



MERCER UNIVERSITY

10th Annual

Faculty & Student Research Conference

Saturday March 28, 2020

Atlanta Campus | Regional Academic Centers

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Recognition & Thanks

Thank you students and faculty members from all of the colleges and schools on the Atlanta Campus and Regional Academic Centers for participating in the 10th annual Research Conference.

We offer this Conference to showcase our research capacities, to provide a venue for the practice of these capacities, and to celebrate our students' and our faculty's scholarly work. Thank you!

Priscilla R. Danheiser, Ph.D.
Dean, College of Professional Advancement
Mercer University



Thank you to the 2020 Research Conference Planning Committee who helped with reviewing submissions and event planning.

This includes Dr. Alyssa Fiss in the College of Health Professions, Dr. Nader Moniri in the College of Pharmacy, Dr. Pamela Larde in Tift College of Education, Dr. Tara Bertulfo in the Georgia Baptist College of Nursing, Florence Tang and Kim Eccles with the Swilley Library, and Dr. Morgan Kiper Riechel, Dr. Wesley Barker, Dr. Laurie Lankin, Dr. Dina Schwam, Dr. Feng Liu, Dr. Lynn Tankersley, and Laurie Rea in the College of Professional Advancement.

Cameron A. Miller, Ph.D.
Chair, Conference Planning Committee
College of Professional Advancement
Mercer University



Stetson-Hatcher School of Business

Public Health Surveillance System for Online Social Networks using One-Class Text Classification

Presenter: Syed Hamza

Co-Presenters: Bilal Tahir & Muhammad Mehmood

Poster Presentation

Public health surveillance by traditional means is a costly and time consuming process. Today, the widespread use of social media has enabled researchers to study different aspects of life such as health, lifestyle, etc. Anonymous postings on these forums enable people to benefit from the collective experience of others facing similar problems. To effectively discern target data from the outliers in a web corpus, an efficient mechanism is required. Traditional approaches such as keyword-based filtering results in the loss of relevant data due to limited vocabulary and lack of contextual information. In this paper, we present a data filtration framework based on Long short-term memory (LSTM) recurrent neural network model for one-class text classification. We compare similarity of regenerated texts using this model for each disease with the original text using Recall-Oriented Understudy for Gisting Evaluation (ROUGE) metric for outlier filtration and classification. Optimal value of ROUGE similarity threshold is determined by introducing an optimization parameter that minimizes the misclassification rate. Leveraging data from three major online health forums, we show that our classification technique outperforms keyword-based filtering and conventional approach of multi-class text classification. Our classification technique can be effectively used for online social networks, search engines, and online recommender systems.

Stetson-Hatcher School of Business

Impact of FOMC Announcement Indicators on Market Movement

Presenter: Kenneth Hunt

Poster Presentation

Retail investing has become increasingly popular due to the increase in accessibility from various technologies. From cell phones that allow for incredible processing power in more convenient mediums to the increase in technology utilization in the financial industry. With technology now matching those used by institutional investors, retail investors can now utilize the same information to make smarter trades and potentially outperform the market. Many media industries have also utilized technology to record and compile datasets of press releases and announcements for ease of access and viewing for the public and their stakeholders. Textual analysis has been profoundly improved due to the advances in data storage, web scraping, and data processing, which has allowed for more efficient modelling given the unstructured nature of textual data.

Many have submitted papers proving the reliability of certain news being a determinant of market direction for certain indices, specifically as it affects the largest market indices, i.e. NASDAQ, S&P 500, etc. These studies have proved time and again that certain announcements play a factor in market determination as much as any financial indicator, such as profit/earnings (P/E) ratio.

Stetson-Hatcher School of Business

A Study on the Performance of Airbnb Listings in New York City

Presenter: Candace Walton

Co-Presenter: Tiffany Williams

15 Minute Lecture Session (10 minute presentation plus 5 minute Q & A)

This paper aims to better understand what factors are considered when an individual chooses to book an Airbnb and what features contribute most to their experience. With this understanding, it is the goal to be able to effectively market Airbnb to potential customers to increase the number of bookings and generate more revenue. We focus our analysis on Airbnb listings in New York City through data sets that detail a variety of topics, including listing-specific attributes, host qualities, and user experience. We utilize a variety of data analysis techniques from regressions to text analysis to identify the most important factors that affect a listing's booking rate throughout the year, as well as, take a deep dive to determine which specific attributes affect a review score rating and how the price of an Airbnb, regardless of the borough, compares to hotels within the area. The empirical results not only illustrate that factors such as value, property type and cleanliness affect Airbnb booking rates, but also that Airbnb listings are often priced lower than hotel rooms, regardless of the borough. The results also showed that there are significant discrepancies between what customers value most and the key attributes included within the listing descriptions. And, the paper concludes with detailing ways to combat these discrepancies, while emphasizing the positive attributes potential customers value most.

Stetson-Hatcher School of Business

Tift College of Education

Supporting English Language Learners Through C.A.R.E.

Presenter: Jami Friedrich

Poster Presentation

English language learners (ELLs) are the fastest-growing student population in the United States and, according to the Nation's Report Card, there is a significant disparity in their levels of academic achievement as compared to their non-ELL peers. How can we as educators support our ELL students to increase their levels of academic achievement?

In this session, participants will learn how the acronym C.A.R.E. can be used as a tool for reminding educators of the factors that are essential for creating a supportive and enriching learning space. By focusing on individual students' cultures, asking questions about life outside of school, creating relevant lessons and tasks, and using culturally relevant tasks to engage students, educators can connect with students on a more meaningful level and encourage students' personal growth and development.

Learning the elements of this acronym through a hands-on lesson to learn how to be more culturally competent, participants will learn how to engage students by promoting a supportive learning space.

Sometimes, you just need a little extra C.A.R.E.

Tift College of Education

A Critical Content Analysis of Commonly-Used Mathematics Textbooks Through a LatCrit Lens

Presenter: Jami Friedrich

Poster Presentation

The U.S. public school system is witnessing significant growth in English language learners (ELLs) as the Hispanic population is the largest and fastest-growing ethnic minority group in the country. Simultaneously, there is a persistent achievement gap in mathematics between the Hispanic population and their White non-Hispanic peers. Mathematics instruction in k-12 classrooms has become more language-dependent due to the adoption of the Common Core State Standards (CCSS) in much of the United States and an increased focus on developing students' conceptual understanding in mathematics. To better understand the impact of current policy on Hispanic ELL students' academic achievement in mathematics, it is critical to investigate the language usage in mathematics texts that are used as instruction resources in K-12 schools. Using a critical Latinx (LatCrit) theoretical framework, this critical content analysis study sought to investigate how language is employed in three widely distributed fourth-grade fourth mathematics textbooks. Specifically, how language usage may act to include or exclude the Hispanic Latinx culture. The purpose of this study was to analyze the language in commonly used mathematics textbooks to understand how Hispanic Latinx culture is represented within the text. The presentation presents how the study examined implications of the use of texts in mathematics instruction and curriculum writing.

Tift College of Education

On the Shoulders of Giants: Helping Students Understand Mathematics Through its History

Presenter: David Henderson

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

This presentation will discuss a pilot study and ongoing dissertation research into using the historical development of mathematics to help students better understand the nature of the discipline. One problem encountered in practice is that mathematics tends to be taught as a disconnected set of algorithms. In order to better teach the nature of mathematics a curriculum and instructional method (called IDEAS) was developed. The IDEAS method will be discussed and a specific example will be given.

Tift College of Education

Outcomes of Financial Incentives for Behavioral Choices by Students with Disabilities

Presenter: Carmean Holloman

Poster Presentation

The topic researched was the outcome of fiscal rewards versus an ambiguous point system. The purpose of this action research was to determine if monetary rewards increased appropriate behavior choices in students with disabilities. The trial was implemented among a resource class of fifth grade students with varying exceptionalities. An online classroom management system was utilized and then monetized. Rather than earning points, students earned pre-set wages based behavioral output. With account credits, students were able to purchase items with credits that were applied to their individual accounts. The results of this study justified the claim that financial incentives, when implemented with validity, can cause students with disabilities to decide to make decisions based on potential fiscal gains. The data showed an increase in desired behavior over undesirable options. The results conclusively suggest that students with disabilities made favorable behavior choices in order to acquire account credits.

Tift College of Education

Does Pedagogical Knowledge Support Effective Instructional Leadership?

Presenter: Louise Jones

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

The element of instructional quality is known to be a key influencer on successful student outcomes. The instructional leader is known to impact faculty instructional quality through their practices. This cross-sectional study was designed to investigate what knowledge of general pedagogy (GPK) as an element of instructional quality instructional leaders in higher education have and how this personal resource influences their daily practices in maximizing instructional quality. Drawing from leaders within U.S. medical education (n=189) as a subculture of higher education, the study used a 32 item Likert-type rating survey instrument, Educational Leadership Practices in Higher Education (ELPHE). The instrument was developed by modifying two previously validated scales measuring general pedagogical knowledge (Choy et al., 2012) and effective leadership practices (Hallinger 2011). Reliability, validity and model-fit studies were carried out on the data set using inter-item correlation, and structural equation modeling before scoring the ELPHE subscales and full scale. The findings indicate that participants with a higher level of self-reported GPK were more likely to also have a higher level of engagement with evidence-based effective educational leadership practices. The findings from this study provide some insight into the personal resources required to support instructional leaders with direct responsibility for building capacity in faculty teaching excellence.

Tift College of Education

Bringing History to Life: Oral History Research Assignments as a High Impact Practice

Presenter: Katherine Perrotta

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

Oral history research projects are assignments that can foster student engagement and learning in undergraduate survey history courses. Although these assignments are frequently used in history and social studies classes, there is limited scholarship on whether oral history projects can serve as a high impact practice when implemented in college and university level courses that align with many institutions' quality enhancement plans. High impact practices (HIPs) are instructional strategies, such as service learning and collaborative research, aimed at promoting student achievement and retention rates. With these premises in mind, the purpose of this action research study is to evaluate whether my five-step oral history research project could serve as a HIP in undergraduate history survey courses. Major findings indicate that oral history research projects can be considered a HIP when grounded in pedagogies that emphasize community-based field work that encourage students to consider diverse perspectives on topics and make real-world connections to content and experiential knowledge.

Tift College of Education

Supports for Undocumented and Under-Documented Learners in Higher Education

Presenter: Derek Phillips

Poster Presentation

Each year, 65,000 undocumented students graduate from high schools in the United States (NASSP, 2018) and are more likely to pursue community-based opportunities in higher education than their native-born peers (Baum and Flores, 2011; Wisell and Champanier, 2010). However, program administrators often lack the tools and knowledge necessary to counsel undocumented learners (Arteh et al., 2018). Institutions that have implemented supports report "varying degrees of success" (Bjorklund, 2018, p. 656).

This presentation presents findings of a study that explored the lived experiences of program administrators who assist undocumented and under-documented students as they navigate paths to higher education. Following steps detailed by Moustakas (1994), a series of semi-structured interviews with eight program administrators from varying backgrounds were subject to phenomenological analysis, isolating the essence of each one and using a combined framework of Postcolonial Thought (Go, 2016) and Latino/a Critical Race Theory (Kiehne, 2016) to assign meaning.

Tift College of Education

Media Culture Influences on the College Experience: Applying Phinney's Model of Ethnic Identity Development

Presenter: Kyle Smith

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

During the college experience, students undergo a considerable amount of changes which include; their cognitive abilities, physical characteristics, and their identity. Throughout these changes, students begin to explore different social and political views, create and build personal norms, and grow interested in the ethnic group that they identify with. The discovery of one's ethnic identity can strengthen or weaken a student's collegiate experience. This process is something that all students encounter, however, students within a minority ethnic group(s) have the most challenging experience. This presentation will explore Phinney's Model of Ethnic Identity and will discuss the impact that ethnic identity development has on college students' overall well-being. In addition, the presenter will give insight into the influence that media culture has portrayed for students of color in television series such as, "Grown-ish," "Dear White People", "A Different World", "College Hill", and "The Quad". Finally, we will discuss the programming that colleges are implementing to assist current students of colors with the discovery of their ethnic identities.

Tift College of Education

The Growing Attrition in African American Male College Students

Presenter: Kyle Smith

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

The U.S. Department of Education reported that "more than two-thirds of all African American men who enter college leave before earning their college degree, resulting in the highest rate of attrition among all races and both sexes" (2006). With the present regression and low statistics of African American males presently enrolled, universities and post-secondary researchers have outsourced many theories and collected research studies findings to determine why this issue is still prevalent within the racial demographics on their prospective college campuses. There are many unanswered questions on the issue of retention and increased attrition. The purpose of this research presentation is to investigate the relevant issues of increased attrition, discuss the current exclusionary practices of stereotype threat and racial battle fatigue, and explore what interventions current universities and higher education faculty are using to correct the present campus diversity and inclusion issues that occur across predominantly white university campus communities, academic support and access for African American males enrolled, and social development and community efforts for African American males attending or planning on attending Predominantly White Institutions.

Tift College of Education

College of Health Professions

Seeing the Patient through the Pathology: Affecting Functional Outcomes through Patient Perspective

Presenter: Joshua Bloodworth

Co-Presenter: Beth Collier

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

Background: Healthcare across the spectrum views patients through their pathology and often seeks to address the pathology through treating the experienced pain. However, patients present with more complexity than just their pathology and pain. Ideals, perceptions, socioeconomic status, and life stressors all factor into a patient's pain experience. The purpose of the case report is to explore how utilizing patient perspectives through the power dynamic of the therapist-patient relationship and motivational factors affect overall recovery in an outpatient setting.

Case Description: The patient is a 65-year-old female presenting with low back pain, limited lumbar ROM in all planes, and recent diagnosis of Sjogren's Disease. She is a retired chiropractor who has a negative view of physical therapy as a profession, demonstrates a heightened focus on movement deficits, and who demonstrates a strong desire to be independent in her health. The therapist utilized a familiar task to the patient in order to achieve buy-in and consistency with therapy. Progress was track by utilizing the Dallas Pain Questionnaire, functional movements, and lumbar range of motion.

College of Health Professions

Homeostatic Acu-reflex Point Pressure as an Assessment of Tissue Irritability and Intervention

Presenter: Tanya Dillon

Co-Presenter: Jeffery Ebert

Poster Presentation

Age-related physical and psychosocial changes increase the risk of developing low back pain (LBP) pathologies, which may become chronic with centralized pain symptoms. Assessment of homeostatic acu-reflex points (HARPs) for severity of tissue irritability and intervention has been proven to mitigate LBP. The purpose of this case report is to discuss a conservative approach to the assessment and treatment of chronic LBP with application of prolonged HARP pressure in an older adult with central sensitization. The patient was a 78-year-old woman presenting to outpatient physical therapy for treatment of an exacerbation of chronic LBP. In addition to pain affecting function, deficits identified at evaluation included impaired lower extremity strength and balance as indicated by functional outcome measures. An identifiable psychosocial influence has significant impact on the patient's perception of pain as well. Initial evaluation to progress report scores on the Timed Up & Go improved from 15.5 seconds to 12.3 seconds, and 5xSTS time improved from 29 seconds to 23 seconds, respectively. Overall NPRS rating has decreased by approximately 22% across all HARPs assessed and PCS score had no change. As physiological homeostasis declines with chronic pain, more tender HARPs develop in predictable locations along peripheral nerve distributions. Application of prolonged pressure on HARPs may have contributed to the patient's improvement in functional status and decreased pain.

College of Health Professions

Sitters, Sedatives, & Restraints: Challenges of Patient Safety vs Autonomy in the Hospital Setting

Presenter: Sarah Lim

Co-Presenters: Dan Dale & Mike Hinerth

Poster Presentation

The use of physical restraints has been recognized as detrimental to the outcomes of hospital stays for older adults. However, providing cost-effective health care while promoting safety makes it challenging for hospitals to provide restraint-free programs, such as the use of sitters that provide direct observation of patients.

The purpose of this case report is to discuss the challenges and health care implications of ensuring patient safety while also providing autonomy to challenging patients in the acute care setting - specifically through the use of sitters versus physical restraints or sedatives.

A 70-year-old African American male with a history of oral cancer presented to the hospital for a scheduled complex oral cavity surgery. The patient's hospital stay was complicated by multiple trips back to the operating room and bedside incision repair due to wound viability, an unsupervised fall, and multiple instances of self-inflicted injury, prolonging the hospital admission to 35 days. In addition, the intensive care unit setting led to delirium and dementia, with use of multiple physical restraints, sedation, and 1:1 sitters to ensure the patient did not inflict further self-injury. The patient also had orthostatic hypotension which delayed meaningful Physical Therapy intervention to prepare for discharge home. The patient was ultimately discharged home with 24-hour assist to the patient's son in his 3rd floor apartment.

College of Health Professions

Effect of an Interprofessional Education Program on Inpatient Fall Prevention

Presenter: James Pope

Co-Presenter: Daniel Dale

Poster Presentation

For decades, interdisciplinary collaboration and education has been a topic of discussion for major health education centers and medical institutions. Interdisciplinary collaboration has been identified as a major driver to improve health outcomes with patients. Current literature is developing in regards to interprofessional education (IPE), but is lacking in the area of using IPE to prevent falls and adverse outcomes in the inpatient setting. This cross-sectional study focuses on outcomes of an interdisciplinary collaborative education program aimed at helping health care practitioners feel more empowered to assess and screen patients to help decrease fall incidence in the acute care hospital setting. This study involves 30 participants who were graduates of a respiratory therapy program accredited by the Commission on Accreditation for Respiratory Care (CoARC). Education level of respondents ranged from respiratory therapists with an Associate's degree to respiratory therapists with a Master's degree. Experience level of participants ranged from <1 year of experience to >25 years of experience. 21 of the participants in this study were employed by a large urban 643 bed hospital. The 9 remaining participants were employees of a large rural 276 bed hospital. This study examines the effect of an interprofessional education in-service provided to participants regarding fall prevention statistics and screening.

College of Health Professions

Physical Therapy Management in the Skilled Nursing Setting Complicated by Conversion Disorder

Presenter: Bria Williams

Co-Presenter: Jeff Ebert

Poster Presentation

Conversion disorder (CD) presents with various motor and sensory symptoms that are not caused by a medical condition. The purpose of this study is to discuss the physical therapy management in a patient with the contributing factor of conversion disorder in the skilled nursing facility (SNF) setting after a ground level fall (GLF).

This case describes a 59-year-old male who presented to a SNF approximately three weeks after a GLF. Past medical history included degenerative joint disease, history of a right rotator cuff injury, and CD. At evaluation, the patient presented with global weakness as well as decreased mobility. The patient received physical therapy management for improving strength and functional mobility as well as behavioral modification techniques to manage CD diagnosis. Progress was assessed with the outcome measures of Tinetti Balance and Gait Assessment and Functional Independence Measure (FIM). Outcome: The patient was discharged after four weeks of physical therapy treatment. The patient showed no change in his Tinetti score, however, he did show improvement in his FIM score for bed mobility and transfers. Behavioral modification techniques employed to manage his conversion disorder were met with inconsistent response. Discussion: CD has the potential to greatly influence treatment approach and prognosis for conditions unrelated to CD. This case report highlights the need for further research in this area.

College of Health Professions

College of Professional Advancement

Department of Counseling

Counseling Lebanese Americans: A Culturally Sensitive Approach

Presenter: Hafsa Ahmed

Co-Presenters: Colin Freeland & Sara Moe

Poster Presentation

Developing cultural competence is a salient task for counselors wishing to achieve effectiveness across a diversity of clients. The experience of Lebanese Americans is understudied; however, cursory evidence shows that this population is impacted by elevated rates of affective and anxiety disorders, acculturative stress, intergenerational trauma, and a wide range of other psychosocial stressors. This paper examines the impact of Lebanese Americans' sociohistorical background, racial and ethnic identity, and cultural and gender norms on their attitudes and help-seeking behaviors regarding mental health. Recommendations for treatment include trauma-informed, highly directive approaches such as cognitive behavioral and reality therapies.

College of Professional Advancement

Department of Counseling

The Effects of Bullying and Discrimination Towards Youths and Young Adults with Disabilities

Presenter: Olaedo A. Ajoku

Poster Presentation

Bullying and discrimination can be horrific ordeals for persons of any age, and for youths and young adults with disabilities, this is no exception. This type of behavior can come in physical, mental, and emotional forms in different areas, whether it be in school, social settings, the workplace, and for some, even within the supposedly safe confines of the domestic home.

The reasons for such degrading behavior can stem from lack of education and awareness, fear and anxiety, media influences, and the need to maintain a so-called "perfect" social environment. However, if others are made aware and well-educated about disabilities in a positive and encouraging manner, then society can be a better place everyone, regardless of whether or not h/she has a disability or impairment.

This presentation will outline the dark influential roots in which this type of bullying and discrimination stem from, the various effects that these actions have on young persons with disabilities, and how they can be countered, decreased, and even permanently erased.

*College of Professional Advancement
Department of Counseling*

Can We Build Any Bridges

Presenter: Drew Cleary

15 Minute Lecture Session (10 minute presentation plus 5 minute Q & A)

There have been many strides made in the LGBT community toward wider acceptance in the general culture. There still remains obstacles, however. One of the biggest is the obstacle between the Christian culture and the LGBT community. This study proposes to examine the progress that has been made thus far as well as turns toward the question of whether there can be coexistence in the conservative Christian community with their LGBT members.

College of Professional Advancement

Department of Counseling

Psychometric Properties of an In-Session Counselor Empathy and Compassion Scale

Presenter: Carrie Elder

15 Minute Lecture Session (10 minute presentation plus 5 minute Q & A)

Empathy is taught as a primary helping skill in counselor education and is widely practiced regardless of theoretical orientation. As the counseling field embraces mindfulness practices, compassion training has increased within counselor education. Empathy and compassion are often conceptualized interchangeably. While there are many scales to measure empathy and compassion, there are none that use questionnaire items consistent with current literature that is relevant for counselors use of state empathy and compassion in session with a client. The development and factor analysis of empathy and compassion as separate dimensions of counselors' self-other attending skills are presented.

College of Professional Advancement

Department of Counseling

Holistic Integration: Openness to Self-Healing Scale (OTS-HS)

Presenter: Caroline Fernandes

Poster Presentation

Healing is a profound human experience of self-discovery and transformation (Meza & Faboome, 2008) that provides a sense of wholeness and intrapersonal connection. Sultanoff (1997) states that the behavior which clients are "unable" to achieve is within their power, but they prevent themselves from achieving it due to blockages. According to the American Holistic Health Association (2020), the human system consists of four interdependent and interactive components (physical, emotional, spiritual, and psychological) that influence each other and interact with the environment (social). As counselors we not only have the opportunity to address all these components, but we are in a position to facilitate holistic integration and social connectedness by encouraging clients as one whole entity. This entirety of an individual is often overlooked in other healthcare professionals and this is evident in the gap in literature including the gap in a valid and reliable self-assessment scale to evaluate openness to self-healing. By sharing recent findings, this presentation will demonstrate the need to create a valid and reliable measurement scale for Openness to Self-Healing Scale (OTS H-S).

College of Professional Advancement

Department of Counseling

An Exploration of Multiracial Microaggressions in Counseling and Counselor Education

Presenter: C. Peeper McDonald

Co-Presenters: Kahlor Lutz & Victoria Glover

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

Given that microaggression research is still in its early stages (Ratts, Singh, Nassar-McMillan, Butler, & McCullough, 2016; Sue, 2010; Sue et al., 2007) and that the Multiracial population is an under-represented group in research (Strmic-Pawl, 2014), little is known about how Multiracial people experience microaggressions specific to the counseling relationship or in counseling training programs. As a result, this presentation seeks to shed light on the growing literature surrounding microaggressions especially within counseling settings and give a voice to an under-studied population. Specifically, the presenters will discuss the specific research study that was conducted to get at these types of experiences and share findings and implications.

College of Professional Advancement

Department of Counseling

Quantifying Organizational Trauma: Is it Possible?

Presenter: Elizabeth Norris

15 Minute Lecture Session (10 minute presentation plus 5 minute Q & A)

Organizational trauma is the pervasive and insidious impact on an organizational system and its members as a result of compassion fatigue and organizational stressors. Trauma has been conceptualized as a contagion (Figley, 1995) and can enter an organization from both the organizational and individual levels (Vivian & Hormann, 2013). Workplace stressors such as the dysfunctional leadership, lack of support, and secrecy have been shown to add stress to employees. Additionally, organizations can be impacted vicariously by the nature of the work they do, such consistent exposure to trauma, heavy workloads, and functioning in crisis. Compassion fatigue is the individual experience of mental and emotional exhaustion and stress symptoms that mirror posttraumatic stress disorder as a result of secondary exposure to trauma (Figley, 1995; Stamm, 1995). Individuals and systems are impacted by the above listed stressors and a result in a traumatized organization. To date, organizational trauma has been assessed through interviews and no measurement instrument exists. To bridge the gap, a new instrument has been created in effort to measure the impact of organizational trauma risks on employees. This presentation will discuss the quantifiable operational definition of organizational trauma, a new measurement instrument, and preliminary findings.

College of Professional Advancement

Department of Counseling

Over the Rainbow: Journeys of LGBTQ Youth from Homelessness to Hope

Presenter: John Mark Parker

Poster Presentation

Homelessness remains a major public health concern across the United States, and the issue can be especially damaging to young people. Multiple studies from a variety of disciplines indicate the harmful and potentially long-lasting effects of homelessness on children and youth, and research shows that youth whose sexual orientation and identification differs from the norm are disproportionately affected by the negative influences of homelessness. Despite many obstacles and challenges, however, government agencies, community-based organizations, religious groups, individuals, and others are making a positive difference in the lives of young people who are at high risk for or are already experiencing homelessness. This presentation examines the problem of homelessness in America and the particularly negative effects of homelessness on youth who identify as lesbian, gay, bisexual, trans, queer, and questioning (LGBTQQ). The information presented also explains why this problem matters and explores implications from counselors and others who care. Finally, the presentation makes suggestions for what each of us can do to help.

College of Professional Advancement

Department of Counseling

Broach Salient Identities in Counselor Dyads

Presenter: Leslie Preveaux

Co-Presenter: Kate Dorrough

15 Minute Lecture Session (10 minute presentation plus 5 minute Q & A)

We argue that broaching racial identity within the counselor dyad strengthens the therapeutic relationship and leads to favorable therapeutic outcomes. The current presentation posits that by broaching identity, clients can explore meaning in their lives, a basic tenet of humanistic theory. We propose an integrated system of experiential learning with a focus on broaching identity in counselor education.

College of Professional Advancement

Department of Counseling

The Use of Psychological First Aid in Treating Sexual Violence Survivors

Presenter: Casey Reynolds

Poster Presentation

Psychological First Aid (PFA) will be explained and applied to sexual violence crisis intervention. Benefits and efficacy will be explored using the model. Skills and characteristics of the counselor using PFA will be identified and explained how they are beneficial when working with a sexual violence survivor after a crisis. Based on the needs of the crisis, resources will be suggested including short-term, medium-term, and long term treatment.

College of Professional Advancement

Department of Counseling

The Professional Quality of Life of Veterinarians

Presenter: Austin Shugart

Poster Presentation

The professional quality of life of a veterinarian is comprised of compassion satisfaction, which are the positive parts of helping others who have experience suffering, compassion fatigue, the negative parts of helping others who have experienced suffering, and the effects from end of life decision making, which may involve performing euthanasia on a pet. Compassion fatigue is made up of both burnout and secondary traumatic stress. Burnout entails exhaustion, frustration, anger, and depression. Secondary traumatic stress is a negative feeling driven by fear and work-related trauma. The veterinary profession has a greater risk of suicide compared to the general population, and their proportional mortality rate for suicide is one of the highest of any occupation. However, there is a gap in the literature as to why this is happening. Some research suggests that the high prevalence of suicidal ideation among veterinarians may be due to the profession's acceptance of and familiarity with animal euthanasia, which may change attitudes to suicide as a possible solution to their problems. Compassion fatigue has been found to be increased by reported stress from performing euthanasia as well. The researcher wanted to create an instrument specifically for veterinarians to better inform them of their current professional quality of life. The professional quality of life of veterinarians survey was sent out to veterinarians and the results will be shown.

College of Professional Advancement

Department of Counseling

Promoting Intrapersonal Resilience: Women of Color in STEM Programs

Presenter: Kirstin Sylvester

Co-Presenter: C. Peeper McDonald

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

Institutions of higher education offer opportunities for professional and personal development. However, higher education can also be accompanied by multiple stressors. More specifically, poor campus racial climate perpetuates a culture of microaggressions that can significantly decrease one's resilience. The presented study aims to provide a quantitative analysis of the relationship between resilience and experienced microaggressions, and how that relationship influences retention, progression, and degree completion in underrepresented Women of Color in STEM programs. Understanding resilience characteristics allows for the identification of traits and behaviors that can be encouraged. This session is intended to encourage mental health students and professionals to develop and/or participate in interventions that empower Women of Color in STEM programs.

College of Professional Advancement

Department of Counseling

Multicultural Counseling Competencies: Italian Americans Journey to Inclusion

Presenter: Yvonne Varner-Kirkland

Co-Presenter: Moses Little

Poster Presentation

The purpose of this literature review poster is to present the supportive role that counselors play as immigrants - Italian Americans in particular - experience their journey towards inclusion into a new dominate culture. Prior research has found that counselors' adherence to multicultural counseling competencies (attitudes and beliefs, knowledge, skills, and action) is critical for a positive acculturation/assimilation process. Understanding diverse cultures i.e. values, beliefs, customs, and social structure components must also be considered by helping professionals in their determination of the appropriate counseling theory and therapy for diverse populations.

The review showed a limited number of studies on Italian Americans and culture competencies; however, the evidence gathered from the literature review supported the importance of counselors adhering to multicultural counseling competencies when working with Italian Americans who want to assimilate into the American culture. This conclusion could be generalized to other populations.

College of Professional Advancement

Department of Counseling

Advocacy and Leadership Development through Honor Society Membership: Implications for Counseling Professional Identity

Presenter: Yvonne Varner-Kirkland

Co-Presenters: C. Peeper McDonald & Caroline Fernandes

Poster Presentation

Advocacy and leadership efforts for professional counselors and counselors in training are crucial so that they can continue to serve their respective clients with maximum effectiveness (Chang et al., 2011). With this in mind, this program seeks to provide a wide variety of evidence and examples of what leadership and advocacy can look like, specifically taken from concrete examples performed by Mercer University (MU) students, professors, and alums in the community. Additionally, this program will underscore the importance of ongoing innovation in leadership and advocacy by encouraging dialogue to ultimately promote counselor identity and excellent practice.

College of Professional Advancement

Department of Counseling

Self-Efficacy of Counselors Working with Religious LGBT Clients

Presenter: Ashley Williams

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

While there is a growing body of literature on the importance of counselors' self efficacy in LGBT counseling, there is very little written about the self-efficacy of counselors to integrate spirituality and religion as a component of LGBT counseling. As a result, research on this population has shown the lack of a measurement tool to assess LGBT individuals who have religious backgrounds. The purpose of this program is to explore the self-efficacy of counselors working with LGBT clients with religious backgrounds. While there have been many quantitative studies of statistics related to LGBT communities, we wanted to gain the kind of in-depth knowledge of how to ensure that we are not harming LGBT clients. This discussion will aid in addressing a unifying systemic model that will focus on the processes and structures to promote and support counseling the LGBT population in a way that helps the counseling field embrace diversity for future research

College of Professional Advancement

Department of Counseling

College of Professional Advancement

Department of Human Services and Psychology

The Fight Towards Ending Homelessness

Presenter: Carla Bolivar

Poster Presentation

Various circumstances may lead into one becoming homeless in America. In 2018, there was an estimated 552,820 people experiencing homelessness and an estimate of 9,499 in the state of Georgia (CEA, 2019; NAEH, 2018). Research shows that the leading cause is the result of limited affordable housing within many communities. In the state of Georgia, 16.9% of residence falls below the poverty rate (FPG, 2018). With the cost of living rising, it has become harder for individuals and families to secure stable and affordable housing. With many initiatives focusing on ending homelessness, and the recent decline of chronic homelessness, data still shows that 20 % of those who are classified homeless experience reoccurring laps. While factors such as mental illness and substance abuse plays a role in those reoccurring events, individuals who are unable to secure adequate resources easily fall into that category. This research responds to the challenges of having adequate time, in conjunction with resources needed, to rebuild from the experience of homelessness. This research will encompass gathering data related to the experiences and resources provided/offered for those who experience various types of homelessness. This research seeks to highlight how the variable of time being homeless relate to the correspondence to time and resources needed to support ending homelessness in America.

College of Professional Advancement

Department of Human Services and Psychology

Female Americans and Gun Violence Victimization: Summary of Research

Presenter: Maham Husain

Co-Presenter: Merrin Oliver

Poster Presentation

62% of those injured by a partner are women (Zakar & Abbas, 2016). In translation, that means more than half of American domestic violence victims are women, and their perpetrators are male partners. With the ceaseless existence of human greed for power, peace for women seems relatively unattainable. In recent years, the desperate resort to violence against women has become dangerously intertwined with weapon-related crimes. Where there are weapons, there is power; and where there is power, there is a misguided set of people that believe feeling a sense of power over others is the solution to their internal dilemmas, low self-esteem issues, and temperament issues.

Take this tragedy for example: In 2012, a man named Harold Henthorn pushed his wife off a cliff. After being convicted for killing his wife, police realized he also murdered his first wife as well, leaving her body on the side of a highway. When one person is killed, it is called a tragedy, but when a thousand people are killed, it is called a statistic. This is because it is difficult to make sense of inhumane tragedies, and that is why disparities exist between what society perceives to be the causes of these violent crimes and what the real causes are. To begin to understand the psychology behind criminal violence against women, an analysis regarding female gun violence victimization was conducted. This summary of research helps identify risk factors for female victims.

College of Professional Advancement

Department of Human Services and Psychology

The Dark Triad's Advancement in the Workplace Through the Use of Hard Tactics

Presenter: Rebecca Porter

Poster Presentation

The Dark Triad is used to describe narcissism, psychopathy, and Machiavellianism (Garcia et al., 2015) which are all "characterized by manipulation, exploitation, emotional coldness, and a lack of empathy" (Brewer et al., 2015, p. 122).

Djeriouat and Trémolière (2014) conducted a study on utilitarianism decisions in the Dark Triad personality traits and found that the Dark Triad traits had higher tendencies to make utilitarian decisions and that the lack of empathy influenced decision making. Jonason et al (2012) conducted a study on the tactics used by the Dark Triad personality traits within the workplace and found that The Dark Triad traits correlated with hard tactics over soft tactics. Baka (2019) conducted a study on counterproductive work behaviors (CWB), the Dark Triad, job control (JC), and bullying in the workplace and found that JC was related to active CWB, and in a high-stress environment the Dark Triad was correlated with bullying and had a negative impact on CWB.

The aim of this study is to determine the correlation between the Dark Triad, the use of hard tactics in the workplace, and workplace advancement.

Participants will be 25 and up, a U.S. citizen, and fluent in English. They will be selected through the use of Amazon Turk and will complete three questionnaires: The Dirty Dozen questionnaire (Baka, 2019), the Advancement Quotient (Chong, 2013), and a hard or soft tactics questionnaire (Dubrin, 2016).

College of Professional Advancement

Department of Human Services and Psychology

College of Professional Advancement

Department of Leadership Studies

Inclusion in Fellowships But Exclusion In The Industry? Journalists of Color Share The Impacts Of A Journalism Fellowship

Presenter: Sonya Green Ayers

15 Minute Lecture Session (10 minute presentation plus 5 minute Q & A)

This phenomenological qualitative study was conducted on the experiences of journalists of color who competed and were selected for an elite, mid-career journalism fellowship program that was not only for minority journalists but for journalists from around the world. A literature review revealed that research on the subject did not exist. Instead, research was primarily in the areas of newsroom diversity related to those employed by media organizations and the content the organizations produced. There was also research on minority-only journalist fellowships and training programs. Six journalists of color varying in race, age, years in the journalism industry and regions of the country were interviewed for the study. The participants were selected through convenience and snowball sampling methods. The experiences of journalists of color in the fellowship program revealed attitudes and perceptions about newsroom diversity, inclusion, and leadership that provided information for organizations who seek to close the diversity gap.

College of Professional Advancement

Department of Leadership Studies

Barriers & Facilitators of Collaboration between Interdisciplinary Pediatric Specialists

Presenter: Chelsea Gaines

15 Minute Lecture Session (10 minute presentation plus 5 minute Q & A)

This research study was designed to gain further insight of pediatric healthcare providers who care for children with complex medical conditions (CMC), focusing on collaborative efforts with other interdisciplinary providers regarding a patient's complex needs. A phenomenological approach was utilized, via interviews, to gain first-hand experiences of pediatric healthcare providers, who care for CMC patients, in regard to their personal communication and collaboration efforts towards treatment planning. This study enhances the awareness of the barriers and facilitators of current communication and collaborative efforts that CMC pediatric patients receive for their personalized treatment plans. The contribution of the study will advance the gap in current research for the ongoing barriers and facilitators of care coordination among interdisciplinary healthcare providers of CMC patients.

College of Professional Advancement

Department of Leadership Studies

Recruiting and Enrolling Rural High School Students to Institutions of Higher Education

Presenter: Farish Jerman

15 Minute Lecture Session (10 minute presentation plus 5 minute Q & A)

This presentation will provide an overview of the phenomenological study that is currently being carried out to highlight college access challenges that are unique to rural high school students, whether practices that have proven effective for the recruitment and enrollment of other underrepresented student cohorts (such as low-income high school students and high school students of color) might be as effective for rural high school students, and best practice for how colleges that want to might more effectively recruit and enroll rural high school students. This presentation will also include an overview of the literature as pertains to the evolution of underrepresented student cohorts, effective recruitment and enrollment practices for low-income high school students and high school students of color, and the existing literature on effective recruitment and enrollment of rural high school students and their specific college access challenges.

College of Professional Advancement

Department of Leadership Studies

Leveraging Your Internship

Presenter: Laurie Lankin

Co-Presenters: Elizabeth (Ann) Hall & Charmaine Stallworth

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

Internships can play a pivotal role in the education of a student. Whether they are required or optional, they can provide real-world experience as a method to test out if you're preparing for the right career path. They can introduce you people in your chosen field for networking and can impact your future employment. Internships are a solid way of enhancing the student's transition into a professional role and/or indicating skills and knowledge that can contribute to being hired or promoted.

The workshop will provide strategies and tips for students as they identify possible sites and showcase the importance of supervisors at the site. They will encourage the best ways of using the internship to make contacts with potential employers, and possibly even get hired by the site. For students already working in their field, the workshop will provide suggestions for identifying ways to take on projects that will broaden their job experience and to encourage their workplaces to perceive them as worthy of being promoted.

College of Professional Advancement

Department of Leadership Studies

An Exploratory Study of Organizational Practices in Adult Basic Education Programs in Georgia

Presenter: Zakiya Lescott

Poster Presentation

Education is an important component to develop successful citizens and a stronger economy. As the study in the dynamics of education evolves, the challenges of leadership in the Adult Basic Education (ABE) field continue to expand. The need for well-developed ABE programs and effective leaders are more prevalent today but limited support and resources inhibits the progression. This study examined the perspectives and experiences of ABE professionals in Georgia in order to explore leadership practices. A comprehensive review of literature was supported by utilizing a mixed method approach to obtain qualitative and quantitative data. The researcher conducted semi-structured interviews and distributed Likert-scale surveys to 16 ABE professionals during the course of one week. The findings from the results illustrated that ABE leaders experienced several challenges within their capacities that influences the success of their roles. The integration of quantitative and qualitative data provided a stronger analysis in order to further understand and recommend best approaches to leadership development within ABE programs. Overall, the study aimed to develop effective strategies to implement in order for ABE programs to generate better outcomes and add to the existing literature.

College of Professional Advancement

Department of Leadership Studies

Integration of Management Systems: A Model to Measure Levels of Integration in Organizations

Presenter: Claudia Ortega

15 Minute Lecture Session (10 minute presentation plus 5 minute Q & A)

The purpose of this study was to develop an instrument to measure levels of integration of three (environmental, quality, safety) management systems in an organization to compare the level of integration within the principles that guide them, and their relation to organizational performance. This study employed an exploratory sequential mixed methods design. The measurement instrument was designed using the framework proposed by Nunhes, Bernardo and Olivera (2019), consisting of six guiding principles. The study was carried out in 4 manufacturing plants with 7 participants whose duties included the maintenance of one or more of the management systems that were part of this study. Correlation and regression analysis were used to determine the relation between the level integration of the management systems implemented at each plant with the level of integration perceived by the plant, and their organizational performance, and the level of development of each guiding principle within an organization. Results did not show a significant correlation between the perception of integration or the organizational performance with the achieved level of integration in the organizations studied. It showed positive correlations between all the guiding principles. These results indicate the assessment designed for this study provides an accurate picture of the relationship between principles guiding integration of management systems.

College of Professional Advancement

Department of Leadership Studies

A Government Culture's Receptiveness to Positive Organizational Change

Presenter: Edgar Reyes

Poster Presentation

This study set out to investigate if a significant relationship exists between Positive Organizational Scholarship based change and the organization's receptiveness to its application. Consequently, the research sought to determine if a relationship exists between the organization's culture and the organization's receptiveness to positive organizational change. To this end, a culture assessment was performed in addition to the administration inquiry related to positive organizational change and traditional organizational change. The data collected were analyzed to identify if a statistically significant relationship exists between participant responses to stimuli representative of positive organizational change and stimuli representative of traditional, deficit based, organizational change. Finally, the data were also analyzed to determine if and how the organization's culture correlates with its receptiveness to positive organizational change.

College of Professional Advancement

Department of Leadership Studies

Exploring Resources to Reduce Ex-Offender Recidivism in Macon, Georgia: A Needs Assessment

Presenter: Collinda Simmons

Poster Presentation

This study explored the perceived needs of offenders currently housed in the Macon-Bibb County Jail. Empirical research reports that individuals who have been incarcerated are at risk of recidivism. This study used a qualitative research design and the data were collected from in-depth interviews with ten participants. The study found that lack of education and social support has negatively impacted the number of individuals who are failing to successfully reintegrate into society. This study also revealed that the lack of employment opportunities, housing, community resources, and vocational training can challenge successful reintegration. This study recommends that an increase in transitional services be rendered to ex-offenders, as policy and practice. The types of services that the study recommends implementing are first, an increase in linkage between the ex-offenders and support services in the ex-offender's perceived areas of need, and secondly, more educational and vocational programs implemented in the jail facilities to rehabilitate and prepare reintegrating citizens. It is recommended that there is further research of successful outcomes.

College of Professional Advancement

Department of Leadership Studies

Does Content Matter? The Effects of Social Media on Volunteer Attraction and Retention

Presenter: Chelsea Stevenson

Poster Presentation

Social media marketing has become one of the most inexpensive and popular methods to promote goods and services of an organization. While it is mostly common to see this method used in for profit corporations many nonprofit organizations have adopted this method in order to promote their organization's mission and attract more stakeholders. One of the biggest challenges faced by nonprofits is the ability to acquire and retain volunteers. In this study a survey was administered to 100* individuals in order to determine if there was an association between volunteer attraction and retention to social media use. More specifically, the use of social media platforms of select nonprofit organizations. Results Pending. Data is still being collected.

College of Professional Advancement

Department of Leadership Studies

College of Professional Advancement

Department of Liberal Studies

Health Communication to Serve Children: Awareness, Attitudes, and Behavioral Intent Among Health Care Practitioners

Presenter: Arla Bernstein

Co-Presenters: LeAnna Bohannon, Breona McElwee, Marquita Wright, Bridget Brown, & Raquel Rose

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

This is a service learning project for students in Dr. Bernstein's COMM 390 Health Communication class in the College of Professional Advancement of Mercer University. This project will provide students an opportunity to collaborate with professional representatives of the National Peanut Board on the 'Preventing Peanut Allergies' Campaign. Students are working with the Executive Director of Golin Public Relations, who is a representative for the National Peanut Board, in order to assist the Preventing Peanut Allergies Campaign by conducting interviews with physicians, nurses, and pharmacists. Students are assessing awareness of and attitudes toward medical studies regarding prevention of peanut allergies in children. Based on student's knowledge about the current Preventing Peanut Allergies Campaign and the interview data and analysis, student teams will make recommendations for message strategies to be used in the Campaign for reaching out to, and gaining the support of, Healthcare Practitioners.

College of Professional Advancement
Department of Liberal Studies

Making Meaning: ePortfolios in the Liberal Studies Senior Seminar

Presenter: Andrea Winkler

Co-Presenters: Javoski Harden, Freddie Pelzer, & Cameisha Smart

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

This presentation showcases some of the ePortfolios created by senior Liberal Studies majors. To improve students' reflective skills and increase their chances of creating effective syntheses of their work to date, the Liberal Studies Department began using ePortfolios in the major. These student ePortfolios represent the results of the first time seniors in LBST 498 (Senior Capstone) used the ePortfolios.

ePortfolios are considered the eleventh high-impact practice by the AACU. Done well, they do not merely store artifacts that record a student's progress. They actively encourage students to reflect on their work and to synthesize it. They focus attention on the process of learning, and make that learning visible to student, faculty, and others alike. The LBST 498 ePortfolio required students to explain their degree to the public in a succinct format. The process of selecting artifacts, explaining them, and using them to make meaning for themselves of their degree helped students actively to synthesize their experiences with the perspectives they had gained through their concentrations and core courses.

By demonstrating recent ePortfolios, we intend to document the initial success of the ePortfolio program, and generate discussion about the role of reflection in increasing student success.

College of Professional Advancement
Department of Liberal Studies

College of Professional Advancement

Department of Mathematics, Science and Informatics

Pharmacovigilance Analysis of Drug-Drug Interactions in the FDA Adverse Event Report System

Presenter: Hellen Pham

Co-Presenter: Awatef A. Ben Ramadan

Poster Presentation

Adverse drug interaction, a form of a medication error, can impact a patient's morbidity and mortality. Drug interactions are influenced by various factors such as age, polypharmacy, and comorbidities. With the incorporation of pharmacovigilance and the FDA Adverse Event Reporting System (FAERS), the risk of drug-drug interactions can be reduced through increased awareness to healthcare professionals, manufacturers, and patients. The objective of this study will be to analyze and assess the drug-drug interactions in the web-based, publicly available FAERS database in the years 2018 and 2019. A retrospective descriptive and correlational study design. Secondary data analysis will be performed on the reported cases available in the FAERS database. The researcher will use Excel to analyze the collected data. The results will be presented in tables and graphs as needed in both descriptive and inferential statistics format. Our results will be defended and compared to the current literature evidence on the same subject.

College of Professional Advancement

Department of Mathematics, Science and Informatics

Barriers to Access of Electronic Health Record Data by Public Health Organizations

Presenter: Dustyn Palmer

Co-Presenter: Awatef A. Ben Ramadan

Poster Presentation

In 2009, the Health Information Technology for Economic and Clinical Health (HITECH) Act was passed. This act proposed the 'meaningful use' of interoperable Electronic Health Records (EHR) as a critical national goal. The HITECH Act and EHR-MU helped transform the EHR use in hospital and clinical settings, however the level to which these data are being used to advance public health objectives are limited and focused on diseases of public health importance and/or specific locales. There are significant opportunities in using these data to advance surveillance of the public's health by enabling both clinical and public health to easily share and access this data to effectively manage a communities overall health. As the nation's health protection agency, Centers for Disease Control and Prevention's (CDC) mission is to save lives and protect people from health threats. EHR data present an opportunity to enable enhanced coordination between CDC and primary care providers, however access and use of EHR data within CDC is currently insufficient in contributing to these objectives. There are a variety of barriers limiting access including technical, financial, policy and trust barriers hindering the use of data for public health objectives. This research is intended to understand, describe and then prioritize barriers to access by surveying one division within the CDC to track the current progress in overcoming these barriers.

College of Professional Advancement

Department of Mathematics, Science and Informatics

Patient Satisfaction and Wellness Before, During and After Invisalign

Presenter: Suzanne Jones

Co-Presenter: Awatef A. Ben Ramadan

Poster Presentation

With its introduction in 1998, the Invisalign clear aligner system (Align Technology) is now an important Orthodontic protocol. The aim of this research is to determine if the Invisalign Orthodontic technology and its associated website and smartphone mobile applications improve a patient's health and wellbeing. The Hypothesis for this research is that the Invisalign technology protocol (i.e., website, mobile technology and Invisalign process) is safe and provides effective patient information and intuitive support throughout the protocol. Specifically, the Invisalign technology enhances patient access, participation, compliance, usability and satisfaction of Orthodontic services. This research model consists of a) Historical Design (understanding the origin of Invisalign technology), b) Descriptive Design (understanding through observation and survey responses the decisions to begin and use Invisalign), and c) Evaluation Design (understanding patient acceptability and effectiveness of Invisalign protocol through observation and surveys). This mixed methods research applies across the course of each patient's Invisalign protocol (longitudinally). The purpose of this research study is to create new knowledge and to confirm, evaluate and revise current existing knowledge on the efficacy, acceptability and usability of Health Informatics in the important Invisalign protocol in Orthodontics and Healthcare.

College of Professional Advancement

Department of Mathematics, Science and Informatics

Assessment of Health and Digital Literacy Amongst First-Generation Somali Immigrants

Presenters: Awatef Ben Ramadan & Dina Schwam

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

One-third of the immigrant families live below the federal poverty level and about 25% of immigrants have less than a college education. Serious health problems are often higher in first-generation migrants than those born in the U.S. and due to significant socio-economic and cultural barriers; this has become a difficult issue to address in the health system. Low health literacy is a major challenge, which contributes to health disparities within immigrants groups, with lower literacy levels among immigrants than among other community groups, affecting immigrant lifestyles in nutrition, physical activity, and accident and disease prevention. This study aims to assess health and digital literacy amongst 50 first-generation Somali immigrants, recruited from religious/cultural organizations within DeKalb County, Ga. A research assistant will administer a health literacy assessment and a digital literacy assessment to participants. Participants' scores will be analyzed using statistical tools, resulting in descriptive and inferential results.

Through this study, we will gain insight into the disparity that affects the targeted community. Results can also inform the development of ways to educate this audience in order to bridge the community's health disparities gap, such as through an instructional health website and/or a mobile health application, considering language/s, and cultural norms and values to engage them in improving their own and the community's health.

College of Professional Advancement

Department of Mathematics, Science and Informatics

School of Medicine

Emotional Intelligence is Associated with Decreased Burnout in Clinical Year Medical Students

Presenter: Cody Blanchard

Co-Presenters: Victoria Kravets, Mara Schenker, & Thomas Moore, Jr.

Poster Presentation

Emotional intelligence (EI) has been associated with decreased levels of burnout in surgical residents but has not been extensively studied in medical students. We hypothesized that higher EI would lead to decreased levels of burnout among medical students at Emory School of Medicine.

The authors administered three separate EI measures and compiled a composite EI score by adding the normalized score on each test. These measures were the DRS-15, the Grit Scale, and the Reading the Mind Between the Eyes Quiz. The Professional Fulfillment Index (PFI) was used to determine levels of burnout experienced during the previous two weeks before survey completion.

The population included 68 medical students who completed greater than or equal to 85% of the survey. The mean composite EI score was 0.73 (± 0.07), and the mean PFI score was 0.65 (± 0.2). PFI and EI scores were positively correlated ($R=0.55$, $p<0.001$). An analysis of the separate EI measures indicated that both Grit ($R=0.43$, $p<0.001$) and DRS-15 ($R=0.56$, $p<0.001$) scores were correlated with PFI score. Responses to the Eyes Quiz did not show a significant correlation with PFI ($p=0.2$).

The results confirmed our hypothesis that EI would be correlated with decreased levels of burnout among this group of medical students. Our study opens the door for additional analysis of EI and burnout, including whether these same results hold true at other medical schools and if improving EI has a benefit of decreasing burnout.

School of Medicine

Acute Thrombotic Event in the Setting of Hypercalcemia Secondary to a Parathyroid Adenoma

Presenter: Ndidi-Amaka Onyekaba

Co-Presenters: Courtney Stone, Quinton Blount, Kaushik Chaganty, & Timothy Connelly

Poster Presentation

Primary hyperparathyroidism is an endocrine disorder with an incidence of approximately 28 cases per 100,000 individuals in the general population.

Patients with this disorder often present with non-specific symptoms, including gastrointestinal, cardiovascular, and neuropsychiatric symptoms.

We report a case of a 40-year-old female with complaints of heart palpitations and chest pressure was admitted to our hospital. A serum calcium of 13.2 mg/dL was noted on admission, in addition to complaints of chronic constipation, polyuria, and bone pain for the past few months. Chest CT showed a pulmonary embolus and she was started on therapeutic anticoagulation with enoxaparin. A follow-up neck ultrasound revealed a 2.3 x 1.8 cm infrathyroidal mass consistent with an enlarged parathyroid gland. She then underwent surgical excision of the parathyroid adenoma, later confirmed by pathology. Serum calcium down-trended soon after resection, though she developed post-operative hungry bone syndrome that required IV and PO calcium gluconate. She continues to be on calcium and vitamin D supplementation.

This is a report of an uncommon case of prolonged hypercalcemia leading to a thrombotic event. The pathophysiologic background that connects calcium and thrombosis is not completely understood, but a review of the literature identified few cases of primary hyperparathyroidism leading to a hypercoagulable state.

School of Medicine

Secondary Syphilis Resembling Non-Melanoma Skin Cancer

Presenter: Courtney Stone

Co-Presenters: Ndidi-Amaka Onyekaba, Matthew J Lucas, & Drazen M Jukic

Poster Presentation

Here we describe the occurrence of secondary syphilis in a 45-year old, HIV-positive male patient. He presented with a solitary, crusted, anterior neck nodule with no additional systemic symptoms. Past medical history and physical exam were concerning for non-melanoma skin cancer. Histopathologic evaluation of the lesion revealed an extensive infiltrate of plasma cells at the dermoepidermal junction, and immunohistochemical antibodies revealed numerous *Treponema pallidum* microorganisms. Physicians must keep syphilis on the differential when evaluating atypical nodular lesions resembling non-melanoma skin cancer in order to initiate appropriate antibiotic treatment and prevent future infectious complications.

School of Medicine

Georgia Baptist College of Nursing

The Lived Experience of Tribal Colleges and University Students: Lessons Learned

Presenter: Vicki Black

Poster Presentation

The purpose of this study was to determine the meaning that Tribal College and University (TCU) students associated with their educational experience. TCUs offer a unique educational model that has implications for colleges who serve underserved and underrepresented students. There is a dearth of research studies that investigate student perceptions of their TCU education. Using a hybrid exploratory phenomenological approach, 45 TCU students were interviewed. Fifteen themes emerged from the data analysis. Several of these themes are important for college/university faculty, staff and administrators who serve underrepresented and underserved students. Relevant themes center around barriers, facilitators, the meaning that education has for their families and communities, and the meaning that education has for cultural traditions, traditional knowledge and native language revitalization. The session should particularly benefit educators and stakeholders who are interested in advancing higher education of underrepresented and underserved students.

Georgia Baptist College of Nursing

College of Pharmacy

Inhibitory Effect of Methylene Analogues on LPS Induced Nitric Oxide Production in RAW 264.7 Cells

Presenter: Adesewa Akande

Co-Presenters: Brenda M. Gannon, Jacques P. Petzer, & Kevin S. Murnane

Poster Presentation

Recently, Methylene Blue (MB) has been suggested as a potential treatment in the management of neurodegenerative disorders such as Alzheimer's and Parkinson's disease and has also been shown to have antidepressant and anxiolytic effects in preclinical studies. One possible mechanism of action for these effects is through non-selective inhibition of Nitric Oxide Synthase (NOS). Thus, this study aimed to evaluate MB and MB analogues for their ability to inhibit NOS without producing toxicity.

MB and eight MB analogues were first screened for their ability to inhibit Nitric Oxide (NO) production in Lipopolysaccharide stimulated RAW 264.7 cells using the widely known Griess Reagent assay, in which results were compared to NG-Nitro-L-arginine Methyl Ester as a positive control. Compounds that showed significant NO inhibition in the Griess Reagent assay were then tested for cell viability using the (4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) toxicity assay.

Several of the MB derivatives have shown NO Inhibitory activity, without signs of toxicity. Our results suggest that MB analogues should be further investigated for their potential to treat various conditions associated with oxidative stress; especially neurodegenerative and psychiatric conditions.

College of Pharmacy

Sex Differences in an Fmr1 Knock-out Mouse Model of Fragile X Syndrome

Presenter: Jessica Armstrong

Co-Presenters: Yiming Chen, Tanishka Saraf, & Clinton Canal

Poster Presentation

Fragile X Syndrome (FXS) is the leading monogenetic cause of intellectual disabilities and autism spectrum disorder (ASD). Epilepsy, sensory hypersensitivities, and several other neuropsychiatric symptoms are also common in FXS and ASD. FXS is caused by silencing of the FMR1 gene, located on the X-chromosome, which prevents expression of FMRP. Possessing a single X-chromosome, FXS occurs more frequently in males than females, and males have more severe symptoms. For example, males are more than twice as likely to have epilepsy. Genetic mosaicism (X-inactivation) in females with FXS is the presumed reason for the lower symptom severity. Our results challenge this presumption. During testing of Fmr1 knock-out (KO) mice, we observed a higher prevalence of audiogenic seizures in juvenile, male Fmr1 KO mice (100%) compared to Fmr1 KO females (50%), closely paralleling the sex difference in epilepsy prevalence in FXS. Importantly, however, female Fmr1 KO mice are homozygous for the mutated Fmr1 gene. We also found that expression of the serotonin receptor, 5-HT1AR, was elevated in whole brains of adult, male Fmr1 KO mice, compared to WT mice; we did not observe this difference in female mice. We are currently investigating whether 5-HT1ARs contribute to the sex difference in audiogenic seizure susceptibility. In conclusion, our preclinical data suggest that the reduced symptom severity in females with FXS may not be solely attributed to X-inactivation of the mutated FMR1 allele.

College of Pharmacy

Invitro Assessment of a Novel Particulate Vaccine for the Treatment of Gonorrhea

Presenter: Lotika Bajaj

Co-Presenters: Priyal Bagwe, Rikhav Gala, Susu Zughaier, & Martin D'Souza

Poster Presentation

Due to widespread occurrence of *Neisseria gonorrhoeae* infection, and emerging resistance to antimicrobials, there is an urgent need of a reliable alternative therapy.

N. gonorrhoeae was grown on GC agar and pileated colonies were used for bulk production in GC broth. The culture was formalin-fixed, gonococcal pellets were harvested, washed and saved as dense suspension at -80°C . The matrix for vaccine particles contained pre-crosslinked bovine serum albumin and microparticles were prepared using Buchi Mini Spray Dryer B-290. Adjuvants (Alum, MF59 ∇ E) particles were prepared with the same method. Particle size and zeta potential of these microparticles were measured and scanning electron microscopy was done for morphology. The cytotoxicity of vaccine microparticles was assessed by MTT assay. Invitro immunogenicity was assessed by measuring the amount of nitrite released by dendritic cells (DC2.4) in presence of microparticulate formulations. Dendritic cells exposed to particulate vaccine were evaluated for expression of MHC I, MHC II and CD40, CD86 molecules. Formalin-fixed gonococci were intact (native form) as observed by SEM. Cytotoxicity assay showed that Vaccine microparticles loaded with fixed gonorrhea were non-cytotoxic within the tested concentration range. Nitrite production and expression of MHC I, MHC II, CD40 and CD86 was significantly higher in complete vaccine microparticles group as compared to untreated control group ($p < 0.001$).

College of Pharmacy

Availability of Naloxone at Rural Georgia Pharmacies, 2019

Presenter: Lauren Beasley

Co-Presenters: Jennifer L. Nguyen, Lauren R. Gilbert, John J. Brooks Jr, Jennifer Elliott, K. Bryant Smalley, & Jacob C. Warren

Poster Presentation

Opioid use disorder is the chronic and relapsing condition of opioid use for at least one year despite the experience of continuous negative consequences from opioid use. The use of Narcan ∇ (naloxone) nasal spray dramatically increases the chances of survival when someone takes an overdose of an opioid medication. However, there are many barriers to naloxone access, including misinformation, cost, social stigma, and access to healthcare systems. Narcan is available for purchase at retail pharmacies without a prescription in the state of Georgia, but that is not helpful unless this life-saving medication can be accessed by the patients who need it. To investigate the degree of availability of Narcan ∇ to patients located in underserved areas of the state, researchers placed calls to 364 retail pharmacies and acted as patients seeking to purchase the drug. Results showed that a small majority of these pharmacies stocked Narcan ∇ on the day of the phone call, and that many pharmacists believed that a prescription was required for purchase. The average price of Narcan ∇ with no prescription drug insurance coverage was debatably unaffordable, and few pharmacists offered a less expensive option when prompted. These findings implicate a low level of access to Narcan ∇ nasal spray in rural Georgian counties, emphasizing the need for increased education and awareness surrounding the issue of opioid use disorder to patients and healthcare professionals alike.

College of Pharmacy

SAR Study of Synthetic Cathinones Reveals Nanomolar Antagonist Potency of α -PHP at Human M2 Receptor

Presenter: Yiming Chen

Co-Presenter: Clinton Canal

Poster Presentation

Synthetic cathinones (SCs) are designer, psychostimulant drugs of abuse that primarily act on monoamine transporters; little is known about their off-target liability. Abuse of pyrrolidine-containing SCs, such as α -PHP, has been linked to clinical features, including tachycardia and hypertension, and psychiatric events, including delusions and memory impairments, effects mimicking deliriant hallucinogens that are acetylcholine muscarinic receptor (MR) antagonists. α -PHP and nine analogs with modifications in the α -carbon side chain length and/or containing a methylenedioxy moiety were screened for activity at each of the five human MRs. Increasing the length of the α -carbon side chain of 1-phenyl-2-(pyrrolidin-1-yl)ethan-1-one analogs from a methyl (α -PPP) to a propyl (α -PVP) group caused a steep increase in affinity at all MR subtypes, and one extra carbon (α -PHP) further enhanced MR affinity. The presence of a methylenedioxy moiety generally hindered this effect at all MRs. Highest MR affinity was observed with α -PHP at M2Rs. M2R, cAMP inhibition and α -arrestin recruitment assays showed that α -PHP is an M2R antagonist. Additional experiments showed α -PHP is also an antagonist of M1R, inositol phosphate production. Human toxicology studies report blood concentrations of pyrrolidine-containing SCs, including α -PHP, that reach micromolar levels during intoxication, indicating α -PHP's MR activity might have physiological relevance.

College of Pharmacy

Assessing the Role of Dopamine in the Differential Neurotoxicity Patterns of Stimulants

Presenter: Neha Chitre

Co-Presenters: Monique Bagwell, Brenda M. Gannon, & Kevin S. Murnane

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

Drug-induced parkinsonism (DIP) is the second most common etiology of parkinsonism after Parkinson's disease (PD). Stimulants like amphetamines that are known to cause long term dysregulation of the brain dopaminergic system are top contributors to DIP. Methamphetamine, a very commonly abused amphetamine is an addictive psychostimulant that has very strong neurotoxic effects on the central nervous system (CNS), and specifically the brain dopaminergic system. 3,4-methylenedioxymethamphetamine (MDMA) recently achieved breakthrough status from the Food and Drug Administration (FDA) for post-traumatic stress disorder (PTSD). However, evidence indicates that exposure to toxic doses of 3,4-methylenedioxymethamphetamine (MDMA) can lead to long-lasting dysregulation of brain monoaminergic neurotransmitters, primarily from studies conducted in young adult rodents. Additionally, the abuse of synthetic cathinones, which are the α -ketone analogs of amphetamines has also been on the rise. Despite their structural similarity to amphetamines, not many studies have evaluated their neurotoxic potential and the detrimental effects they could be having on the dopaminergic system. Thus, the aim of the current study is to compare the dopaminergic neurotoxicity exhibited by stimulants to study their potential to cause DIP using prototypical amphetamines, methcathinones and pyrrolidines.

College of Pharmacy

Evaluating the Potential of non-Psychoactive Serotonin 2A Receptor Agonists for Alcohol Use Disorder

Presenter: Aboagyewaah Oppong-Damoah

Co-Presenters: Alice Yoon, M. Frances Vest, Kristen Curry, Bruce Blough, Kenner Rice, Osman Guner, J. Phillip Bowen, Kalyn Rambacher, Nader Moniri, Tyler J. Murphy, Cedrick M. Daphney, Brenda M. Gannon, & Kevin S. Murnane

30 Minute Lecture Session (20 minute presentation plus 10 minute Q & A)

Alcohol is the third leading cause of preventable death in the United States. There has been a recent resurgence in the study of the pharmacotherapeutic benefits of psychedelics; however, their psychoactive properties may render them intolerable. It is necessary to discover and evaluate the benefits of novel serotonin 2A (5-HT_{2A}) receptor agonists for alcohol use disorder (AUD). In the present study, we used 2,5-dimethoxy-4-iodoamphetamine (DOI) to investigate the involvement of 5-HT_{2A} receptors in AUD using two widely used preclinical models; place conditioning and 2-bottle choice ethanol consumption in mice. We also used pharmacophore molecular modeling to identify carvedilol and ethocin as 5-HT_{2A} receptors agonists with reduced psychoactive properties. In vivo, we used loss of righting reflex assay and operant conditioning to confirm the activity of carvedilol at 5-HT_{2A} receptors. For ethocin, we used head twitch response assay to confirm its activity at 5-HT_{2A} receptors. DOI significantly attenuated both ethanol-induced place conditioning and ethanol drinking. In vivo experiments showed that carvedilol increases the ethanol-induced loss of the righting reflex and suppresses operant responding in mice through activity at 5-HT_{2A} receptors. Also, it reduced ethanol drinking in mice. Ethocin engendered fewer head twitch response in comparison to same doses of DOI. Findings suggest that non-psychedelic 5-HT_{2A} receptor agonists may be promising as novel targets for AUD.

College of Pharmacy

Flu Fighters: Protecting Against the Influenza Virus Using a Transdermal VLP-based Flu Vaccine

Presenter: Keegan Braz Gomes

Co-Presenters: Kimberly Braz Gomes, Sang-Moo Kang, & Martin D'Souza

Poster Presentation

The aim of our research was to develop a universal and efficacious influenza vaccine using influenza matrix-2 protein virus-like particles (M2e VLPs) formulated into a microparticulate matrix and administered via non-ablative cold laser.

The M2e VLPs (antigen) and adjuvants were encapsulated into a biodegradable polymeric matrix via spray drying and assessed for their ability to stimulate immune cells and their toxicity to cells. Next, the microparticles were administered transdermally using laser ablation in an in vivo mouse model to assess vaccine efficacy.

The vaccine microparticles were shown to produce high levels of nitric oxide (strong innate immune response) and shown to be non-toxic to cells across a range of concentrations for up to 4 days. The mice vaccinated with M2e VLP and adjuvants microparticles demonstrated elevated levels of immunoglobulin G (IgG) antibodies, which is important marker for antibody-driven adaptive immunity.

Since the current licensed vaccines against influenza are facing numerous challenges associated with production time, antigenic changes, and route of administration, we developed an efficacious flu vaccine with M2e VLPs that was formulated efficiently, immunogenic, and easily administered transdermally.

College of Pharmacy

Treatment of Parkinsonism with "Smart" Microcapsules

Presenter: Devyani Joshi

Co-Presenters: Neha Chitre, Kevin Murnane, & Martin D'Souza

Poster Presentation

Parkinsonism is neurological disorder that is result of decreased dopamine release. Goal of our study is to use regenerative medicine-based cell therapy to increase dopamine level in brain. In a proof of concept study, we are interested in using PC12 cells to demonstrate reversal of Parkinson's disease in pre-clinical studies. If these studies are successful, neuron differentiated stem cells can be substituted for PC12 cells.

For fabrication of microcapsules, cells were suspended in Trehalose- alginate solution and sprayed through 1.40mm nozzle into calcium chloride solution. Microcapsules were reacted with chitosan glutamate and stored in media. FTIR spectroscopy was performed to confirm crosslinking of alginate microcapsules. Short- and long-term stability study was performed to evaluate strength of the microcapsule membrane and mechanical stability. Viability of cells inside microcapsules was determined. Griess's assay confirmed non-immunogenicity of microcapsules.

The microcapsules with diameter of $52\text{ }\mu\text{m}$ were formulated using air flow rate 350L/Hr. FTIR spectra confirmed formation calcium alginate in microcapsule membrane. 85% of the microcapsules were intact in short- and long-term stability studies. Griess's assay showed that microcapsules were non-immunogenic. Microencapsulated PC12 cells were found to release dopamine over a period of 30 days. Successful formulation of microcapsules encapsulating viable PC12 cells demonstrate potential of using cells-based therapy.

College of Pharmacy

Formulation of 3D Printed Oral Dissolving Films (ODF) for Buccal Immunization

Presenter: Devyani Joshi

Co-Presenters: Mohammad Nasir Uddin & Martin D'Souza

Poster Presentation

Measles was responsible for high worldwide morbidity before introduction of vaccine. Vaccine is administered via hypodermic needles. Since children are primary recipients, we are interested in examining the possibility of delivering vaccine via needle-free oral dissolving films (ODF). We are experimenting fabrication of ODF containing microparticulate measles vaccine with the use of a fully automated 3D printer. Oral cavity is rich in dendritic cells which traffic antigen to mucosal associated lymphoid tissue.

Microparticles will be first formulated using specialized three-fluid nozzle using Buchi spray dryer B-290. Microparticles encapsulating the antigen embedded in biodegradable polymer will be surface coated with a biopolymer to provide sustained release of antigen.

ODFs will be formulated using completely automated 3D printing technique. UV curing of polymer will allow for the formation of films in situ in few seconds, as compared to several hours using the traditional method. ODFs will be formulated in the 3 different layers. The middle layer containing the vaccine microparticles will be protected by top and bottom layers of film which will also contain a muco-adhesive biopolymer. ODFs will be evaluated for thickness, tensile strength, Young's modulus, percent elongation and dissolution of microparticles.

ODFs containing the measles vaccine will be further tested in pre-clinical mouse model for induction of immune response by determining specific antibody responses.

College of Pharmacy

Synthesis and Characterization of Neuropeptide Loaded Nanoparticles

Presenter: Akanksha Kale

Co-Presenters: Rokon Uz Zaman, Kevin Murnane, & Martin D'Souza

Poster Presentation

Neuropeptide Y is a neurotransmitter with significant role in the pathophysiology of anxiety, depression. It also has antiseizure activity. However, it is a small hydrophilic molecule which can not cross Blood-Brain Barrier (BBB) when administered exogenously. To enable it to cross BBB, we encapsulated it in nanoparticles conjugated to brain targeting ligands such as Transferrin (Tf), Rabies Virus Glycoprotein (RVG).

NPY loaded PLGA nanoparticles were prepared by multiple emulsion solvent evaporation method while NPY loaded BSA nanoparticles were formulated by the nanoprecipitation method. Particles were characterized for size, zeta potential, surface morphology, encapsulation efficiency and release profile. Total amount of Neuropeptide Y released was detected by ELISA. Immunogenicity and cytotoxicity were assessed by nitric oxide and MTT assay respectively. Size of PLGA and BSA nanoparticles ranged between 190-200 nm and zeta potential ranged between -16 to -20 mV. No particles were immunogenic or cytotoxic. The NPY content of PLGA nanoparticles was found to be 78 ± 2.5 % w/w. The NPY content of BSA nanoparticles was found to be 71 ± 2.5 % w/w. PLGA-based nanoparticles released NPY over a period of 23 days while BSA-based nanoparticles released NPY over a period of 20 days in a sustained manner.

NPY loaded Tf or RVG conjugated PLGA and BSA nanoparticles were non-immunogenic, non-cytotoxic and showed sustained release in vitro.

College of Pharmacy

Painless Respiratory Syncytial Virus Transdermal Vaccination

Presenter: Ipshita Menon

Co-Presenters: Sucheta D'Sa, Sang-Moo Kang, & Martin D'Souza

Poster Presentation

Vaccine-enhanced respiratory disease has thwarted attempts to develop a vaccine for Respiratory Syncytial Virus (RSV) using the inactivated form of the virus. The objective of this study therefore was to design a novel vaccine using the fusion (F) protein virus like particle (F-VLP), encapsulated into biodegradable microparticles using a needle free method of vaccination. The F-VLP was incorporated into a biodegradable polymer matrix and spray dried to form microparticles (MP). The in vitro immunity of the F-VLP MP along with adjuvant (adj) monophosphoryl lipid A (MPL) MP was investigated. Subsequently, F-VLP MP+Adj was administered to Swiss Webster mice via the transdermal route using P.L.E.A.S.E laser. The mice were bled at regular intervals to determine immunoglobulin G (IgG). The mice were then challenged with RSV A2 virus and post challenge, the lung viral load was analyzed using an immune plaque assay. Results: The F-VLP MP + Adj stimulated significantly higher nitrite release from RAW 264.7 macrophage cells. The F-VLP MP+Adj also significantly enhanced expression of major histocompatibility factor (MHC) I and II. Serum analysis indicated significantly higher levels of RSV specific IgG levels in the mice immunized with F-VLP MP+Adj. Furthermore, the mice immunized with F-VLP MP+Adj had negligible viral plaques. Thus, the novel F-VLP MP+Adj vaccine, administered transdermally using ablative laser shows promise for a vaccine for RSV.

College of Pharmacy

Exploring 5-HT₂ Receptors as Targets for Treating Epilepsy in Fragile X Syndrome: A Preclinical Study

Presenter: Tanishka Saraf

Co-Presenters: Yiming Chen, Jessica Armstrong, & Clinton Canal

Poster Presentation

Recent clinical data report that serotonin 2C receptor (5-HT₂CR) agonist, lorcaserin, abates seizures in children with Dravet & Lennox-Gastaut syndromes. At high doses it also activates 5-HT₂ARs. This study evaluates the efficacy & possible 5-HT₂AR and/or 5-HT₂CR mechanism(s) of lorcaserin to treat audiogenic seizures (AGS) in juvenile (P23-25) Fmr1 knock-out (KO) mice, a genetic model of fragile X syndrome (FXS). AGS closely models epilepsy seen in 25% of individuals with FXS. FVB mice treated with vehicle (wild-type (WT) & Fmr1 KO mice), 1, 3, 5.6 or 10mg/kg lorcaserin, M100907 (0.03mg/kg) or M100907+5.6mg/kg lorcaserin (Fmr1 KO mice only) are exposed 30min later to a 120dB alarm for 5min. Membranes from brains of juvenile WT & Fmr1 KO mice are collected for saturation binding experiments to determine binding site densities of 5-HT₂ARs & 5-HT₂CRs using [³H]Ketanserin & [³H]Mesulergine, respectively. AGS prevalence in vehicle-treated WT & Fmr1 KO mice was 10% & 75%, respectively. Lorcaserin 3mg/kg decreased AGS prevalence 56% (P=0.31) & lethality caused by AGS by 32% (P=0.059), relative to vehicle. AGS onset latency & duration was unaffected by lorcaserin 3mg/kg, however, it was significantly increased with 5.6mg/kg (P=0.0479). M100907 pretreatment before lorcaserin 5.6mg/kg administration did not affect prevalence, seizure onset latency or seizure duration. Preliminary results from 5-HT₂AR & 5-HT₂CR saturation binding assays suggest decreased expression of both receptors.

College of Pharmacy

Other

Reducing PTSD among African American Women

Presenter: Faiz Syed

Poster Presentation

Posttraumatic stress disorder (PTSD) is a psychiatric condition brought on by a terrifying event with outcomes including increased morbidity, mortality, and a lowered quality of life. PTSD among women ranges from 10-12%; however, its prevalence among African American women is 60%. Despite increased exposure to trauma and risk for PTSD, African American women with PTSD are understudied, underrepresented in treatment populations, and more likely to drop out of treatment. Our research explores the environmental factors, stigma, and lack of integrated care of behavioral health in inner cities that has resulted in this health disparity. The research team at Morehouse School of Medicine has developed an eight-week Goal-Directed Resilience Intervention Training (GRIT). The study will examine the impact of the GRIT intervention on self-report and objective outcome measures relevant to clinical practice (mental health, cardiovascular health, etc). The central hypothesis is that development of resilience skills will promote goal-directed engagement relatedness that will replace stimulus-based symptoms of reactivity and social withdrawal among study participants.

University of Georgia (Undergraduate student)

2020 Monroe F. Swilley, Jr. Library Student Research Award Winners

Between LGBT Youth, Religion, and Suicidal Ideation

Sherry Smith, B.A., Kiristen D. Camper, B.A., and Craig Marker, Ph.D.

Winner:

 Mercer Health
Sciences Center

PRODUCTION

FIGURES AND DATA

DISCUSSION

to the Centers for Disease Control (CDC), in 2016, 20,000 Americans ages 10 or older died by suicide.

Presenter:

College:

Title:

COMMENDATIONS

David Henderson

Tift College of Education

On the Shoulders of Giants: Helping Students Understand Mathematics Through its History.

Runner Up:

Presenter:

Co-Presenters:

College:

Title:

Neha Chitre

Monique Bagwell, Brenda M. Gannon, & Kevin S. Murnane

College of Pharmacy

Assessing the Role of Dopamine in the Differential Neurotoxicity Patterns of Stimulants.



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