

Graduate Student Research & Creative Activity Conference



Monday | May 3, 2021
Southern Connecticut State University

It is our honor as members of the organizing committee to welcome you to the Annual Graduate Student Research and Creative Activity Conference, hosted by Southern Connecticut State University. This event is a celebration of scholarship and creativity in all forms, as well as a showcase for the leading minds of today's graduate community. As an educational institution, Southern seeks to promote interdisciplinary academic careers and both logic and creativity are key components in individual, economic, and societal success. The presentations highlighted in this conference demonstrate the diverse scope of subjects engaged by students from many disciplines as well as illustrating the parallels between them. This conference aims to not only encourage continued work as a community, but also to awaken individual curiosity and purpose. So it is with great pleasure that we present the scholarship and creative activity featured this year, and invite you to join in what promises to be an unparalleled demonstration of graduate accomplishment.

The Graduate Student Research and Creative Activity Conference is proudly sponsored by:

The SCSU Foundation
The Office of the Provost/Vice President of Academic Affairs
Division of Research and Innovation/Office of STEM Innovation and Leadership
Research and Scholarship Advisory Committee
School of Graduate and Professional Studies/Graduate Student Affairs Committee

Conference Committee

Listed in alphabetical order:

Kelly Bordner	Caitlin McLaughlin
Christine Broadbridge	Sean Reilly
Jeremy Chandler	Amy Taylor
Sandip Dutta	C. Michele Thompson
Samantha Hepworth	Bogdan Zamfir
Elliott Horch	Victoria Zigmont



Annual Graduate Research and Creativity Conference

Monday, May 3, 2021 | 5:00 p.m. – 8:00 p.m.

Southern Connecticut State University

4:30 - 5:00 p.m. Welcome to HopIn

5:00 – 5:15 p.m. Opening Remarks

Robert Prezant, Ph.D. | *Provost & Vice President of Academic Affairs, Southern Connecticut State University*

Michele Thompson, Ph.D. | *Prof. of Southeast Asian History & Chair of the Research and Scholarship Advisory Committee*

Samantha Hepworth | *Grants and Events Coordinator, SCSU Office of STEM Innovation and Leadership*

5:15 – 6:00 p.m.
Student Workshops

Articulating the Value of your Research Experience in Professional Interviews.
Integrating Your Research Experience into Your Professional Portfolio and Brand.
Value Proposition-Identifying Value in Research and Innovation

5:15 – 6:00 p.m.
Faculty Workshop

Ten Things Everybody Should Know About Sponsored Research.

6:00 – 7:00 p.m.	Oral Session 1 Room 1 -- Brown Bulls Turner, et al. Caruso & Rhoades Davis Diaz	Oral Session 1 Room 2 -- Dupnik Forchetti Halsey Hansen Hayward Maxwell	Poster Session 1 Room 1 -- Woosley	Poster Session 1 Room 2 -- Felder	Poster Session 1 Room 3 -- Carlson	Poster Session 1 Room 4 -- Yarrish et al.
			Poster Session 2 Room 1 -- Mazurkiewicz	Poster Session 2 Room 2 -- Pecora	Poster Session 2 Room 3 -- Rivers	Poster Session 2 Room 4 -- Nuzzolillo
			Poster Session 3 Room 1 -- Retort	Poster Session 3 Room 2 -- Sutherland & Pham	Poster Session 3 Room 3 -- Kaesmann	Poster Session 3 Room 4 -- Kiehnle-Benitez & Perez
7:00 – 8:00 p.m.	Oral Session 2 Room 1 -- Johnson, et al. Keefe Lewis Klaucke Pfeiffer Rice	Oral Session 2 Room 2 -- St. Juste Talarico Tsisin Meyer Bravo Albee	Poster Session 4 Room 1 -- Shea	Poster Session 4 Room 2 -- Diosa	Poster Session 4 Room 3 -- De Leon	Poster Session 4 Room 4 -- Adams, et al.
			Poster Session 5 Room 1 -- Metzger	Poster Session 5 Room 2 -- Mahama	Poster Session 5 Room 3 -- Sadowski	Poster Session 5 Room 4 -- Electron Microscopy Demo -- Scanley
			Poster Session 6 Room 1 -- Spotkov	Poster Session 6 Room 2 -- Kiszka	Poster Session 6 Room 3 -- Surdam	

5:15 – 6:00 p.m. | Student Workshops

SW1 Articulating the Value of your Research Experience in Professional Interviews.

Rachel Cunningham-Exavier, Assistant Director of Career and Professional Development

Research experiences are valuable professional experiences to companies, organizations, and employers. This session will showcase how to highlight and leverage different components of your research experience within a professional interview for jobs, internships, and graduate school.

SW2 Integrating Your Research Experience into Your Professional Portfolio and Brand.

Aimee O'Shea, Associate Director of Career and Professional Development

As students conclude a research experience, there is often the question of “*what should I do next?*” This session will highlight how students can integrate components of their research experience into more prominent aspects of their professional portfolio and brand.

SW3 Value Proposition-Identifying Value in Research and Innovation

Samantha Hepworth, Grants and Events Coordinator, SCSU Office of STEM Innovation and Leadership

Having trouble talking about your project or idea without getting off topic? Can you communicate your research in layman's terms?

This workshop is designed to introduce students to the concept of the value proposition as well as discuss tools for effective communication of research concepts to stakeholders outside of their specialization.

5:15 – 6:00 p.m. | Faculty Workshop

FW1 Ten Things Everybody Should Know About Sponsored Research.

Moderator: *Amy Taylor, Director Sponsored Programs and Research*

This one-hour session will provide you with an overview of where to find external research funding, what it can be used to accomplish, and how to learn more about the ways your university can help.

O1.1.1 *Education as a Method of Improving African American Patient's Outcomes*

Author(s): Jacqueline Brown

Mentor: Sousan Arafeh, Ph.D

Department: Educational Leadership

Abstract: A prevalent issue impacting African American communities in the United States is health care access and health success. In an effort to improve successful health care, many studies have explored approaches to educate individuals in African American communities. However, despite the research to date, the Centers for Disease and Control (CDC) data show that the health system continues to fail to successfully care for the African American population. Different barriers such as relationships with health care providers, beliefs toward medications, limited funds to access medications and lifestyles that influence health outcomes, keep African American individuals from living healthful lives. Changes in community education models are necessary to reach African American communities and other communities of color. This policy brief will explore current education approaches to improve knowledge within African American communities in regard to taking preventative steps and managing medications.

O1.1.2 *Getting into "Good Trouble" at School: A Call to Action for School Social Workers to Demand the Discipline-Specific Supervision to Which They Are Entitled.*

Author(s): Tanya Bulls

Mentor: Elizabeth Rodriguez-Keys, Ph.D., LCSW

Department: Social Work

Abstract: In the state of Connecticut, the National Association of Social Workers (NASW) and the Connecticut State Department of Education are two interrelated systems with their own ethical standards, practices, and guidelines for supervision during the delivery of social work services in school host settings. Yet there appears a disconnect between systems in the implementation of best practice guidelines: school social workers are faced with competing ideals regarding the process of developing the competency needed to impact positive outcomes for clients. This leads to three resulting problems: decreased professional morale, an underprepared skillset, and children's inadequately addressed needs. The time is now for school social workers to self-advocate both inside and outside of the school walls for the needs of children.

This capstone project will be a webinar presentation serving as a call to action for school social workers to advocate for the discipline-specific clinical supervision that they are entitled to as designated in the Connecticut State Department of Education Practice Guidelines for Delivery of School Social Work Services: Promoting the Social-Emotional Competencies of Students-Linking Families, Schools, and Communities. General systems theory will explain why school social workers are not receiving discipline-specific clinical supervision and describe how this came to be.

O1.1.3 *A mixed methods analysis of language preferences from a sample of opioid using individuals who are not in treatment*

Author(s): Jeffrey Turner, Aukje Lamonica, Christine Unson & Miriam Boeri

Mentor: Aukje Lamonica

Department: Public Health

Funding: This work was supported by a GSGA award

Abstract: Previous literature examining language preferences of opioid-using individuals have been primarily conducted with in-treatment populations with the objective of reducing stigmatization amongst this population. However, to the best of my knowledge, there is little to no research regarding the language preferences of individuals who use opioids and are not in-treatment. Therefore, this study aims to determine what terms or labels users of heroin and prescription painkillers (from here on referred to as opioids) who are not in treatment, use to self-identify and why? This research will focus on determining what terms this population prefers from a defined list of 13 terms (12 closed and one open-ended format). Using a mixed-methods study design, a secondary analysis will be conducted on previously collected data from 150 participants. Using this data, I will add to the existing literature by determining the preferential labels of this hidden population. These data will be used to make recommendations for future research and provide guidance on desirable and undesirable language for health professionals to use when speaking to new patients to promote health and treatment-seeking behaviors.

O1.1.4 *COVID-19 and colligate athletes*

Author(s): Alexandra Caruso & Elizabeth Rhoades

Mentor: Kristie Rupp, PhD, ACSM-CEP

Department: Exercise Science

Abstract: **PURPOSE:** To determine whether the likelihood of having clinically meaningful depression and anxiety differs between collegiate athletes who perceived sport-related changes as one of their top three stressors in comparison to those who did not perceive sport-related changes as one of their top three stressors during the COVID-19 pandemic.

METHODS: Cross-sectional analyses included 157 collegiate (79% Female; 13.4% DI) athletes from universities in Connecticut. Participants completed an online study survey. They were asked about their: (1) perceived top three stressors; (2) demographic information; and (3) psychosocial health (i.e. anxiety, depression, perceived stress, perceived social support, and grit). Separate adjusted binominal logistic regression models assessed the relationship between sport related stressor group (primary analysis) and psychosocial predictors (secondary analyses; stress, grit, and social support) with clinically meaningful anxiety and depression.

RESULTS: Overall, prevalence of clinically meaningful anxiety (38.8% vs. 34.4%) and depression (62.7% vs. 62.2%) was high in both sport-related and non-sport-related stressor groups, respectively. However, there was no association between sport-related stressor group. Higher perceived stress, low grit, and low social support were all significantly associated with the increased likelihood of clinically meaningful depression and anxiety (p 's < 0.05).

CONCLUSIONS: Clinically meaningful anxiety and depression were prevalent among this sample of collegiate athletes during the COVID-19 pandemic with lower perceived stress, higher levels of grit, and high levels of perceived social support reducing risk of having clinically meaningful depression or anxiety during the COVID-19 pandemic.

O1.1.5 *Poetry Manuscript: A Catalogue of Loss*

Author(s): Terri Linn Davis

Mentor: Prof. Jeff Mock

Department: English; Creative Writing

Abstract: This poetry manuscript is my graduate thesis. In this manuscript, I explore the concept of loss through poetry. The etymology of the word “loss,” according to the Oxford English Dictionary, has twenty-two definitions; these definitions—not counting the many ways we define loss individually within our lifetimes—has such breadth, that I became compelled to explore the nuance of loss: loss caught in the act, its aftermath, and the imminent fear of it.

Loss is a theme I express and explore through various poetic forms. Through form, I utilize these aspects of craft to emphasize loss in ways that are unique to each poem.

O1.1.6 *The Ketogenic Diet and Alcohol: Withdrawal, Hangover, Cravings, and Consumption*

Author(s): Deven Diaz

Mentor: Christopher J. Budnick

Department: Psychology

Abstract: Alcohol is a commonly used substance worldwide. Regardless of the intended use, alcohol can potentially engender negative outcomes. These outcomes are commonly experienced the next day (hangover/withdrawal) or relate to the behavior of consumption (cravings). The implementation of a Ketogenic Diet (KD) for alcohol withdrawal is currently undergoing human trials. Research around the topic of how a KD correlates with alcohol use is scarce and requires additional investigation. The purpose of this proposal is to further assess the potential salubrious effect of a KD on alcohol hangover, withdrawal, cravings, and consumption. A quasi-experimental cross-sectional research design was utilized to further analyze this question. Surveys were posted to online forums inviting individuals on a KD and non-KD, who consume alcohol, to complete a series of questionnaires. The results are hypothesized to reveal a KD to correlate with decreased symptoms of alcohol hangover, consumption quantity, and craving in comparison to a non-KD group. Data has been collected and analysis will be run within the next two weeks.

O1.2.1 *Aware: A Cyber Security Awareness Company*

Author(s): Jonathan Dupnik

Mentor: Dr. Mark Pisano

Department: Business Information Systems

Abstract: I will be creating a security awareness company called “Aware”. The idea for this company comes from my current involvement within the security industry. Also, to provide and protect those from Phishing campaigns, ransomware attacks, and other security incidents. I will be providing my customers with the tools and skills to harden their current environments and provide them with the necessary skills to prevent them from falling victim to a cyber threat. Aware will provide security awareness services for individuals, small to medium-sized businesses, and universities. We will have a website with a blog highlighting up-to-date phishing techniques and a newsletter sent to clients if they sign up. We will provide a tier price structure for all groups.

For individuals, we will offer a free tier plan this will include access to our blog and a monthly newsletter. We will also offer a paid plan where they will receive quarterly simulated phishing emails and a whitepaper on how they can keep themselves secure online.

For small to medium-size businesses and universities, we will offer multiple tier plans. Some of the items include phishing exercises, online/in-person training, custom teachable moments informing users how to identify a phishing email, and custom-tailored newsletters based on the industry of the business.

We keep up to date on our social media platforms (Twitter, Instagram, and Facebook). We value our customer's privacy and we will not sell any Personal Identifiable Information (PII) to third-party advertisers.

O1.2.2 *The Importance of Creating Town Commissions for Individuals with Disabilities in Connecticut*

Author(s): Jacqueline Forchetti

Mentor: Sousan Arafeh, Ph.D

Department: Educational Leadership

Abstract: It is important for individuals with disabilities to have equal access to all aspects of the communities in which they live. Not all towns in Connecticut have commissions for individuals with disabilities that exist to ensure that they have equitable opportunities to live an inclusive life. Town commissions are set up so that stakeholders examine all areas of community living and implement necessary supports and actions so that the community considers individuals with all disabilities in their policies and planning. All towns in Connecticut should create town commissions for individuals with disabilities so that their needs are considered and inclusion is possible. This presentation will explore how these town commissions are critical to ensuring that community access and inclusion is possible for individuals with disabilities in all towns across the state of Connecticut.

O1.2.3 *Building Confidence for Caregivers of NAS Infants*

Author(s): Brennah Halsey

Mentor: Prof. Lorrie Greenhouse Gardella, J.D, LMSW, ACSW

Department: Social Work

Abstract: Our country is currently in the midst of an opioid epidemic, and amongst those suffering are pregnant women with substance use disorders. Every 15 minutes, an infant is born suffering from opioid withdrawal. Neonatal abstinence syndrome (NAS) has typically been treated with pharmacologic interventions, however recent research has shown that infants with NAS recover faster and benefit more from non-pharmacologic interventions, such as “cuddling” and rooming-in to breastfeed. Initial evidence from NAS studies that chose a more holistic approach towards intervention support the concept that attachment-based and NAS-specific psychoeducation and caregiver skill training during hospitalization produce better outcomes in infants with NAS compared to pharmacologic interventions alone. Discharge planning and properly equipping caregivers with the right tools to meet the needs of infants with NAS is imperative for their overall long-term wellbeing. This special project will deliver an educational video that provides an overview of what caregivers can expect from their infants with NAS, shows how to soothe and care for the infants when they are in distress, and provides resources for further assistance. It is the hope that with the continuation of research, one of our most vulnerable populations, infants with NAS, will be given a better chance to thrive.

O1.2.4 *A New Absolute Proper Motion Determination of the Milky Way Satellite Leo I*

Author(s): Caitlin Hansen

Mentor: Dana I. Casetti

Department: Physics

Funding: Space Telescope Science Institute - grant # HST-AR 15632

Abstract: The orbits of satellite galaxies of the Milky Way (MW) are critical for understanding the formation, structure, and mass profile of the MW. While the radial velocities of these systems are readily measured, achieving accurate transverse velocities are more difficult due to practical limitations of measuring proper motions. Leo I is a classical dwarf spheroidal satellite galaxy with a poorly measured proper motion due its large distance from the Sun. The first measurement was based on HST ASC/WF3 images separated by ~5 years in time with respect to ~100 stationary background galaxies. Since the second data release of Gaia (DR2), others have used various methods to select high-likelihood member stars of the galaxy in the Gaia catalogue in order to determine its proper motion. These Gaia determinations have larger uncertainties because Leo I stars are in the faint range of Gaia's detection limits where errors are increasing substantially. Furthermore, the discrepancies in the current proper motion measurements indicate a larger uncertainty than desired for an accurate orbit. We present the first absolute proper motion measurement of Leo I that is based on two epochs of Hubble Space Telescope (HST) Wide Field and Planetary Camera 2 (WFPC2) images separated by ~10 years in time. We cross-identify stars in these images with the Gaia early-data release 3 (EDR3) to tie the measurement into an absolute frame of reference. This measurement benefits from a new, improved astrometric calibration of the WFPC2 and has the longest time baseline to date.

O1.2.5 *Empathy: A Framework for Action*

Author(s): Judith Hayward

Mentor: Lorrie G. Gardella, JD, LMSW, ACSW

Department: Social Work

Abstract: Social work calls upon practitioners to use empathy in building and sustaining relationships, interventions, and programs with individuals, groups, and communities. The deliverable of this capstone special project is a workshop for graduate social work students and practitioners that explores empathy as a framework for action. Workshop sessions identify physiological, affective, cognitive, and behavioral dimensions of empathy; consider implications of positive and negative empathy; and introduce the contributions of Martin Buber and Emmanuel Levinas to our understanding of empathy as a call to action.

O1.2.6 *Benefits of a Maker Space in a Library Media Center: The Academic and Curriculum Connection*

Author(s): Deejae Maxwell

Mentor: Dr. Yan Liu

Department: Information and Library Science

Abstract: Maker spaces are a popular area in the field of librarianship but there are challenges to having a successful program in an elementary school. These challenges arise in the forms of education of staff, implementation of curriculum, cost and acquisition of equipment and management of students. A maker space is a frame of mind as much as a physical location. Libraries have always been public spaces where people can study and learn. These days libraries, however, are not only about books. Part of modern learning is the advancement of technology and the role it plays in our daily life. Students enjoy using technology and working with new equipment. Even elementary school libraries can be innovative. The assumption I am making is that many schools will establish maker space programs in the coming years and that it will be done in the best interest of the students. While the maker space concept raises many questions, this study will answer the following questions. A) What role do assessments play in a school maker space? B) Can curriculum and a maker space program work together, remembering that a true maker space is participant driven? C) What support needs to be in place for a cohesive program? This study surveyed school librarians in the state of Connecticut that have maker spaces in their libraries/media centers.

6:00 – 6:19 p.m. | Poster Session 1 – Room 1

- P1.1 *The effects of depth, light, and orientation on the fluorescence of the symbiont *Breviolum psygmophilum* in the *Astrangia poculata**
Author(s): Nicole Woosley
Mentor: Sean Patrick Grace, Ph.D.
Department: Biology
Funding: Werth Center for Coastal and Marine Studies
Abstract: The effects of depth, orientation and light penetration on the photosynthetic ability of zooxanthellae in the temperate coral *Astrangia poculata* (Ellis and Solander 1789) will be examined at Fort Wetherill in Jamestown, Rhode Island where a dense population of colonies exist. A 5m transect line will be laid at depths 2m, 7.5m, 15m and 25m and the photosynthetic activity of the first 9 corals encountered along the line will be determined using a Walz Diving- PAM. The PAM will measure and record values for minimum, maximum, and variable fluorescence on individual coral polyps. Light will be determined near the corals using a Hobo-Temp/Light meter and orientation will be determined using a protractor. The coral examined will be collected, transported back to the lab and tissue examined for the concentration of zooxanthellae with a hemocytometer. The effect of depth, orientation and light will be examined using a 3-factor ANOVA where the independent variables are photosynthetic rate (as determined by the PAM) and concentration of zooxanthellae. The hypothesis of this thesis is that there will be a gradual decrease of photosynthesis with depth increases and orientation changes due to decrease in light levels.

6:00 – 6:19 p.m. | Poster Session 1 – Room 2

- P1.2 *MindBound: Technology on Your side*
Author(s): Robin Felder
Mentor: Emma Junhong Wang, Ph.D., Ph.D.
Department: School of Business
Abstract: It is undoubtedly true that mental health disorders prevail throughout both the GenZ (born between 1997 and 2012) and Millennials (born between 1981 and 1996) in the U.S. at an alarming rate. This is no coincidence, of course, for they are the same generations who consume more digital content than any other. 'Facebook depression' is a term coined to explain the potentially negative impact of social media on young people. They spend hours scrolling through the various social media platforms, only to find themselves out of touch with reality, constantly comparing their lives with the life of others, and just overall not feeling positive about life. Against this backdrop, what I propose is a business that hosts a cross-platform software application that empowers users to put technology on their side and of which the name is MindBound. As a growing body of scientific research links technology misuse with crippling mental health problems, MindBound exists to equip, educate, and encourage positive mental health habits for its users. The most important goal of this business is to change the way people understand their relationship with their personal devices. My business plan includes a thorough market analysis, an overview of the organization structure, a detailed product description including its positioning and targeting strategy, and projected incomes and cash flows for the first 3-5 years.

6:00 – 6:19 p.m. | Poster Session 1 – Room 3

- P1.3 *The Fox is Guarding the Henhouse: Connecticut's Department of Developmental Disabilities needs an independent investigation division.*

Author(s): Robin Carlson

Mentor: Sousan Arafeh, Ph.D

Department: Educational Leadership

Abstract: Individuals served by Connecticut's Department of Developmental Disabilities have intellectual disabilities. It is widely believed this population is vulnerable to maltreatment. Before 2017, an independent state agency was charged with safeguarding and advancing the civil and human rights of people with disabilities in Connecticut -- the Office of Protection and Advocacy (OPA) for Persons with Disabilities. This office was where all allegations were recorded, but it was abolished by Connecticut Law in 2017.

Since 2017, allegations of maltreatment are handled by the Department of Developmental Services (DDS). It is charged with receiving reports and assigning state investigators. These investigators are not only employees of DDS, the process that is currently in place leaves significant room for the loss of information, unreliable information, or incorrect information that can result in maltreatment not being prevented or ceased. All positions, including those receiving the allegations, assigning investigators, developing plans, reviewing plans, and supervising are employed by DDS. This creates a 'fox guarding the henhouse' scenario.

Lacking from data are allegations that are not recorded, how many of the allegations called in are not considered worthy of investigation, as well as the definitions of maltreatment across the service delivery spectrum. Until the Abuse and Neglect division operates independently of the Department, the efforts and results of the current Abuse Investigation Division lack credibility. This policy brief will explore these issues and provide recommendations.

6:00 – 6:19 p.m. | Poster Session 1 – Room 4

- P1.4 *Neurological Overlap Between Visual and Auditory Processing: A Case Study*

Author(s): Caitlin Yarrish, Florette Pursell, Annie Prusak & Jennifer McCullagh

Mentor: Jennifer McCullagh, Au.D., Ph.D.,

Department: Communication Disorders

Funding: GSGA

Abstract: Neurological impairment affecting the visual system may also impact auditory processing mechanisms. This case study is of a child with cortical visual impairment subsequent to perinatal bilateral parieto-occipital infarction. He underwent audiologic and auditory processing evaluations which indicated normal peripheral hearing sensitivity. However, auditory temporal processing skills were below normal limits. Results demonstrate the importance of the central mechanism for accurate processing of auditory stimuli in children with neurological histories and the co-occurrence of auditory and visual cortical processing deficits.

6:20 – 6:39 p.m. | Poster Session 2 – Room 1

P2.1 *COVID-19 Guide*

Author(s): Erika Mazurkiewicz

Mentor: Prof. Amal Abd El-Raouf

Department: Computer Science

Funding: GSGA

Abstract: The impacts of COVID-19 have changed the day to day lives of everyone. Grocery stores, gyms, and restaurants have implemented reduced hours and limited capacities, and hospitals have been overcrowded, leaving many who need medical attention with nowhere to go. This work provides a solution: An Android and web app that serves as an interactive search for hospitals and grocery stores. The apps will rely on Firebase to provide live updates on crowding, distance, and wait times for nearby hospitals and grocery stores. We hope this app will allow users to feel comfortable and safe when deciding the locations to visit.

6:20 – 6:39 p.m. | Poster Session 2 – Room 2

P2.2 *The SAT: Unethical and Unacceptable*

Author(s): Kaitlin Pecora

Mentor: Sousan Arafeh, Ph.D

Department: Educational Leadership

Abstract: Standardized testing has long been used as the determining measure for the success of schools, the growth of students, and the effectiveness of teachers. In 2015, the State of Connecticut was granted a waiver to administer the SAT statewide as its common assessment of all 11th grade students and has remained the standard test in schools across the state since. There has always been controversy and questions around the use and benefits of the SAT. It originated as an aptitude test where scores could be converted into IQ scores. If the SAT is really an IQ test, how can school curriculum and teaching help students improve or change their scores? How can the test reflect student learning when the content is kept guarded by College Board? How are all students able to have a fair chance on the test when classmates are able to buy extra time? How can ELL students be required to take the exam when all test questions and readings are only given in English? Clearly standardized testing is flawed; yet, Connecticut continues to require its schools to administer a test that furthers the achievement gap and racial divide – a disservice to the schools, teachers, and most importantly the students. This policy brief explores issues regarding standardized testing's relation to racial discrimination, the re-segregation of school districts, and the way scores have been, and can be, manipulated by states, districts, schools, and families – typically those with the financial means to do so.

6:20 – 6:39 p.m. | Poster Session 2 – Room 3

P2.3 *Developmental Education: Whose Development Counts?*

Author(s): Yevgeniya Rivers

Mentor: Sousan Arafeh, Ph.D.

Department: Educational Leadership and Policy Studies

Abstract: In higher education, developmental education is a costly and complicated undertaking. Institutions and students shoulder the financial burden in different ways and the costs of delivering instruction far outweigh spending on placement (Rodriguez et al., 2014). In the last two decades, many states – including Connecticut – initiated reforms to transform placement policies and improve completion rates of college-level courses in public two and four-year institutions. Many higher education systems have adopted the multiple measures approach to placing students into or out of remedial classes with some allowing students the final determination (Kosiewicz & Ngo, 2019; Rutschow & Mayer, 2018). Some states mandate, and others recommend, advising in the placement process. Developmental instruction is delivered through modularization, embedded co-requisite models, or traditional multi-course structures and is often supplemented by technology. While some states measure student success in remedial education by participation and passing rates, others look at persistence, transfer from two to four-year colleges, and degree completion. However, the literature rarely acknowledges the role of faculty development in DE reforms, which is ultimately an equity issue. In this policy brief, I will present different methods of placement and instruction while evaluating which system has created the most equitable approach. I conclude with a call to action to emphasize supporting those who support the students.

6:20 – 6:39 p.m. | Poster Session 2 – Room 4

P2.4 *Undergraduate International Students' Experiences with Changing Immigration Policies in the United States*

Author(s): Anita Nuzzolillo

Mentor: Sousan Arafeh, Ph.D.

Department: Educational Leadership and Policy Studies

Abstract: The globalization of higher education in the United States – defined by international student enrollment -- has seen a steady increase in the last decade, except for the 2019 academic year showing the first decline in enrollment of international students. Not only is globalization a diplomatic venture in that students from other countries who come to study in the United States eventually serve as informal ambassadors within and outside of the United States, it is also a prosperous economic investment. While the globalization of higher education is profitable to the host country, the rhetoric surrounding national and institutional policy changes can drastically impact the enrollment and experiences of international students. The current literature on policy rhetoric and international students' experiences reveals higher education institution's lack of attention to the value of internationalization of curriculum and instructional practices over the globalization of international students' cultures, languages, and funds of knowledge to foster a more inclusive and productive learning environment. This research aims to explore the effects of political rhetoric on international students' experiences in the United States and offers suggestions on how to better internationalize our higher education institutions.

6:40 – 6:59 p.m. | Poster Session 3 – Room 1

P3.1 *The Title IX Pendulum: Policy and Politics*

Author(s): Jenna Retort

Mentor: Sousan Arafeh, Ph.D.

Department: Educational Leadership and Policy Studies

Abstract: Despite 30 years of federal policy making, sexual misconduct remains a pervasive issue on college and university campuses. Title IX has been seen as the policy vehicle by which colleges and universities can eliminate sexual violence, but as the political pendulum swings, so swings the pendulum that is Title IX.

Under the Trump Administration, the Department of Education made significant changes to Title IX that required colleges and universities to adopt new Title IX Grievance Procedures, indicating that the previous guidance outlined in the Dear Colleague Letter issued under the Obama Administration failed to uphold the due process rights of students accused of sexual misconduct. However, the new provisions outlined in the Final Rule have created new barriers in identifying and eliminating campus sexual misconduct.

On March 8, 2021, President Joseph R. Biden signed an executive order that instructed the Secretary of Education to review all existing guidance regarding sexual misconduct and suspend, revise, or rescind the Final Rule. As the Title IX pendulum is about to swing again, there is an opportunity for the Department of Education to leverage existing research to improve the rule making process under Title IX. The focus of this policy brief is to offer a review of the literature on campus sexual misconduct and the related legislation, and to provide recommendations for policymakers to develop more equitable student-centered provisions under Title IX that are designed to identify and eliminate campus sexual misconduct.

6:40 – 6:59 p.m. | Poster Session 3 – Room 2

P3.2 *Inspecting K Star Systems for Companion Stars*

Author(s): Victoria Sutherland & Hang Pham

Mentor: Elliott Horch

Department: Physics

Funding: SCSU & NSF (AST-1909560)

Abstract: The goal of this project is to inspect approximately 5000 star systems using high-resolution imaging in order to identify which systems have companion stars. This is part of a larger ongoing effort being completed in collaboration with the Research Consortium on Nearby Stars (RECONS). This project investigates the properties of K Stars, and is known as RECONS K Star project, or RKStars. K Stars are similar to our Sun in important respects, but have a lower mass and are far more common. We describe the goals and motivation for RKStars and focus on the portion of the project being done at SCSU, specifically, the observations taken at the WIYN 3.5m telescope in May of 2013. This sub-sample includes 362 star systems that are suspected to have companion stars. We discuss the image reduction process and show some examples of potentially interesting systems identified through our analysis.

6:40 – 6:59 p.m. | Poster Session 3 – Room 3

P3.3 *Evaluating Treatment Fidelity of the EMPOWERED Dialogic Reading Intervention*

Author(s): Stephanie Kaesmann

Mentor: Cheryl C. Durwin, PhD.

Department: Psychology

Funding: GSGA

Abstract: The SCSU R.E.A.D.S. Lab adapted the evidence-based Dialogic Reading technique to improve reading outcomes of early elementary-aged children from lower socioeconomic backgrounds in the New Haven area. Undergraduate research assistants (RAs) typically implement dialogic reading (DR) when reading individually to students several times a week for six to eight weeks. In DR, RAs use strategies summarized by the acronym, EMPOWERED: Encouraging vocabulary, Make it fun, Prompting frequently, Open-ended questions, Wh-questions, Expanding the child's responses to model more complex language, encouraging Repetition of the expanded responses, Evaluate (i.e., praise and feedback), and Distancing (personal connection questions). This study evaluates the efficacy and consistency of the RAs' usage of the EMPOWERED strategies when implementing DR with kindergarteners from the 2018-2019 school year. Unlike prior treatment fidelity research by Chiaraluce (2018) and Faber (2018) with first and second graders, RAs were more variable in their implementation of DR strategies and inconsistently applied the Wh- question technique. In support of previous research, we found that encouraging repetition was significantly different among the RAs.

6:40 – 6:59 p.m. | Poster Session 3 – Room 4

P3.4 *Direct Air Capture of CO₂*

Author(s): Monica Kiehnle-Benitez & Katherine Perez

Mentor: Thomas Sadowski

Department: Physics

Funding: Werth Family Foundation

Abstract: As we burn fossil fuels, we increase human enhanced greenhouse effects. CO₂ creates a barrier in the atmosphere, allowing the heat that comes from the sun to be trapped within our atmosphere instead of being reflected back into space. This causes global temperatures to increase and climate to change.

In order to prevent further damage to our planet, there have been several efforts to produce less CO₂; however, this has proven to be a challenge—we keep producing more carbon dioxide each year. In order to decrease the amount of CO₂ in the atmosphere, carbon capture technologies are being developed. This idea was first proposed by the IPCC. There are many types of carbon capture technologies, but most can be categorized in two ways depending on the CO₂ source: point sources or distributed sources. Point sources are fossil-fuel power stations and cement plants, among others. Cars, houses and small factories are known as distributed sources. Pre-combustion and post-combustion technologies can only be used in point sources. These technologies have to be placed in specific locations within the plants.

In this study, we will focus on the direct removal of carbon dioxide from the atmosphere—a method known as direct air capture (DAC). Direct air capture is still in its development stages. This technology is being explored and studied because it provides benefits such as flexibility of location and the recovery of the carbon dioxide for later commercial use.

O2.1.1 *Wiser for the Journey: Discovering Awakenings and Catalysts for Transformation through Autoethnographic Stories*

Author(s): Melissa Johnson, Shampa Iftakhar, Luciana McClure & Ursula Pfeiffer

Mentor: Laura Bower-Phipps, PhD.

Department: Women's and Gender Studies

Abstract: Autoethnography has developed as a pedagogical tool and an academic methodology in recent years. Evolving out of personal narrative and testimonials, autoethnography provides a unique opportunity to blend the personal and the scholarly, especially in the Women's and Gender Studies classroom where the personal and the political, theory and practice, regularly combine resulting in a broader understanding of the role lived experiences play in the academy. As social justice writer and poet Levins Morales says about testimonio, "The intellectual traditions...create theory out of shared lives ... [like] open crates and barrels of produce to which the earth still clings" (Sosa-Provencio, et al). This project seeks to utilize collaborative autoethnography as a means of exploring the methodology, ethics, and scholarly potential of this exciting field of study. As graduate students in Southern's WGS Program we responded to a question posed to us: what was our journey to/with research. What resulted was a variety of stories of trauma, triumph, and transformation. And, more significantly, a driving imperative to seek awakenings through feminism and scholarship was revealed. Within this presentation we will identify the catalysts that drive these awakenings, the unique experiences that shape our collective paths toward feminism, and the importance Women's and Gender Studies programs have along these journeys.

O2.1.2 *Wise*

Author(s): Tayler Keefe

Mentor: Lorrie G. Gardella, JD, LMSW, ACSW

Department: Social Work

Abstract: The family system is astounding. Adaptation and resiliency, sustainability and efficiency are all possible with the right supports. However, family systems theory shows that when an any member of the family experiences a change in condition it can have a tremendous impact on the entire family dynamic. When an aging member of the family system is unable to satisfy their role within the home and family unit, the responsibilities need to shift to other members. As other members need to absorb those roles and now take on new roles of caregivers, a disruption within the homeostasis of a family can occur. Because of this, family caregivers face a very unique set of challenges as they take on these new roles and changes within the family system. Over time, this stress can have a major impact on the wellbeing of the family caregiver. Providing family caregivers with resources that align with evidence-based interventions not only helps the caregiver, but also helps sustain the entire family system. Wise was designed to serve as a website for family caregivers that provides access to information and supportive resources that they need. The combination of resources provided on the website allows the viewers to mimic evidence-based interventions that have been shown to decrease stress and increase positive experiences of being a family caregiver.

O2.1.3 *The Use of Mobile Services in Public Libraries Across the Country*

Author(s): Sarah Lewis

Mentor: Dr. Yan Liu

Department: Information and Library Science

Abstract: When the COVID-19 pandemic hit, many businesses scrambled to find ways to stay relevant in a time when people were staying home. Libraries had to evolve as well, and many began to offer curbside services. However, patrons of these libraries needed to continue to be able to connect with their library. Mobile apps, mobile reference services, mobile library catalogs and mobile printing were some of the services that libraries began to offer if they did not already have them. To determine what services libraries in the United States were currently offering, the author surveyed 151 libraries based on circulation, making sure to include at least one library or library system from each state plus Washington DC. The survey included mobile visits, content analysis and librarian survey responses.

The results show that every library surveyed had at least one mobile website, mobile catalog, mobile app or website optimized for a mobile device. The libraries have added services as a result of the COVID-19 pandemic in order to further connect with their patrons. The mobile presence of libraries today is growing and now includes mobile printing, access to mobile databases, ability to make mobile reservations and connect with a librarian – all from the comfort and safety of their home.

O2.1.4 *A Three Telescope Intensity Interferometry Simulation*

Author(s): Paul Klaucke

Mentor: Elliott Horsch

Department: Physics

Funding: NSF (AST-1909582)

Abstract: At Southern Connecticut State University we are in the unique position of having a highly portable, custom made, three telescope intensity interferometer. The Southern Connecticut Stellar Interferometer (SCSI) is unlike other astronomical imaging facilities, because instead of collecting source images, it measures photon arrivals with picosecond time resolution. By correlating the photon arrival times between more than one telescope, one can measure the diameters of bright stars from the SCSI campus. Recently, we upgraded the SCSI instrument and added a third telescope. Recent papers indicate that incorporating a third telescope may now give us the ability to reconstruct images of a source. To capitalize on this exciting opportunity, we have developed a simulation to model three-telescope intensity interferometry experiments and investigate the capabilities of the SCSI. The simulation discussed here takes a brightness distribution (e.g. a stellar disk), various observational parameters such as filter center wavelength and width, detector dead-time, and telescope coordinates as arguments and then generates photon arrival channels for three “telescopes.” By cross- and triple-correlating the photon arrivals, full Fourier components of the source can be measured. Since the simulation accounts for the main parameters that affect the uncertainty of correlation values, it is particularly useful for investigating ways to improve the efficiency of doing intensity interferometry with the SCSI. Most importantly, this simulation lays the groundwork for determining whether source phase recovery using three telescopes, which is needed for true source image reconstruction, is feasible with the SCSI in its present state.

O2.1.5 *Unleashed and the Theory of Epicenters of Hegemony*

Author(s): Ursula Pfeiffer

Mentor: KC Councilor

Department: Communication Media and Screen Studies

Abstract: “For it is impossible to name and act against oppression if there are no nameable oppressors” -Mary Daly, *Quintessential* (1998).

Naming is essential to understanding and, as such, the first step towards deliberate and conscious action. Misnaming truncates understanding and agency, it hides and camouflages reality, and leaves the individual with the uneasy feeling of fragmentation that stems from the chasm between perception and the socially established untruth.

Unleashed and the Theory of Epicenters of Hegemony is an attempt to name, describe, and consequently reveal the underlying social system that gives way to the many embodiments of human civilization, and which I propose has resource allocation as its main goal. The topic is approached from an interdisciplinary perspective, borrowing connecting and reinterpreting concepts from philosophy, semiotics, individual and social psychology, anthropology, sociology, economy, history, and Theory of Mind; and, by exploring intra and intergroup processes, dynamics, and relations as they reflect the underlying system’s use of categorization and hierarchy as means of control, perpetuation, and of establishing social structure, entitlement, and marginalization.

Furthermore, *Unleashed* offers a space for reimagining new possibilities of coexistence for humans and the many species with whom we share this planet, and proposes that the biggest hope towards a more inclusive and collaborative system are the individuals who negate or elude categorization and whose sole existence is dissidence.

O2.1.6 *Policy Brief: Raising awareness of the pluralistic nature of the concept of resilience and the impact the definition can have on educational policy outcomes.*

Author(s): William Rice

Mentor: Sousan Arafeh, Ph.D

Department: Educational Leadership

Abstract: Natural and social scientists have defined resilience in several different ways. A consistent definition of resilience identified in the research defines resilience as the successful adaptation despite challenging or threatening circumstances (Masten, 1994). Others define resilience as the ability to maintain or quickly return to the status quo after a significant disruption to the system (Hollings, 1973). In contrast, another defines resilience as a self-governance method used by the dominant groups to maintain the conditions that make adaptation necessary for marginalized groups (Humbert & Joseph, 2019). The policymakers' definition will determine whether resilience is viewed as a badge of honor or a scarlet letter. This policy brief brings awareness to the pluralistic nature of resilience in the literature and discusses potential educational policy implications. Hopefully, this policy brief will encourage policymakers to think about whether the policies implemented to foster resilience promote the system's transformation rather than adaptation by the subjects.

O2.2.1 *Exploring Youth Development: A Bilingual Youth Fair for a Haitian Church Community*

Author(s): Sabrina St. Juste

Mentor: Lorrie G. Gardella, JD, LMSW, ACSW

Department: Social Work

Abstract: Ephraim SDA Church in Bridgeport, Connecticut, serves a Haitian congregation, many of whom speak Creole as their primary language. Families in the congregation live in neighborhoods where youth are at risk for adverse traumatic experiences and for involvement or recidivism in the justice system. The purpose of this special project is to introduce parents and youth in the church to local youth development programs that promote hope, resiliency, and post traumatic growth among vulnerable youth. A bilingual virtual youth fair, organized in collaboration with church leaders, will introduce parents and youth to youth development programs in the local community.

O2.2.2 *Images of Childhood in Italian Cinema*

Author(s): Nicholas Talarico

Mentor: Erin Larkin, Ph. D. (Associate Professor of Italian, WLL)

Department: World Languages and Literature

Abstract: From the origins of Italian cinema, the figure of the child and childhood has been central. This project will take as point of departure the symbolism of the child and childhood in Italian Neorealism, through analysis of literary and cinematic texts, as well as the dialogue between them. From this focus on Italian Neorealism, the project will expand in scope to examine these images' origins from the silent film era and work all the way up to work of today. This project will specifically examine the significance of the child as protagonist in Italian film history, as silent witness and thus functioning as critique of not only the social reality embodied on screen but also the real-world context that it reflects.

O2.2.3 *Project Based Learning for Adults*

Author(s): Julia Tsisin

Mentor: Professor Jesse Gleason

Department: Bilingual Ed & TESOL

Abstract: While examining various learning theories, it became necessary to consider dichotomy between pedagogy and andragogy by way of highlighting learning theories that underpin PBL. The paper shows how various skills are transferable from PBL, and summarizes numerous benefits of PBL in the context of adult ESL/EFL classrooms. By providing opportunities for students to interact with speakers of the target language, whether it is through work placement, or volunteering opportunities. These studies have shown very positive outcomes for students language learning, as well as their personal and psychological growth. Another area prospering from the use of PBL is in technology and media for language learning. Studies such as those by Robb, Fang and Warschauer can provide us with an understanding of the students' benefits when using the Internet in a project-based approach. Therefore, the paper proposes implementation of project based learning in ensuring pedagogical relevance and andragogic effectiveness among higher education providers. Specifically, considering adults, in what ways can teachers develop comprehensive lesson plans that draw upon adults prior knowledge, life experiences, and motivation? Is project-based education a viable approach and how can it be used with adults ELLs? Specifically, how can teachers in adults ESL programs use project -based learning with their adult learners at varying levels of English proficiency?

O2.2.4 *Supporting College Students: The Forgotten Faces of Food Insecurity*

Author(s): Kelli Meyer

Mentor: Sousan Arafeh, Ph.D

Department: Educational Leadership and Policy Studies

Abstract: The demographics of college students have changed dramatically in the last 40 years. With an increase in low-income students, first-generation students, and students of color, the ways in which college students are supported need to change. Studies report that an average of 39% of college students are food insecure, with an even larger number in the “at-risk” category. With the rising cost of tuition, financial aid being insufficient to cover costs, and many students funding their education independently; students are often faced with the stress of not knowing where their next meal is coming from. Though the need exists, access to public benefits is extremely limited for college students. This policy brief will explore the ways in which institutional and state policies can be changed to increase college students’ access to public benefits like the Supplemental Nutrition Assistance Program (SNAP, formerly known as food stamps). We will also discuss ways in which the financial aid system can hurt students more than it helps.

O2.2.5 *Developing a Culturally Sensitive Parent Education and Counseling Program for Hispanic Families with School-age Children who Stutter*

Author(s): Nelson Bravo

Mentor: Professor Sujini Ramachandar

Department: Communication Disorders

Abstract: Approximately 1% of the world’s population stutters and 5% of children experience a period of stuttering in their life. Stuttering disrupts the flow of speech, and it is characterized by blocks (i.e., I wan---ted to go), prolongations (i.e., pencccil) and/or repetitions of sounds or syllables (i.e., sto-to-to-top). While persistent stuttering in adults has been studied extensively, research on childhood stuttering remains a work in progress. Stuttering adversely impacts the lives of people who stutter as chronic stuttering leads to the development of negative attitudes in self-identity, low self-esteem, and anxiety. Therefore, counseling and educational programs for speech and language disorders must be individualized to take into consideration different cultural factors that play a fundamental role inside a family system. The proposed program aims at providing effective and culturally sensitive parent education and counseling to Hispanic families by incorporating core cultural values found in the Hispanic community. This program will support the communication ability of Hispanic children who stutter through an improved parent-child relationship generating greater acceptance for stuttering in the family system. To achieve this, the program will incorporate an evidence-based component utilizing different educational and counseling techniques to effectively support children parents’ understanding of stuttering in a culturally sensitive and affirming manner.

O2.2.6 *There but For the Grace of God Go We: Stories of Resilience and Hope Told by the Mothers Who Are Survived by Their Child’s Suicide*

Author(s): Laura Jane Albee

Mentor: Julie Marie Piepenbring, Ph.D., LCSW

Department: Social Work

Abstract: There is much to be learned about the grief process and moreover, the phenomenon of how grief may transcend to post traumatic growth. In particular, assisting those who have lost a loved one to a suicide. Given the overwhelming prevalence of suicide it is imperative that the personal narratives of those mothers who are survived by their child’s suicide be explored. Hence, using a qualitative research design, this narrative analysis examined the private, interpersonal, and somatic toll of 13 mothers who endured the unimaginable. The purposive sample participated in a 60-minute semi-structured interview that was later transcribed, coded, and thematically analyzed. Participants recounted the wake and aftermath associated with their child’s suicide and the positive and negative psychosocial factors that both impeded and propelled them towards post traumatic growth. Their combined narratives suggested that is through the oscillation of grief and its circumstances that a mother is able to transcend her sorrow to a state of resiliency and renewed purpose that embraces continuing bonds while severing intrinsic guilt and self-blame.

7:00 – 7:19 p.m. | Poster Session 4 – Room 1

P4.1 *A Search for Wide Companions of Nearby K-Dwarf Stars*

Author(s): Melissa Shea

Mentor: Elliott Horch

Department: Physics

Funding: NSF

Abstract: Results from the Gaia satellite provide a new way to obtain a comprehensive assessment of local stellar populations, including, for example, a determination of how frequently nearby stars have an orbiting companion star. The RECONS K Stars (RKStars) project aims to remedy this by examining the multiplicity of 5,043 K dwarfs within 50 parsecs of our solar system. Three surveys (Wide Field, Speckle, and Radial Velocity) will detect stellar and planetary companions to K dwarfs at separations of 0.1 to 1000 times the Earth-Sun distance. This poster will detail the Wide Field portion using Gaia's Data Release 2 to assemble a list of stellar companion candidates at separations larger than 1 arcsecond from their primary star. These are then cross-referenced with the Washington Double Star Catalogue, which is the most comprehensive catalog of known double stars. By combining the two data sets, there is the possibility of finding binary and multiple star systems that have yet to be recognized. Preliminary findings of this cross-catalogue comparison will be presented. Knowledge of these newly recognized star systems combined with those that are previously known will be crucial in future exoplanet surveys and will serve to inform theories on stellar and planetary formation.

7:00 – 7:19 p.m. | Poster Session 4 – Room 2

P4.2 *Machos o Caballeros?*

Author(s): David Diosa

Mentor: Dr. Gayle R. Bessenoff

Department: Psychology

Abstract: The purpose of the proposed study is to explore the relationships among marianismo, machismo, and acculturation in Latin women in the US. It is expected that increased acculturation into US culture will be associated with less adherence to traditional female gender roles in Latin women (marianismo), which may then predict lower levels of endorsement of machismo. The results of this analysis may add to the body of research that address the nuances of Latin gender roles as they evolve and perpetuate in modern culture. Prior research largely ignores the perspective of women in traditional Latin gender roles, even outside the context of acculturation.

7:00 – 7:19 p.m. | Poster Session 4 – Room 3

P4.3 *Reducing Unintended Pregnancy- An Assessment of Contraception Awareness and Knowledge in College Students*

Author(s): Breanna De Leon

Mentor: Marian Evans, MD, MPH, CRA

Department: Public Health

Abstract: Background: Unintended pregnancy continues to be a public health concern across the nation. National data demonstrates the highest rates of unintended pregnancy occurs in women who are 18 to 24 years old. Providing practical and meaningful health education about contraception has potential to reduce unintended pregnancy and improve quality of life for young adults.

Methods: Convenience sampling was used with a custom survey conducted in Women's Health classes from 2015-2021. Surveys contained questions about demographic characteristics, knowledge of contraception options, sources of knowledge, stress levels, and confidence in knowledge. Students completed a pretest, received a comprehensive contraception health education lecture, and completed a post-test. Data collection was approved by the university's IRB, and analyses were conducted using SPSS Version 27.

Results: Demographic data indicated respondents were primarily female, single, Caucasian or Black/African American, and junior or senior undergraduate students. Assessments highlighted gaps in both contraception awareness and knowledge which improved with knowledge.

Conclusion: At a time when reproductive freedom, choice, and justice is scrutinized and suppressed, it is imperative that young adults maintain and understand the importance of having control over when, where, and how they decide to have children if they desire to do so. While both awareness and knowledge increased, there is a need for continued health education and appropriate resources at a university level. The use of assessments, building trusted professor-student relationships, and exploring credible and reliable information sources can be used to reduce the number of unintended pregnancies for college-aged students.

7:00 – 7:19 p.m. | Poster Session 4 – Room 4

P4.4 *Prevalence and Predicting Factors of Pre-Treatment Dysphagia in Veterans with Head and Neck Cancer*

Author(s): Katherine Adams, Lauren Romanelli, M.S., CCC-SLP, Nwanmegha Young, M.D., & Jingyuan Xiao, MPH

Mentor: Heather Warner, PhD., CCC-SLP

Department: Communication Disorders

Funding: GSAC

Abstract: Dysphagia is a common sequelae of the diagnosis of head and neck cancer. However, the prevalence and predicting factors for pre-treatment dysphagia have not been well identified in the literature (Starmer, Gourin, Lua & Burkhead, 2011; Wotherspoon, Kanatas, & Rogers, 2018). The ability to predict pre-treatment dysphagia in this population would allow more targeted intervention and potential improvements in clinical outcomes. This study utilized a quasi-experimental, single-group design to investigate the prevalence and predicting factors of pre-treatment dysphagia in 41 veterans with head and neck cancer through the West Haven, CT Veterans Affairs cancer database via retrospective chart review. Candidates for review were those who received an objective swallowing evaluation prior to cancer treatment. Our results indicate that the prevalence of pre-treatment dysphagia in our sample was 53.66%. Findings of this data also identify several clinical factors such as age, dysphagia severity ratings, functional swallow status and pre-treatment, patient-reported pain, that have a statistically significant association with dysphagia outcomes. Findings offer important preliminary data about this clinical issue, and serve as a foundation for future research.

7:20 – 7:39 p.m. | Poster Session 5 – Room 1

P5.1 *Parental Support for Loved Ones*

Author(s): Mary Metzger

Mentor: Lorrie G. Gardella, JD, LMSW, ACSW

Department: Social Work

Abstract: Discovering that a child has a substance use disorder can be overwhelming for parents and leave them feeling lost or unsure of how to help the child recover. There are many negative effects that substance use has on the family unit as a whole. Parents may feel betrayal and loss of trust with their child, siblings may feel anger and resentment for the child who is using substances, and the family may become isolated from outsiders. As a result, parents and family members need support and self-care during the time that their child is using and getting sober. Self-care is crucial when handling the stress of a loved one who is using.

7:20 – 7:39 p.m. | Poster Session 5 – Room 2

P5.2 *Exploring the impact of biopsychosocial factors on subjective well-being*

Author(s): Fatawu Mahama

Mentor: Professor Christine Unson

Department: Public Health

Abstract: Purpose: The study compared the effects of biomedical, psychological, and social factors on eudaimonic, evaluative, and affective well-being (WB). Little research demonstrating the relative effects of these biopsychosocial factors on WB has been conducted.

Method: A subsample (n=1764) of the Everyday Life and Well-being Survey of the Health and Retirement Study (HRS) was utilized. Respondents had to be 50+ years old. Data were analyzed with the general linear model in the SPSS complex sampling design module.

Results: The sample was mostly female (61.60%), White (89.40%), averaged 60.23 years of age, 12.72(0.11) years of education, and 2.89/0.03 chronic diseases. The mean (SE) scores of perceived aging satisfaction, perceived mastery, loneliness, and years of education were associated with eudaimonic well-being. Age, chronic disease, perceived age, perceived aging satisfaction, loneliness, financial security, neighborhood social cohesion, and positive support were associated with evaluative well-being. Depression, perceived aging satisfaction, perceived mastery, loneliness, and neighborhood social cohesion were associated with positive affective well-being.

Discussion/Conclusion: More psychological factors and sociological factors, were associated with the three types of well-being than biomedical factors. Perceived aging satisfaction and loneliness were significant across all three types; whereas neighborhood social cohesion was across two types. The findings point to increasing the importance of psychological and sociological factors in designing public health interventions.

7:20 – 7:39 p.m. | Poster Session 5 – Room 3

P5.3 *Microscopy of Metal Nanowires Formed Via Thermomechanical Nanomolding*

Author(s): Carey Ciaburri

Mentor: Thomas Sadowski

Department: Physics

Funding: Werth Family Foundation

Abstract: Previous techniques have shown that metal is not a suitable material used for molding, especially in the field of fabricating metallic nanowires. A recent unexpected discovery made by Dr. Jan Schroers's Lab located at Yale University, has transformed this idea through thermomechanical nanomolding with crystalline metals (TMNM with CM's). TMNM with CM's is a diffusion driven mechanism allowing for the potential of uniform arrays of metallic nanowires to be synthesized. The relationship between the diameter of the nanowire and the temperature in which it formed is of particular interest as to why the nanowires are consisting of varying lengths and distributions throughout the samples. The position of the nanowires on the wafer of the sample is also being considered as a fundamental role in uniformity. In a collaborative effort with Dr. Jan Schroers's Lab, conditions in which the nanowires are formed were analyzed using a Scanning Electron Microscope (SEM) housed in the CSCU Center of Nanotechnology at Southern Connecticut State University. Each sample was imaged at 0° and 30° angles for the purposes of observing nanowire distributions across a sample and for imaging nanowires from root to tip. From this information, the lengths of the nanowires can be quantified and the ability to fabricate perfect uniform single crystal arrays of nanowires is potentially obtainable. Although significant discoveries and progress have been made thus far, additional research will play a key role in the improvement and advancement of this new technique.

7:20 – 7:39 p.m. | Poster Session 5 – Room 4

P5.4 *Electron Microscopy in the Center for Nanotechnology*

Author(s): Jules Scanley, M.D., Ph.D.

Department: Center for Nanotechnology

Abstract: The Center for Nanotechnology which is on the lower level of the new science building has two electron microscopes. These microscopes are used to visualize things as small as ~ 1 nm for the transmission electron microscope and ~ 10 nm for the scanning electron microscope. We collaborate with students and faculty from biology, chemistry, earth sciences and physics on a wide variety of research projects. This demo will highlight the scanning electron microscope and several of the projects that have been done with this instrument.

7:40 – 8:00 p.m. | Poster Session 6 – Room 1

P6.1 *Exploring Factors Contributing to the Opportunity and Achievement Gaps*

Author(s): Lauren Spotkov

Mentor: Sousan Arafeh, Ph.D.

Department: Educational Leadership

Abstract: The current model of education from Kindergarten to grade 12 showcases an undeniable gap of opportunity. The opportunity gap, a disparity in the inputs to student's lives and education, often results in an achievement gap where there is not only a substantial difference between the achievement scores of certain groups of students, but a large differential effect on their careers and lives. Many researchers attribute the opportunity and achievement gaps to organizations' and education institutions' structures, not just individual knowledge, skill, or achievement. School policies and organizational structure are examined as part of this research to highlight the many demographic, geographic, economic, and other factors that play a role in creating opportunity and achievement gaps. This research aims to identify and explain factors that contribute to opportunity and achievement gaps and explores how they can be reduced through structure and policy to make certain that all students are valued and successful in today's society.

7:40 – 8:00 p.m. | Poster Session 6 – Room 2

P6.2 *Do the 100 most visited public libraries in the United States have accessible website homepages?*

Author(s): Victoria Kiszka

Mentor: Dr. Yan Liu

Department: Information and Library Science

Abstract: Public libraries have been slowly integrating more of their services to an online format while still offering them online. This has been more prevalent and widespread since the Covid pandemic started in early 2020. Patrons of all ages are using technology from smartphones to tablets to desktop computers to access the world, now more than ever before. This shift has led to a number of challenges that librarians need to keep in mind while maintaining their websites and migrating programs online. One of these challenges is creating accessible content online. All libraries have a legal responsibility to make their website as accessible as possible to be in compliance with the American Disabilities Act (ADA). This study discusses the 100 most visited public libraries in the United States' homepages and evaluates if they are ADA compliant and accessible.

7:40 – 8:00 p.m. | Poster Session 6 – Room 3

P6.3 *In What Ways Does Hope Influence Individuals with Trauma Histories?*

Author(s): Jennifer Surdam

Mentor: Jemel P. Aguilar, PhD, LCSW

Department: Social Work

Abstract: It is common for clients to come to therapy in “pain and distress, usually feeling very discouraged, isolated and lacking in confidence” (Larsen ET SAL, 2020, p408). Despair is defined as “the complete loss of absence of hope” (Hawkins & Allen, 1991, p392 in Jenmorri, 2006). Children that experience trauma for instance can alter how they view and trust the world around them as well as a change in secure attachments (Jennmorri, 2006). In addition, trauma can transform into post-traumatic stress disorder (Jennmorri, 2006).

It has been of interest through my college career to study how hope affects individuals that have experienced trauma. How does one gain hope? how does one keep hope? If one loses hope, is it possible can they acquire it and if so how?

It is evident that hope is a key element in psychotherapy. However, what does hope to look like for individuals that have been through traumas such as child abuse, addiction, displacement or even when the therapeutic alliance becomes breached. In what ways does hope influence individuals with trauma histories?

7:40 – 8:00 p.m. | Poster Session 6 – Room 4

P6.4 *Electron Microscopy in the Center for Nanotechnology*

Author(s): Jules Scanley, M.D., Ph.D.

Department: Center for Nanotechnology

Abstract: The Center for Nanotechnology which is on the lower level of the new science building has two electron microscopes. These microscopes are used to visualize things as small as ~ 1 nm for the transmission electron microscope and ~ 10 nm for the scanning electron microscope. We collaborate with students and faculty from biology, chemistry, earth sciences and physics on a wide variety of research projects. This demo will highlight the scanning electron microscope and several of the projects that have been done with this instrument.

