

Wednesday, August 27, 2025

Graduate Student Poster Session and Networking

11:00 a.m. – 1:00 p.m.

Terrace Room

Graduate Poster 1 - **Navigating the Storm: From Crisis to Confidence**

Kailee Peterson - Graduate student, Department of Special Education, Rehabilitation, and Counseling, College of Education

Juana Lyles - Graduate student, Department of Special Education, Rehabilitation, and Counseling, College of Education

Crisis is a when, not if, situation. Crisis is any event where balance is disrupted and can show up in many forms. Especially for those involved in outreach and engagement, crisis can be a daunting reality that is not talked about or prepared for enough. These crisis scenarios are not planned, but plans can be made to encounter crisis effectively. This poster presentation gives some strategies to prepare for a crisis, navigate the storm, and debrief afterwards. No matter what your place is in the community, you can benefit from a greater understanding of how to "navigate the storm."

Graduate Poster 02 - **Auburn University CARTT Community Engagement and Family Support Project**

Caroline Glahn – Graduate student, Department of Psychological Sciences, College of Liberal Arts

Madeleine Levin - Faculty, Department of Psychological Sciences, College of Liberal Arts

Dr. Sarah Richling – Faculty, Department of Psychological Sciences, College of Liberal Arts

The aim of this project is to expand the scope of the services provided to the families of individuals diagnosed with autism or other related disorders at Auburn University Center for Autism, Treatment and Training (CARTT). This grant serves to provide social skills training utilizing evidence-based behavioral strategies for individuals and families to promote the development of self-regulation of children and the reduction in stress of caregivers. The overall objectives of this project are to 1) provide opportunities for family support via a licensed independent clinical social worker with interdisciplinary training in behavior analysis; 2) to provide group intervention for youth with autism and other related disorders; 3) to enhance and develop the clinical skills of graduate and undergraduate clinicians in the Behavior Analysis program to expand the level of accessibility of applied behavior analysis (ABA) in Alabama. This project will assess success and overall outcomes through the collection of pre- and post-intervention quantitative and qualitative data for individuals, groups and families to examine the effectiveness of the project and develop recommendations and applications for future interventions and research to continue to support the mission of the university and department.

Graduate Poster 3 - **Wish List Solutions: Addressing Food Insecurity by Connecting Anonymous Demand with Supply**

Madison Edwards - Graduate student, Department of Supply Chain Management, Harbert College of Business

In this study, we describe how internet communities are helping food-insecure people in a dignified and confidential way. In our case study, we analyzed 368 Reddit posts, collected over six years, to understand how people request and are given food through anonymous e-commerce wish lists. Unlike traditional food banks, online communities offer resilient and non-judgmental help. Through thematic analysis, we found that the subreddit fosters a sense of shared identity and concern. Donors give freely and without expectations of reciprocation. The anonymity and compassion expressed there provided by the platform allow individuals to request assistance without shame. Using common platforms like Amazon, this community has reimagined food aid to be discreet, rapid and respectful. This research highlights the potential of digital platforms to meet fundamental human needs without compromising individual autonomy and dignity.

Graduate Poster 04 - **Influence of Pedestrian Behavior on the Compliance of Drivers at Uncontrolled Midblock Crosswalks**

Md Roknuzzaman - Graduate student, Department of Civil and Environmental Engineering, Samuel Ginn College of Engineering

NsongErnest Asiedu - Graduate student, Department of Civil and Environmental Engineering, Samuel Ginn College of Engineering

Pedestrian crossing safety is a critical global concern, accounting for 23% of all traffic-related fatalities. Factors such as misjudging vehicle speeds, improper looking behavior, and reluctance to use pedestrian facilities contribute significantly to pedestrian crashes, particularly at uncontrolled crosswalks where motorists often fail to yield. This study aims to establish a framework linking driver compliance with pedestrian sight distance, looking behavior, waiting time and facility usage at uncontrolled crosswalks through a before-and-after analysis. The research will focus on two Auburn crosswalks - one equipped with a Rectangular Rapid Flashing Beacon (RRFB) and another with only a painted crosswalk. In the before phase (4 months), video footage will capture existing pedestrian behavior and driver yielding rates. Following this, an awareness campaign will educate pedestrians on the importance of sight distance, minimum wait time, proper looking behavior and facility usage. The campaign will utilize interactive banners, graphic panels and QR codes displaying real-time usage and compliance data. The after phase (4 months) will involve post-campaign data collection through video recordings to assess changes in pedestrian behavior and driver compliance. A statistical model will be developed to examine the relationship between driver compliance and pedestrian attributes. Additionally, the study will evaluate the effectiveness of the awareness campaign in improving crosswalk safety by increasing driver yielding rates.

Graduate Poster 05 - The Self as a Protector: Exploring Help-seeking for Mental Health Disorders in Ghana

Nana Adjoa Konadu Attiah - Graduate student, Department of Human Development and Family Science, College of Human Sciences

While different factors have been found to impact help-seeking for mental disorders globally, the impact of certain psychological variables on mental health help-seeking has not been adequately understood. Specifically, the predictive potential of self-compassion and self-efficacy on mental health help-seeking remains insufficiently explored in sub-Saharan Africa. Both constructs are significant to Western self-perception; nonetheless, their conceptual and statistical interaction in a sub-Saharan African context, which varies in interdependence and biopsychosocial approaches to mental illness, remains under-researched (Adu et al., 2021). As Western countries seek evidence-based biopsychosocial approaches to seeking help for mental disorders, African societies like Ghana endorse faith-based and close relations predominantly (Adu et al., 2023; Nyame et al., 2021). Thus, the present study focused on Ghanaians' intentions and initiative for seeking help from mental health professionals and close relations (friends, significant other, or family members) while considering self-compassion and self-efficacy as predictive and moderating factors. Using a survey, 411 Ghanaians completed measures of self-compassion, general self-efficacy, and mental help seeking intention after reading vignettes of generalized anxiety disorder (GAD) and depression. Data was analyzed in Statistical Package for the Social Sciences (SPSS) v27 using bivariate correlation, hierarchical multiple regression, dependent sample t-test and moderation analysis. The findings revealed that self-compassion and self-efficacy were positively correlated with professional help-seeking for GAD and depression. Additionally, self-compassion predicted professional help-seeking for both GAD and depression, whereas self-efficacy predicted only help-seeking for depression. Self-efficacy moderated the link between self-compassion and professional help-seeking for GAD. Results also revealed that Ghanaians prefer to seek help from mental health professionals for depression in comparison to close relations. The findings of this study highlight the need for mental health professionals to include self-compassion and self-efficacy building techniques in their interventions targeted at tackling GAD and depression. Consequently, enhancing self-compassion and self-efficacy could help understand and promote professional help-seeking for GAD and depression.

Graduate Poster 06 - Assessing Impacts of Particulate Matter (PM2.5) Emission Regulation Changes in Forest Industries of Alabama, USA

Manisha Subedi - Graduate student, College of Forestry, Wildlife and Environment

Alabama, renowned for its extensive forest area and leading forest industries, significantly contributes to the nation's economy - ranking first in loblolly pine stock volume, second in pulp and paper production, and sixth in lumber and panel industries. The recently revised primary annual fine particulate matter (PM2.5) standard from 12.0 $\mu\text{g}/\text{m}^3$ to 9.0 $\mu\text{g}/\text{m}^3$ by the U.S.

Environmental Protection Agency (EPA) is expected to present challenges for Alabama's forest industries, particularly in rural areas. This study aims to understand perceptions and investigates the economic, environmental, and operational impacts of the revised PM2.5 regulations on sawmills, pulp and paper industries in Alabama. Primary data collection involves focus group discussions with industry and policy maker representatives, and surveys with industry people and landowners to gather data on their perceptions, anticipated impacts, and adaptive strategies. Primary industries (sawmills and pulp and paper mills) will be selected from the online-based Alabama Forest Industry Directory, and total enumeration will be done. The qualitative and statistical test data will be analyzed using MAXQDA and R software. Secondary data will be supplemented through government documents, reports, journal articles, and extensive literature reviews to support the primary data. Funded by the USDA-NIFA, this research spans two years, and the results will be disseminated through reports, presentations, thesis and peer-reviewed publications. The findings of the research will support informed decision-making and strategies for balancing regulatory policies with broader implications for Alabama's forest industry, ultimately fostering a healthier population, a resilient environment, and a thriving economy in rural communities.

Graduate Poster 07 - Open Databases and Misinterpretation: Balancing Access and Accuracy in the Age of Information/Digital World

Brianna Crumly-Goodwin - Graduate student, Department of Human Development and Family Science, College of Human Sciences

Dr. Adrienne Duke-Marks - Faculty, Department of Human Development and Family Science, College of Human Sciences

Sandra Anti Eyiah - Graduate student, Department of Human Development and Family Science, College of Human Sciences

Angela Mintah - Graduate student, Department of Human Development and Family Science, College of Human Sciences

Nana Adjoa Konadu Attiah - Graduate student, Department of Human Development and Family Science, College of Human Sciences

Open access databases and dashboards have been on the rise in the U.S. for nearly two decades. These resources are lauded as advancing data transparency and increasing community engagement. However, this accessibility also raises important considerations, as different users may draw varied conclusions based on their perspectives, prior knowledge or biases. Specifically, there are calls for concern regarding misinterpretation given a low level of data literacy in the general public. Data literacy refers to both the skills and the mindset needed for an individual to find insights and draw meaningful conclusions from data (Hanegan, n.d). Skills include an individual's ability to read, analyze, interpret and communicate the data in an effective manner, while the mindset focuses on the ability of individuals to take a critical approach to the interpretation and have an openness to diverse perspectives.

This poster aims to spark conversation on best practices for promoting informed use of open access data resources. We acknowledge the benefits of open data to promote informed

decision-making and accountability, yet it is important to assess the risks of misuse or overinterpretation if not properly contextualized. This topic is very relevant in the current climate which places a high importance on data transparency, but not on data literacy or accurate interpretation. This poster highlights the role of open access databases and dashboards play in providing information to lay audiences, emphasizing the importance of promoting data literacy to mitigate misinterpretation.

Graduate Poster 08 - **Beyond Numbers: Creating Research Reports That Inform, Engage, & Inspire**

Melike Coskun - Graduate student, Human Development and Family Science, College of Human Sciences

Jenna Lawlor - Graduate student, Human Development and Family Science, College of Human Sciences

Dr. Francesca Adler-Baeder - Faculty, Human Development and Family Science, College of Human Sciences

Kim Gregson - Community Partner, Gregson Consulting, LLC

Dr. Julianne McGill - Faculty, Human Development and Family Science, College of Human Sciences

The Alabama Healthy Marriage and Relationship Education Initiative (AHMREI) is an applied research project in the Department of Human Development and Family Science at Auburn University. The focus is on promoting healthy relationship functioning for adults and youth by offering and evaluating free education programs in Alabama and collaborating with community agency partners across the state. After each program implementation and impact evaluation cycle concludes, the AHMREI team generates academic publications as well as two publicly available reports based on the quantitative and qualitative data collected on evidence of the program's effectiveness. One of the reports focuses on data visualization, including graphics and charts, while the other report provides both research details and a summary of the program's results for an audience of researchers and non-researchers. These reports enable the program to present its findings to the public, its partners, and stakeholders, acknowledge the contributions of program partners, and celebrate the program's impact, which can be applied in various settings. We aim to outline the process of creating engaging research reports and offer insights into the practical, meaningful and impactful communication of community-focused research reports. First, we will outline the process of creating stakeholder research reports, highlighting two distinct types of reports with their respective purposes and functions. Next, we will outline the process of team collaboration and decision-making regarding the reports' design and content. Finally, we will discuss the reasons for creating different reports and the purposes they can serve in communication with the partners, stakeholders and the public.

Graduate Poster 09 - **Evaluate the Pedestrian Safety at Crosswalks with On-Street Parking**

NsongErnest Asiedu - Graduate student, Civil and Environmental Engineering, Samuel Ginn College of Engineering

Md Roknuzzaman – Graduate student, Civil and Environmental Engineering, Samuel Ginn College of Engineering

With the rise in pedestrian-vehicle crashes, transportation agencies are actively seeking alternative strategies to enhance pedestrian safety and reduce crash severity. Midblock locations account for 80% of pedestrian fatalities in the U.S., making them a critical focus for safety improvements. Alabama is ranked the fifteenth most fatal state for pedestrians with pedestrian fatality rate per 100,000 population at 2.54 persons (NHTSA, 2020). The state had 567 pedestrian fatalities between 2016 and 2020.

To further enhance pedestrian safety and compliance rates, studies have explored improvement in roadway geometric features such as medians, refuge islands and curb extensions, which improve pedestrian visibility and perceived safety. Limited driver's sight distances caused by on-street parking pose an additional challenge at crosswalks. To mitigate this, transportation agencies often use advance road signs to alert drivers in advance of pedestrian crossings. Additionally, curb extensions, which extend into parking lanes, provide more pedestrian space and improve visibility at critical crossing points.

A newer approach, daylighting pedestrian crosswalks, restricts parking within a designated distance from crosswalks to ensure clear sightlines. While this method has been legally adopted in several states, it has yet to be implemented in Alabama. This study seeks to evaluate pedestrian safety at crosswalks with on-street parking at four cities in Alabama under different metropolitan planning organizations. Using video footage recording of 60 hours at each crosswalk, the study will evaluate pedestrian waiting time, looking behavior, driver speeding and motorist yielding behavior by employing statistical methods.

The findings of this study will be used to raise awareness on the policy of restricted on-street parking at crosswalks with transportation safety practitioners by providing valuable insights, supporting the development of targeted countermeasures to improve pedestrian safety at crosswalks and enhance overall roadway safety.

Graduate Poster 10 - **Inclusive Counseling and Sex Education for Individuals with Disabilities: Bridging Systemic Gaps in Practice through the Development of Well-Informed Professionals**

Kendall Kaiser – Graduate Student, Department of Special Education, Rehabilitation, and Counseling, College of Education

Sexuality is a universal and lifelong component of human development. Yet, individuals with disabilities consistently face barriers that drastically limit their access to vital education and informed counseling regarding sexuality and sex-related topics. Unfortunately, an inherent part of the present-day disability experience, these barriers are rooted in systemic discrimination, limited professional training, and biased attitudes held by professionals in the educational, medical, and counseling fields.

Despite sexuality being an inherent aspect of the human experience, there is an incredible lack of sex education for all individuals, even more so for individuals with disabilities. Sex-related topics remain absent from most clinical, educational and counseling environments. Due to fundamental barriers in the healthcare system, sex education is widely unavailable, inaccessible and non-inclusive for diverse and minority populations. Research consistently highlights that individuals with disabilities have limited access to well informed, inclusive sex education. Professionals who work with this population demonstrate both inadequate training, as well as an embedded discomfort with these topics. These issues, coupled with hesitancy from parents and guardians, give rise to detrimental consequences: increased vulnerability to sexual abuse, poor sexual health, overwhelming feelings of shame and confusion, as well as inhibited self-autonomy and relationship building skills.

Drawing from current literature and through academic analysis, this presentation explores how professionals in counseling-related fields can develop well-informed practices, as well as disrupt the pattern of discrimination through a blend of education and stigma awareness. Strong emphasis is placed on the urgent need for education, advocacy, and healthy counseling spaces which support the sexual health, autonomy, and validation inherently owed to individuals with disabilities.

Graduate Poster 11 - **More Than a Lesson: How Context and Curriculum Shape Adolescent Knowledge and Intentions**

Sandra Anti Eyiah - Graduate student, Human Development and Family Science, College of Human Sciences

Dr. Adrienne Duke-Marks - Faculty, Human Development and Family Science, College of Human Sciences

For more than four decades, sex education has been an important yet highly contentious public health and policy issue in the U.S. Despite this difficulty, research suggests that the wide implementation of sexual education programs has led to a significant improvement in adolescents' sexual and reproductive health. Primarily, sex education has predominantly relied on two basic approaches: abstinence-based sex education programs (ABE) or comprehensive sexual education programs (CSE). Although these programs have the same primary goal of reducing adolescents' sexual risk behaviors (SRB), their approaches and content vary. ABE teaches adolescents that the reliable way to avoid Sexually Transmitted Infections (STI) and unplanned pregnancies is to refrain from sexual activity, usually until marriage. Although most CSE programs teach young people that the most prominent way to avoid STIs and unwanted pregnancies is abstinence, these programs also emphasize the use of contraceptives. Prior studies have shown that ABE programs indicated inconsistent effects on sexual health behaviors and outcomes. Empirical evidence on the effectiveness of ABEs exists, while other studies provide evidence highlighting their ineffectiveness. By contrast, most studies provide substantial support for implementing CSE for its impact on risky sexual behaviors. Early studies on sex education primarily focused on the content, age appropriateness, type of sex education, and the efficacy of the programs. Gradually, attention is being given to the settings in which sex

education is implemented. In literature, school-based sexual education has received more attention. However, it has been suggested that not all school-based sex education programs are effective. Thus, the primary objective of this study is to investigate the relationship between adolescent knowledge and adolescents' intentions to reduce SRB as well as considering the variations across different approaches to sexual education. Lastly, we seek to examine the moderation effect of implementation setting in the relationship between adolescents' knowledge and intentions.

Graduate Poster 12 - **Educated Choices: How Vaping Knowledge Impacts Adolescents Likelihood to Vape in Future**

Angela Mintah - Graduate student, Department of Human Development and Family Sciences, College of Human Sciences

Dr. Adrienne Duke-Marks - Faculty, Human Development and Family Science, College of Human Sciences

The increasing prevalence of vaping among adolescents has raised significant public health concerns, prompting the U.S. Surgeon General to classify e-cigarette use as an epidemic in 2018. Research suggests that young vapers face a heightened risk of long-term addiction compared to traditional cigarette smokers. Despite these alarming trends, there remains a critical gap in understanding the cognitive and behavioral factors that influence adolescent vaping decisions. This presentation will examine the role of vape knowledge in predicting adolescents likelihood to vape in future, emphasizing the importance of targeted educational programs. By exploring this relationship this research aims to provide insights into effective prevention strategies that empower teens to make informed health decisions.

Graduate Poster 13 - **Exploring the Relationship Between Supplemental Nutrition Assistance Program (SNAP) Participation and Functional Limitations in Older Adults**

Susan Osayande - Graduate student, Human Development & Family Science, College of Human Sciences

Dr. Thomas Fuller-Rowell - Faculty, Human Development & Family Science, College of Human Sciences

Food insecurity is a persistent challenge among older adults and may be linked to functional decline. The Supplemental Nutrition Assistance Program (SNAP) provides nutritional support to low-income individuals, yet its relationship with long-term functional limitations remains understudied.

Using five waves of Health and Retirement Study (2010-2018) data (n = 11,568), we estimated unconditional and conditional latent growth models to examine how food insecurity, SNAP participation, and their interaction were associated with changes in functional limitations - measured by activities of daily living (ADL) and instrumental activities of daily living (IADL). Functional limitations at baseline were higher among older adults who reported being food

insecure, receiving SNAP benefits, or being single, female, or older. However, those who reported both food insecurity and SNAP participation had fewer limitations at baseline compared to food-insecure individuals not enrolled in SNAP. Over time, food-insecure older adults who participated in SNAP showed a slower increase in limitations, despite reporting more challenges initially. Increases in limitations were more pronounced among those who were single or older. These patterns may offer useful insights for community organizations and practitioners supporting aging populations. Next steps involve sharing findings through scholarly and community channels in collaboration with partners, with the goal of informing outreach strategies that support equitable SNAP access and guide future efforts to promote healthy aging.

Graduate Poster 14 - Waves of Care by AU Outreach in Underprivileged Paradise: Combating and Healing Chronic Illness in Underserved Maldivian Communities

Suhrud Pathak - Graduate student, Department of Drug Discovery and Development, Harrison College of Pharmacy

Jeyaram Bharathi Jeyabalan - Graduate student, Department of Pharmacology, JSS College of Pharmacy, JSS Academy of Higher Education & Research, Nilgiris, Ooty, Tamil Nadu, India

Rishi Nadar - Undergraduate student, Department of Drug Discovery and Development, Harrison College of Pharmacy, Auburn University, Harrison College of Pharmacy

Dr. Chippewa M. Thomas - Faculty, Department of Special Education, Rehabilitation, and Counseling, College of Education, Director, Office of Faculty Engagement and the Encyclopedia of Alabama

Mohemed Hameed - Staff, Executive Director at Villa Foundation, Maldives

Dr. Muralikrishnan Dhanasekaran - Administrative Fellow and Alumni Professor Graduate School, Professor, Harrison College of Pharmacy

The Maldives, recognized for its breathtaking islands, is confronting a growing burden of noncommunicable diseases (NCDs), notably diabetes mellitus, insomnia and hypertension. Despite this rising public health problem, there is scant information on the prevalence of these chronic illnesses in the local community. To fill this void, our exploration and outreach activities sought to measure blood pressure, blood glucose and sleep levels among people of various Maldivian islands, providing critical baseline data to inform future health initiatives. A cross-sectional health screening was conducted utilizing accessible sampling to enroll participants from around the Island population. Standardized questionnaires were used to collect demographic data, including age, gender and medical history. Additionally, trained healthcare workers used standardized equipment and a questionnaire to assess blood pressure, blood glucose and sleep levels. Our study found that high blood glucose and hypertension were prevalent, which is consistent with global trends in the increase in NCDs. Age and hypertension were shown to be significantly correlated, suggesting that older persons require focused screening. Additionally, greater blood glucose levels were associated with a family history of diabetes mellitus, underscoring the significance of genetic predisposition. A subset of participants reported lifestyle behaviors such as regular caffeine (coffee/tea) and betel-nut consumption, and sleep difficulties. Due to the stimulating effects of betel-nut and caffeine,

these factors could have an impact on health outcomes and should be investigated further in future research. Our current research and outreach activities underscore the critical need for collaboration between international and local institutions to address shared health challenges. The findings emphasize the urgency of implementing public health programs that promote healthy lifestyles and routine health screenings. Moreover, providing essential insights into the healthcare status of Maldivian populations, the study advocates for proactive, evidence-based interventions to combat the escalating burden of NCDs and to reduce morbidities and mortality.

Graduate Poster 15 - Global Outreach for Occupational Health: Addressing the Burden of Silicosis in Resource-Limited Settings

Shannon Kim - Graduate student, Harrison College of Pharmacy

A preventable yet fatal occupational lung disease, silicosis develops from inhaling microscopic crystalline silica dust. In low-resource environments and labor-intensive sectors, especially mining and stone carving, it continues to be a major global public health problem. In Rajasthan, India, an area severely impacted by silicosis and silico-tuberculosis as a result of extensive marble mining, Auburn University graduate students took part in the Study Abroad Program to share their results and observations in this outreach research presentation. The goal of the study was to expose vulnerable worker groups to the epidemiology, socioeconomic factors, and clinical treatment of silicosis firsthand. Students observed active public health and policy initiatives targeted at prevention and care, and they interacted with local communities, public health authorities, and medical professionals to gain a better understanding of the difficulties presented by these occupational lung diseases. Silicosis currently lacks a designated therapeutic agent, especially in the latter stages when lung function is significantly affected. Therefore, most non-pharmacological treatments, such as wet drilling, dust suppression, and wearing protective gear, concentrate on prevention. Nonetheless, new treatment approaches are being investigated. These include antifibrotic therapies that help delay pulmonary fibrosis and maintain lung function, such as pirfenidone and nintedanib. In certain individuals, whole-lung lavage has demonstrated potential in eliminating inhaled particles and alleviating symptoms. Furthermore, the anti-inflammatory and antioxidant qualities of natural compounds, including kaempferol, dioscin, and emodin, are being investigated in hopes of reducing lung tissue damage with no or minimal adverse reaction. This study examines current research on treatment approaches that may lessen the burden of silicosis, in addition to discussing the public health consequences of the disease in Rajasthan. To address complex occupational health challenges in marginalized communities, the experience highlights the significance of translational research, policy measures, and global health involvement.

Graduate Poster 16 - Addressing Dental Hygiene in Underprivileged Maldivian Island Communities to Decrease Morbidity and Mortality: A Targeted Outreach Initiative to Promote Healthcare

Keyi Liu - Graduate student, Department of Drug Discovery and Development, Harrison College of Pharmacy

Suhrud Pathak - Graduate student, Department of Drug Discovery and Development, College of Education

Jeyaram Bharathi Jeyabalan - Graduate student, Department of Pharmacology, JSS College of Pharmacy, JSS Academy of Higher Education & Research, Nilgiris, Ooty, Tamil Nadu, India

Rishi Nadar - Undergraduate student, Department of Drug Discovery and Development, Harrison College of Pharmacy

Dr. Chippewa M. Thomas - Faculty, Department of Special Education, Rehabilitation, and Counseling, College of Education, Director, Office of Faculty Engagement and the Encyclopedia of Alabama

Dr. Muralikrishnan Dhanasekaran - Administrative Fellow and Alumni Professor Graduate School, Professor, Harrison College of Pharmacy

Oral health is a critical component of overall human and animal health throughout the lifespan. Dental hygiene remains one of the most neglected areas in global healthcare, particularly among underprivileged and geographically isolated populations. In the Maldives, most of the remote island communities experience limited access to basic dental care, resulting in high rates of untreated dental caries, periodontal disease, tooth loss, and associated systemic health issues. The lack of prophylactic healthcare activities, oral health education, and trained professionals further exacerbates the burden of dental problems in these regions. In response to this pressing need, Auburn University, in collaboration with Villa Group Maldives and local stakeholders, launched a focused healthcare outreach initiative targeting underserved Maldivian populations. This initiative involved community-based healthcare screenings, health education and referrals for advanced care. Emphasis was placed on the link between poor healthcare (increased BMI, improper diets, lifestyle and dental hygiene) and broader systemic health risks such as cardiovascular disease, gastrointestinal disorders and diabetes mellitus. Through direct AU outreach service delivery, health promotion, and culturally sensitive engagement, the program aimed to increase awareness, reduce preventable oral diseases, and empower communities to adopt healthier behaviors. Interdisciplinary collaboration among students, faculty, staff, and local healthcare providers facilitated mutual learning, professional development, and a deeper understanding of global health equity. Our valid and genuine AU outreach model underscores the importance of integrating dental health into primary care strategies and highlights how academic-community partnerships can drive sustainable impact in under-resourced settings. Future directions include expanding oral health infrastructure, integrating school-based programs, and incorporating personal hygiene as a core component of public health outreach in the region.

Graduate Poster 17 - **Sleep Health in the Maldives: Cultural Influences and Barriers to Care**

Melissa Sanders - Graduate student, Harrison College of Pharmacy

Mia Chambliss - Graduate student, College of Education

Suhrud Pathak - Graduate student, Drug Discovery and Development, Harrison College of Pharmacy

Rishi Nadar - Graduate student, Harrison College of Pharmacy

Dr. Chippewa M. Thomas - Faculty, Department of Special Education, Rehabilitation, and Counseling, College of Education, Director, Office of Faculty Engagement and the Encyclopedia of Alabama

Dr. Muralikrishnan Dhanasekaran - Administrative Fellow and Alumni Professor Graduate School, Professor, Harrison College of Pharmacy

Sleep is essential for preserving one's physical and mental health. However, considering the intricate interactions between holistic, occupational, and cultural factors, sleep disorders such as bruxism, insomnia, and obstructive sleep apnea are still underdiagnosed in the Maldives. In order to evaluate sleep health in addition to blood pressure and glucose levels, researchers performed community-level health screenings and conversations throughout several Maldivian islands as part of a larger health outreach program addressing noncommunicable diseases (NCDs). Trained healthcare volunteers and local employees participated in outreach efforts, conducting screenings and distributed standardized questionnaires to gather clinical, behavioral, and demographic information. Participants often reported sleep difficulties, particularly those who consumed large amounts of stimulants like caffeine and betel nut. Disrupted sleep patterns were also associated with religious and social habits, as well as irregular working hours in the tourism and fishing industries. The stigma associated with mental disorders still prevents many locals from seeking help, and many are unaware that symptoms like bruxism, sleeplessness or persistent exhaustion could be precursors to more serious psychological or physical issues. The results also supported the national burden of NCDs, showing a significant correlation between sleep deprivation and high blood pressure or blood glucose levels, particularly in older persons and those with a family history of diabetes. In addition to providing essential baseline health data, this integrated communication strategy promoted community awareness and discussion about sleep and well-being. The project emphasizes the need for coordinated, culturally sensitive interventions and health education initiatives that support regular screening and good sleep hygiene. Combating the twin burden of NCDs and poor sleep health throughout the Maldives requires empowering local healthcare institutions and encouraging early detection.

Graduate Poster 18 - **Elevating Family Science Through Public Data: Strategies for Impactful Research**

Emily Hanson - Graduate student, Human Development & Family Science, College of Human Sciences

Publicly available government data offers a powerful opportunity for a variety of scholars to conduct rigorous, theory-driven research to understand the well-being of individuals and families without the financial and logistical barriers of primary data collection. This presentation outlines practical strategies for leveraging public use datasets—such as those from the U.S. Census Bureau—to explore timely, policy-relevant questions about family well-being. Emphasizing accessibility of these data, this presentation will guide attendees through the process of identifying, accessing and analyzing datasets of interest, as well as crafting hypotheses and meaningful research questions.

With a focus on supporting both emerging (e.g., graduate students) and established scholars, this presentation also highlights how public data can serve as a bridge between academia and community stakeholders (e.g., policymakers), fostering mutually beneficial partnerships and informing impactful solutions. To achieve this aim, this project will showcase an interdisciplinary collaboration between the Military REACH lab at Auburn University and the Department of Defense to address a variety of economic security issues among military families, using data from the Household Pulse Survey (2021–2024). Attendees will gain insights into strategies for managing large datasets, developing stakeholder-informed research questions, and translating findings into actionable insights for policymakers and practitioners.

The presentation will also celebrate the role of engaged scholarship by sharing tools developed during the project that support outreach, innovation and knowledge exchange. Ultimately, this presentation aims to inspire scholars to harness public data as a catalyst for meaningful, community-connected research in family science.

Graduate Poster 19 - **Uncharted Territory: Addressing the Lack of Pharmacogenomics Research in the Maldives**

Preston Cook - Graduate student, Drug Discovery and Development, Harrison College of Pharmacy

Pharmacogenomics (PGx), the study of how genetic variations affect drug response, has garnered significant attention as a cornerstone piece in the realm of precision medicine. PGx offers a unique ability to tailor therapeutic strategies based on each individual's genetic profile, optimizing therapeutic outcomes, while minimizing adverse drug reactions. Because of its relative novelty to the healthcare field, there remains a significant gap in the global application of PGx, especially within underserved nations, particularly within the Maldives. The Maldivian healthcare system faces a barrage of challenges, including limited access to specialized care, constrained medical infrastructure, and a growing burden of non-communicable diseases, which have plagued their healthcare system in providing optimal care for the citizens in need. Despite these elongated challenges, PGx studies within this specific population are non-existent, leaving healthcare providers, as well as citizens, with minimal knowledge and insights on population-specific genetic variations that can influence drug metabolism and efficacy. Integrating PGx within this population has great potential to enable precise prescribing and a reduction in trial-and-error treatment, ultimately leading to improved health outcomes for the citizens in need. Bridging this gap in research is imperative, now more than ever before, as it can allow for an advancement in equitable healthcare, while also equipping the Maldivian healthcare providers with the necessary tools and resources to attend to their citizens' needs in the safest and most effective manner.

Graduate Student Poster Awards Announcements

1:00 p.m. – 1:30 p.m.

Terrace Room