8 ($SD=8.4$). Many had completed some college (40.4%), with a total of 57.9% of the sample attaining less than a four year degree at the time of training. Mean score was 83.2% with 77.6% of the sample scoring 83.2% or higher.

Conclusions: Results suggest that it is feasible to train DSPs in the principles of DBT, but attention is required to uneven knowledge retention.

Presentation #2

Laura Masse, Mia Ocean (Graduate Social Work) (Sykes 209, 3:00 – 3:15 pm)

Presenters: Faculty, Student

TITLE: Student to Student Advice: An Action-Oriented, Qualitative Examination of Lessons Learned by Low-Income Community College Students

Keywords: Qualitative, Low-Income Community College Students

Higher education is not a system that can be navigated intuitively for most students. For many low income community college students this leaves them at a significant disadvantage. Therefore, in this research, we asked the experts, low-income community college students (n=62), what advice they have for students who are just beginning their studies. Subsequently, we conducted a thematic analysis identifying students' most pressing and common recommendations. Themes include creating social support, reaching out for help, and investing resources wisely. Results from the project are to be shared via web page postings on local community colleges' online presences as well as via brochures distributed to local colleges. Guided by action research and by using visual and relatable venues of dissemination, one of our goals is to provide future community college students with both useful and informed advice allowing them to avoid unnecessary pitfalls.

Presentation #3

Tyler Draxton (Master of Social Work) (Sykes 209, 3:15 – 3:30 pm)

Presenter: Student

Faculty Mentor: Chun-Chen (Liz) Wang

Title: Community Partners Perceived Attitudes on the Service Learning Relationship: A Two Way Street

Key Words: service-learning, community partners, community attitudes, higher education

While most of the research surrounding service-learning focuses on student's benefits and outcomes, valuable knowledge can be attained by shifting attention to the community partnerships that are involved as well. Using a qualitative exploratory research approach, this study will examine the organization's perceptions of the university-based service learning relationship with the institutions it collaborates with in order to better understand the benefits and challenges of this service. The participants included three community agencies that are currently engaged or have been a part of a service-learning curriculum at West Chester University. Semi-structured interviews comprised of open-ended questions aimed to elicit experiential knowledge were utilized in order to collect data regarding the participant's perceptions to further analyze. These interviews focused on investigating perceived benefits and challenges surrounding planning, methodology procedures, as well as outcomes within the service-learning curriculum. By decreasing the gap within this field of research, this study can ideally provide clarity to the specific experiences that occur within university-base community partnerships in order to make improvements and better provide this service in the future for both students and the surrounding communities.

Presentation #4

Matthew Kruger-Ross (Professional & Secondary Education) (Sykes 209, 3:30 – 3:45 pm)

Presenter: Faculty

Title: New Google Sites, Instagram, and Snapchat... oh my! Web-based tools in teacher preparation coursework

Key Words: E-portfolios, web-based technologies, pre-service teacher education

Fluency with educational technologies is the litmus test for successful teachers in the 21st century. In this presentation I will share the results from my attempts to integrate new and emerging web-based technologies into a pre-service teacher educational technology methods course. These tools include: Edmodo, Instagram, old and new Google Sites, Snapchat, and YouTube. In addition, the incorporation of E-portfolios as a robust framework for assessing pre-service teacher's technological capability and capacities will be presented and described. Results are only at the beginning stages and are thus anecdotal, but still provide clues and insight into how to best prepare future teachers to be successful in their classrooms with new technologies.

Presentation #5

Justin K. Rademaekers (English) (Sykes 209, 3:45 – 4:00 pm)

Presenter: Faculty

Title: Critical Thinking and Language Across the Curriculum

Keywords: critical thinking; pedagogy; rhetoric and writing; higher education

Critical thinking is a peculiar phrase in higher education: most agree it is good and desirable, but when pressed to articulate just what it means to *think critically*, answers vary widely. Tim John Moore's study *Critical Thinking and Language* (2011) is the most recent and comprehensive examination of disciplinary distinctions for *critical thinking*. Conducted from 2005-2006, Moore utilizes spoken data from 17 in-person interviews and textual data (i.e. teaching documents collected from participants) to parse out disciplinary meanings of *critical thinking* in the humanities. Moore's study concludes that different academic disciplines do emphasize different mental tasks as modes of critical thinking. In 2016-2017, with support from Dean Timothy Blair's RACA grant program in the College of Arts and Humanities, Dr. Justin Rademaekers replicated Moore's 2011 methodology at West Chester University. The purpose of this research is to determine whether Moore's (2011) framework for critical thinking changes when we apply this to a larger body of participants (replication study more than doubled the participants (45-minute interviews with 35 faculty)), in a more diverse range of disciplines (seven interviews in each of five academic Colleges), in a different institutional context (Public, M-1 university). This presentation will discuss the results of this study of critical thinking across the curriculum, including the confirmation that Moore's framework for critical thinking is largely evident among faculty at West Chester University. The presentation will conclude with a critique of Moore's framework and propose a new way to think about critical thinking across the curriculum in higher education.

Oral Presentation Session #2

When:

2:45pm—3:45pm

Where:

Sykes Room 210

Oral Presentation Abstracts

Presentation #6

Christine Williams, Matin Katirai (Health) (Sykes 210, 2:45 – 3:00 pm)

Presenters: Faculty

Title: The relationship between sense of coherence and rumination

Key Words: resilience, rumination, health, sense of coherence

Ineffective coping skills and rumination can worsen existing health conditions and contribute to disease and illness. Sense of coherence (SOC) positively influences coping and is one's belief that life is meaningful, manageable, and understandable (Wong & Fry, 1998). People with higher rumination are much less likely to offer problem solving coping skills (Nolen-Hoeksema & Morrow, 1991). The purpose of the study is to determine the relationship between SOC and rumination. Survey questionnaires were administered to 211 participants concerning sense of coherence (SOC), demographics and rumination. Linear regression was used to assess the association between SOC and rumination while controlling for gender, race, age and marital status and the model was found to be significant with a R^2 value of 0.30. Results indicate that SOC has an inverse relationship with rumination, with a b coefficient of 0.38. Females are also much more likely to ruminate compared to males, with a b coefficient of 4.17. It is important to understand the relationship between SOC, a variable that can improve health, and rumination, a variable that can decrease health (Eriksson & Lindstrom, 2005) so that health educators and therapists can offer improved skills and techniques to improve thinking patterns, resilience and stress management.

Presentation #7

Cristina Seffrin (Kinesiology) (Sykes 210, 3:00 – 3:15 pm)

Presenter: Student

Faculty Mentor: Alison Gardiner-Shires,

Thesis Committee Members: Nicole Cattano and Melissa Reed

Title: Comparison of various outcomes following instrument-assisted soft tissue mobilization treatment: a systematic review and meta-analysis

Key Words: manual therapy, instrument-assisted soft tissue mobilization, clinical outcomes, systematic review

Purpose: Instrument-assisted soft tissue mobilization (IASTM) is a form of manual therapy using hard tools to manipulate tissue that is often used with corrective exercise. As no comprehensive systematic review exists on IASTM, the purpose of this study was to critically organize, summarize, and analyze existing IASTM literature to: determine overall effectiveness in improving range of motion, strength, functionality and/or pain; provide recommendations for use; and guide future research.

Methods: A systematic search used databases accessible through the West Chester University library using a Boolean string and preset inclusion/exclusion criteria. Studies were compared and appraised for key characteristics and outcomes, as well as methodological quality and levels of evidence using PEDro, CEBM, and SORT guidelines. Reported data was used in a meta-analysis comparison calculating Cohen's *d* effect size of pre- to post-test outcomes following treatments.

Results: Thirteen articles were included in the systematic review, while twelve were included in the effect size analysis. The average PEDro score was 5.86 with CEBM and SORT levels of 2, indicating moderate-quality evidence. Eight studies reported IASTM-treated groups to have statistically significant improvements compared to control groups. Overall effect sizes ranged from -2.21 to 2.48, with ten studies yielding moderate to large improvements in at least one of the measured outcomes.

Conclusion: IASTM treatments show promising benefits in improving pain, range of motion, strength and/or functional outcomes, in healthy and injured patients. More high-quality research on a larger variety of subjects is needed to further substantiate and allow for generalization of these findings.

Presentation #8

Dara Blomain (Nutrition) (Sykes 210, 3:15 – 3:30 pm)

Presenter: Faculty

Title: Social Cognitive Theory and Nutrition Behavior: Effects of an Introductory Nutrition Course Intervention among College Students

Keywords: Nutrition, college students, dietary behavior change

This quasi-experimental study used a pre-test and post-test design approach to determine the affect a 10-week introductory nutrition course had on dietary intake of students who completed the course, whether the course influenced students' mean social cognitive theory construct scores, and whether the course influenced students' mean fruit, vegetable, and fiber intake. Dietary behavior change interventions are needed among college students, as this is a period of excess weight gain and poor dietary behaviors. While weight gain and poor eating habits and behaviors have been identified as common undertakings by college students, little is known about the effectiveness of dietary behavior change among college students after the completion of an introductory nutrition course. Furthermore, there is not any existing literature to indicate if the completion of a short-term, 10-week dietary behavior change course can change students' dietary habits and behaviors.

Dietary behavior change interventions rooted in Social Cognitive Theory (SCT) have been shown to have one of the greatest impacts on changing dietary behaviors among college students. The 10-week introductory nutrition course in this study included a dietary behavior change intervention that was rooted in SCT, making it desirable to elicit dietary behavior change. It was the researcher's hope that the results of this study would highlight the importance of making an introductory nutrition course with a dietary behavior change intervention, modeled after the SCT, a mandatory component of the undergraduate college curriculum in order to improve college students' dietary intake, habits, behaviors, and beliefs.

Presentation #9

Jacob Hinkin, Jordan Crills (Sports Medicine) (Sykes 210, 3:30 – 3:45 pm)

Presenters: Students

Faculty Mentors: Lindsey Keenan, Daniel Baer

Title: Bilateral Exertional Venous Thoracic Outlet Syndrome In A Collegiate Women's Rugby Athlete

Keywords: thoracic outlet syndrome, athlete, sports medicine, diagnosis

Background: A twenty-five year old female collegiate rugby athlete presented with a history of bilateral shoulder pain and discomfort, with radiating symptoms down both arms for three years. The patient complained of a heavy sensation in both arms, as well as weakness and fatigue during and after intense upper extremity exercise.

Differential Diagnosis: Neurological, arterial, venous thoracic outlet syndrome (TOS); upper extremity compartment syndrome; Paget-Schroetter Syndrome; rhabdomyolysis.

Treatment: X-rays were negative for a cervical rib or other bony abnormalities. Venous duplex ultrasonography was positive for subclavian vein compression bilaterally and subclavian artery compression of the left shoulder. The patient was referred to a vascular surgeon for follow-up. Future treatment may include anticoagulation therapy or surgical intervention including first rib resection.

Uniqueness: Only one case of bilateral exertional venous TOS has been reported in the literature, occurring in a young, healthy male.¹ This patient did not present with the common signs and symptoms of exertional venous TOS.

Conclusions: This case highlights the importance for healthcare professionals to consider exertional venous TOS as a differential diagnosis. Exertional venous TOS is rare and further research is needed to better understand diagnostic protocols and treatment.

Relevant Evidence: Venous and arterial TOS symptoms are only found in approximately 3-5% of TOS cases.² Duplex ultrasonography has a specificity of 82% to 100% and a sensitivity of 78% to 100% in diagnosing venous TOS.³ There is a lack of support for positive outcomes in conservative treatment³, and surgical intervention is determined by specific anatomical variances.²

Works Cited:

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Oral Presentation Session #3

When:

2:45pm—3:45pm

Where:

Sykes Room 252

Oral Presentation Abstracts

Presentation #10

Michael A. Di Giovine (Anthropology & Sociology) (Sykes 252, 2:45 – 3:00 pm)

Presenter: Faculty

Title: The Trouble with Translation: Sustainable Food Activism and Slow Tourism in Central Italy

Key Words: sustainability, Italy, slow food, slow tourism

Based on ethnographic research in the central Italian province of Umbria, this paper explores the intersection of Italian food activism (such as Carlo Petrini's "Slow Food" movement), and "Slow Tourism," paying close attention to the discourses and practices of local organic producers as they combat changing food preferences within Italian society. A characteristic of the Anthropocene is the exploitation of the natural environment for human subsistence, but ironically, humans are also exploited. Increasingly, local Italian producers see themselves as activists responsible for changing the food system by modifying the way that people produce, distribute and/or consume food. The paper argues that these producers are not capitalizing on the growing culinary tourism trend solely for economic purposes, but also as a way of playing identity politics in the face of two opposing threats: homogenization of the global food chain on the one hand, and the penetration of alternative, ethnic foodways brought in by the millions of non-European migrants on the other. Yet unlike other generations of local food activists, today's producers are cognizant of the need to speak in terms consumers and tourists understand, to discursively and performatively adopt hegemonic idioms and imaginaries in order to render their alternative visions and ideologies comprehensible and touristically "seductive" to consumers. While this paper examines some of the positive potentials of slow food tourism, it will also demonstrate that tensions emerge in the process of translating their visions to outsiders, which threaten to undermine the core vision of Italian food activism.

Presentation #11

Rachel Sirdashney (Anthropology & Sociology) (Sykes 252, 3:00 – 3:15 pm)

Presenter: Student

Faculty Mentor: Michael A Di Giovine

Title: Padre Pio, An Outlet of Resilience

Key Words: Resilience, Well-being, Social Ecological Systems, Padre Pio

Based on ethnographic research among devotees in Pennsylvania and southern NJ, this paper argues that devotion to the popular 20th century Catholic stigmatic and saint, Padre Pio, is an outlet of resilience. I argue that these devotees visit shrines to experience spiritual, psychological, and social resilience. Resilience is defined here as the ability to become strong, healthy, or successful again after something bad happens, as well as an ability to recover from or adjust easily to misfortune. Among Padre Pio pilgrims, mental and physical health are the leading contributors for seeking resilience. When humans are exposed to situations that disrupt their social lives, such as death, sickness, and disease, they are faced with the responsibility of maintaining their well-being. Humans are expected to cope, adapt, and transform with the constantly changing aspects of life thrown at them. Data was collected through participant based observation and ethnographic interviews at the National Centre of Padre Pio in Barto, Pennsylvania and Our Lady of Pompeii, Shrine to Padre Pio in Vineland, NJ. This study gathered data between August 2016 and December 2016 and includes participant observation and ethnographic interviews. The interviews were conducted during the period of and after the interviewees' experience with death, sickness, and disease.

Presentation #12

Janet Chang (Psychology) (Sykes 252, 3:15 – 3:30 pm)

Presenter: Faculty

Title: The Costs of Ethnically Heterogeneous Friendship Networks for Filipino Americans

Key Words: Filipino Americans, mental health symptoms, cross-group friendship, ethnically heterogeneous friendship

Ethnically heterogeneous friendship networks may be characterized by interactional conflict and other challenges, but the potential risks for minority status groups, namely Filipino Americans, have been overlooked. The present study examined whether ethnically heterogeneous friendship networks are associated with depressive and anxiety symptoms and whether friendship discord mediates these relationships after adjusting for covariates. Analyses focused on data from the Filipino American Community Epidemiological Study, involving 2,305 Filipino American adult respondents in San Francisco and Honolulu. Participants completed measures of depressive and anxiety symptoms, ethnically heterogeneous friendship networks, friendship discord, ethnic identity, everyday discrimination, and sociodemographics. Compared to their Filipino counterparts who reported two or less close non-Filipino friends, Filipino Americans who reported three or more very good non-Filipino friends had higher levels of depressive and anxiety symptoms. Friendship discord also mediated these associations between ethnically heterogeneous friendship networks and mental health symptoms. These results suggest that ethnically heterogeneous friendships appear to be complicated for Filipino Americans, with a potentially adverse effect on mental health symptoms.

Presentation #13

Kelly Fisher (Management) (Sykes 252, 3:30 – 3:45 pm)

Presenter: Faculty

Title: Military Expatriates: U.S. Veterans Living Abroad

Keywords: Expatriate, veterans, leadership, mixed-methods

This paper discusses the push-pull factors implicated in an exploratory case study of U.S. military expat veterans. The paper's aim is to identify and elaborate upon expatriation motivations by U.S. veterans through their own understanding and lived experiences. A mixed-methods approach was employed for several reasons; to allow for more confidence in our results; to provide thicker, richer data; to lead to the synthesis or integration of theories; and, to potentially uncover contradictions. In our analysis, we drew on the extant literature on migration theory and expatriate motivations. The paper concludes with a future proposed research agenda.