

ARCH INSTITUTE

Advancing Research & Community Health



2026 ARCH Fall Research Symposium Program

Wednesday October 21st, 4:00-6:00pm

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Contributors: Crystal Palmisano-Dillard, Lori Dowdy, Cassie Sutton, Krystal Carver-Dickens

Program: WKU Training Resource Center

Title: Training Resource Center Programs

Description: Features the variety of programs the Training Resource Center hosts and how each program works to serve young people in foster care, foster/adoptive/kinship caregivers, and other relevant parties.

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Contributors: Dr. Vance Pounders, Dr. Anthony Mancini, Emma Chef, Natalie Hagewood, Stephanie Bingham

Program: Physical Therapy

Title: Exploring the Impact of Clinical Instruction on Burnout Levels Among Practicing Physical Therapists

Description: The study examines the associations between clinical instruction practices among practicing physical therapists. Findings suggest that CI training, professional satisfaction, and student workload may influence burnout patterns and highlight opportunities to better support clinical instructors.

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Contributors: Dr. Kara Haughtigan, Dr. Nadia Khan, Christopher Haughtigan, Dr. Kimberly Link, Dr. Gregory Ellis-Griffith, Dr. Gretchen Macy

Program: WKU School of Nursing and Allied Health

Title: Through Their Lens: A Photovoice Exploration of Workplace Stress and Resilience in Healthcare Administration

Description: Local practicing healthcare administrators were interviewed about workplace stress and submitted quotes and images representing their stressors and the resources they use to manage stress. These materials were developed into a Photovoice presentation for WKU Healthcare Administration students to increase their awareness of workplace stress and resilience within healthcare leadership.

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Contributors: Dr. Kim Link, Dr. Kara Haughtigan, Dr. Zach Farley

Program: WKU Center for Rural Health

Title: From Community Voice to Community Action: Identifying Health Priorities Across Southcentral Kentucky

Description: The Barren River Initiative to Get Healthy Together (BRIGHT) Coalition Community Health Assessment used quantitative and qualitative approaches to identify health priorities, barriers, and community perspectives across the 10-county Barren River region of Southcentral Kentucky. This poster highlights how community-engaged assessment and WKU applied research partnerships can translate into local evidence and community voice into priorities that inform regional health improvement efforts.

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Contributors: Dr. Kim Link, Dr. Christina Noel, Shea Ryan-Kessler

Program: WKU Center for Rural Health & WKU Suzanne Vitale Clinical Education Complex

Title: Building an Autism-Ready Workforce: An Interdisciplinary Education Initiative at Western Kentucky University

Description: The TOP-funded autism initiative is developing and implementing interdisciplinary, evidence-informed educational modules to strengthen autism knowledge and preparedness among WKU students entering health and human service professions. This poster highlights the development of a scalable educational model that integrates autism-focused learning into existing curricula and supports WKU's role in preparing a more autism-informed future workforce.

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Contributors: Dr. Amy Engelhoven, Emma Markus

Program: WKU Department of Communication Sciences & Disorders

Title: Intergenerational Service-Learning and Student Perceptions of Aging

Description: WKU undergraduate CSD students participated in service-learning activities and completed questionnaires on anxiety about aging and ambivalence of aging before and after their service-learning experiences. It was hypothesized that anxiety and ambivalence of aging would decrease following their experiences; however, both constructs increased.

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Contributors: Blake V. Jones, Dr. Edrisa Sanyang

Program: WKU School of Health and Social Services, M.S in Environmental & Occupational Health Science

Title: Environmental Surveillance of Mosquito and Tick Populations at Fort Knox, Kentucky: A Baseline Assessment to Support Force Health Protection and Operational Readiness

Description: This study established a standardized baseline assessment of mosquito and tick activity across residential perimeters, physical training, and military training environments at Fort

Knox, Kentucky. The findings provide installation-specific surveillance data that can support future environmental Health Decision-making, force health protection, and operational readiness.

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Contributors: Dr. Zach Farley, Dr. Whitley J. Stone

Program: WKU School of Health and Social Services

Title: Occupational Heat Burden Among a Regional Sample of Beekeepers: Prevalence, Correlates, and Role in Physical Strain and Injury

Description: Beekeepers work in dense protective suits and lift heavy hive boxes during the hottest months, yet the occupational health evidence base for this workforce is thin and has never addressed heat, leaving them absent from heat surveillance entirely. This poster presents survey findings from 100 U.S beekeepers showing that greater heat-symptom burden was associated with more injury and worse back strain even after accounting for workload, pointing to the need for more research, direct heat measurement, and practical protections for this workforce.

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Contributors: Dr. Edrisa Sanyang, Dr. Kara Haughtigan, Dr. William Mkanta, Dr. Rukia Rajab Bakar, Dr. Said Ali Said, Dr. Halima Ali, Dr. Zeinab Bwanakheir Hassan, Dr. Salma Mahmoud, Dr. Ritchie Taylor, Taylor Lyle

Program: Public Health

Title: Continuity of Care After Road Traffic Injuries in Zanzibar: Identifying Gaps for Equitable Recovery

Description: This poster provides the background, purpose, and methodology of an ongoing interdisciplinary study examining continuity of care following road traffic injuries in Zanzibar, including the development and implementation of a linked trauma registry system. It establishes the study framework and data collection process that supports the companion poster presenting study progress and findings to date.

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Contributors: Dr. Edrisa Sanyang, Rukia Rajab Barkar, Dr. William Mkanta, Dr. Kara Haughtigan, Dr. Said Ali Said, Dr. Ritchie Taylor, Dr. Salma Mahmoud, Halima Ali, Zeinab Bwanakheir Hassan

Program: Environmental and Occupational Health Science Programs, School of Health and Human Services

Title: The Burden and Patterns of Injuries Treated at Two Major Trauma Hospitals in Zanzibar, Tanzania: Preliminary Results.

Description: This poster presents preliminary findings from a trauma registry study of adult injury patients treated at two major trauma hospital in Zanzibar, Tanzania, identifying road traffic injuries as the leading cause of trauma and a major contributor to disability. The findings

demonstrate the value of trauma registries for informing evidence-based injury prevention policies, strengthening trauma care systems, and guiding public health planning to reduce the burden of injuries in Zanzibar.

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Contributors: Emily Lyons & Olivia Dick

Program: WKU Center for Child Welfare

Title: The Child Welfare Analytics Collaboration (CWAC)

Description: The Child Welfare Analytics Collaborative is an innovative partnership between Kentucky's Cabinet for Health and Family Services, the Division of Prevention and Community Wellbeing and Department for Community Based Services, and Western Kentucky University's Center for Child Welfare.

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Contributors: Dr. Susan Jones, Catherine Malin, Natalie Bryant, Dr. Dawn Garret-Wright, Dr. Kaitlyn Rippey, Katie Morgan

Program: South Central Kentucky AHEC, School of Nursing and Allied Health, College of Health and Human Services

Title: Mobilizing Community Partners to Promote the Health of Farmers

Description: Farmers face unique health challenges because of the nature of their work and barriers to health care that compound them. This poster describes the development and outcomes of engaging multiple community-based partners to provide health screenings and services for farmers and their family members.

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Contributors: Dr. Qinfang Song, Dr. Kim Link, Dr. Whitely Stone, Dr. Zach Farley, Dr. Silvio Valladao

Program: WKU School of Health and Human Services

Title: Exercise Health: Program Evaluation of a Community Cardio-Drumming Program

Description: This research implements effective community exercise programs to increase physical activity and primitive health in Kentuckians as it is urgently needed. In this project, the health outcomes of a community sample in Bowling Green, Kentucky who participated in group cardio-drumming classes was taken.

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Contributors: Emma Macy, Ethan Gallagher, Dr. Kim Link, Dr. Ritchie Taylor

Program: Dual Credit Students Center for Rural Health Center for Environmental and Workplace Health

Title: Answering the Call: Connections Between Volunteerism and Mental Health

Description: The purpose of this project is to explore how civic engagement and volunteerism may improve mental-health outcomes. The project examined the fire service as a model of community-based volunteerism and utilized firefighter narratives in order to highlight the benefits of community service and engagement.

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Contributors: Lilly Pluimer, Dr. Katrina Burch, Dr. Gretchen Macy, Dr. Jacqueline Basham

Program: WKU Department of Psychological Science

Title: Training Needs Assessment for Kentucky Emergency Managers

Description: Kentucky emergency managers require a targeted training need analysis to identify gaps in hazardous materials knowledge, skills, and response capabilities across jurisdictions. This poster presentation aims to present the information that has been collected thus far.

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Contributors: Dr. Daniel Boamah, Tiara Barbour

Program: School of Health and Human Services

Title: The Impact of Burnout and Secondary Traumatic Stress on the Health and Life Satisfaction Intellectual and Developmental Disabilities Workforce

Description: This presentation will examine the risk and protective factors that contribute to Direct Support Professionals (DSP) and what is impacted such as staff life satisfaction and general health. This study aims to examine the dynamics within these variables.

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Contributors: Dr. Erin Warfel, Dr. Whitney Cassity Caywood, Jenny Flowers, Paige Simpkinson

Program: School of Health and Social Services, Social Work and Center for Child Welfare

Title: Engaging Communities in Child Welfare: Participant Perspectives and Insights

Description: This project will share data related to participant perspectives of trainings and events offered through the Center for Child Welfare Community Engagement Series. The trainings and events are designed to increase awareness and knowledge of child welfare issues among students, faculty, health providers, and community members. A variety of training formats are offered based on interest and demand.

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Contributors: Jake Gillespie, Makenna Twyman, Dr. Gretchen Macy

Program: School of Health and Human Services

Title: Results of the CHHS Student Wellness Assessment

Description: The results of the CHHS Student Wellness Assessment related to the 10 Dimensions of Wellness administered during the Spring 2026 semester will be presented. The recommendation and programming based on assessment findings will be outlined.

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Contributors: Dr. Katrina Burch, Dr. Ritchie Taylor, Dr. Gretchen Macy, Dr. Jacqueline Basham, Dr. Edrisa Sanyang, Dr. Vijay Golla, Jay Macy

Program: WKU Department of Psychological Sciences

Title: Strengthening Firefighter Wellbeing: A Total Worker Health Approach in Rural Kentucky

Description: The primary objective of the proposal is to present a holistic Total Worker Health program for firefighters in Kentucky that integrates physical, psychological, and social wellbeing support. Firefighters face numerous occupational hazards including exposure to toxic substances, biological contaminants, physical strain, and trauma associated with emergency response.

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Contributors: Dr. Jacqueline Basham, Dr. Gretchen Macy, Dr. Ritchie Taylor, Lester Archer

Program: WKU School of Health and Social Sciences

Title: Female Leaders in Occupational Safety and Health: Perceived Barriers and Potential Interventions

Description: This study utilized key informant interviews to qualitatively analyze what the perceptions of female safety leaders were within the occupational safety and health (OSH) field related to barriers and interventions to sustain or increase the number of female safety leaders currently working in the field. The overall goal for this research project was to understand challenges female leaders in OSH face and identify potential interventions, such as resources, training, or support mechanisms to address these challenges.

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Contributors: Dr. Denise Hardesty

Program: South Central Kentucky AHEC

Title: Programs and Activities of the South Central Kentucky AHEC

Description: This presentation will be focused on programs and activities provided by the South Central Kentucky Area Health Education Center (AHEC) to our 22-county service region. AHEC is a part of the WKU College of Health & Human Services. Programming includes: health career pathway exploration for middle and high school students; connecting college students with clinical, professional development, and experiential opportunities; and providing continuing education to health professionals. AHEC also houses the WKU CPR Training Center.

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Contributors: Dr. Whitney Cassity-Caywood, Dr. Erin Warfel, Jenny Flowers, Paige Simpkinson

Program: SWKU, School of Health and Human Services, Center for Child Welfare

Title: Workforce Readiness and Resilience in Child Protective Workers

Description: This research presents findings from a national mixed-methods study which examines the cultures of state-based child protection and permanency agencies, focusing on advice that current and retired child welfare workers offer to those entering the field. Emergent themes include the importance of self-care, boundaries, and realistic expectations; utilizing professional relationships and supervision; and practicing with compassion, integrity, and partnership.

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Contributors: Dr. Nadia Khan, Dr. Grace Lartey, Dr. Lester Archer, Dr. Gretchen Macy, Dr. Gary Houchens and Dr. Nicholas Brake

Program: Healthcare Administration, School of Health and Social Services

Title: Closing the Gap: Healthcare Administration Education and Workforce Expectations

Description: This mixed-methods study examines the alignment between healthcare administration graduate curricula, and the competencies healthcare industry professionals consider important for workforce success. Findings identify areas of alignment and gaps, offering practical implications for curriculum development and preparing graduates to meet evolving healthcare workforce needs.

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Contributors: Sophie Jerome, Hanna Forrest, Dr. Matthew Woodward, Heather Webb, Dr. Austin Griffiths

Program: WKU, Department of Psychological Sciences

Title: Client and Referral Base of the Integrated Family Trauma Treatment Clinic

Description: This project provides descriptive information about referrals made to the Integrated Family Trauma Treatment Clinic. Specifically, descriptive information regarding distributions of client age ranges, client counties of residencies, sources of referrals, trauma history, and other related information provide a comprehensive review of the population referred for services at the clinic.

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Contributors: Hanna Forrest, Sophie Jerome, Dr. Matthew Woodward, Heather Webb, Dr. Austin Griffiths

Program: WKU, Department of Psychological Sciences

Title: An Overview of the Integrated Family Trauma Treatment Clinic

Description: This submission provides descriptive information about the services offered at the Integrated Family Trauma Treatment Clinic. Specifically, descriptive information regarding the

populations served, evidence-based trauma-informed treatment options, adoption services and other related information will provide a comprehensive review of the clinic, its purpose, and the intended outcomes.

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Contributors: Nora Fitzgerald, Haley Jo Robbins, Dr. Jacqueline Basham, Katrina Burch, Dr. Ritchie Taylor, Dr. Gretchen Macy, Dr. Zach Farley

Program: WKU School of Health and Social Services

Title: Incident Analysis as a Tool for Emergency Preparedness

Description: A hazardous material commodity flow study was conducted in Christian and Hopkins County, Kentucky in the Summer of 2026 to assist emergency managers with emergency response planning, training, and overall preparedness. As part of this study, an analysis of previous incident locations from the previous 20 years was conducted, and hot spot maps were created to help illustrate where future accidents may occur to better inform emergency managers

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Contributors: Olivia Rice, Dr. Gretchen Macy

Program: WKU College of Education and Behavioral Science (CEWH)

Title: Learned, Not Told: Teaching Environmental Science Through KAS

Description: Kentucky Academic Standards (KAS), including Common Core Standards, educates and measures the knowledge that students should understand by subject areas and grade-level comprehension. This research poster/literature review explores how the kas is integrated in teaching environmental science, not just rote memorization, but real-word applications, critical thinking skills, and the development of knowledge and awareness for environmental challenges.

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Contributors: Jay Macy, Dr. Ritchie Taylor, Dr. Katrina Burch, Dr. Jacqueline Basham, Dr. Gretchen Macy, Dr. Edrisa Sanyang, Nora Fitzgerald, Haley Jo Robbins, Charlotte Peters, Caleb Parnell

Program: WKU College of Health and Human Services

Title: Hazardous Materials Commodity Flow Study: Implications for Public Health Preparedness in Christian and Hopkins Counties, Kentucky

Description: Hazardous materials transport poses a significant risk to human health, environment, public health preparedness, and emergency management in rural Kentucky counties. Results of this study identifies hazardous materials transported through two counties in Western Kentucky and the implications for public health preparedness and emergency management.

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Contributors: Dr. Silvio Polly, Jacob Costello, Dr. Whitley Stone, Dr. Rachel Tinius

Program: WKU School of KRS

Title: Acute Effects of Brief Pre-Exercise Dry Sauna Exposure on Power In Resistance-Trained Adults

Description: Brief pre-exercise heating may enhance muscular power by raising tissue temperature, but its acute effects on resistance training outcomes are unclear. This study examines the effects of a 5-minute pre-exercise dry sauna exposure on power, perceptual readiness, and estimated core temperature in resistance-trained adults.

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Contributors: Michael Hernandez, Dylan Freeman, Emma Smith, Faith Schultz, Morgan Robertson, Hayley Best, Dr. Silvio Polly, Dr. Kurt Neelly, Dr. Zach Farley, Dr. Jason Crandall, Dr. Mark Schafer

Program: WKU School of KRS

Title: Playing for Prevention: Effects of Six Weeks of Bingocize® on Fall Risk in Older Adults

Description: Bingocize ® is a game-centered program that integrates exercise and health education into bingo, with benefits reported after ten weeks. This study examined the effects of a shortened six-week Universal Wellness Bingocize® format on physical and cognitive measures associate with fall risk in older adults.

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Contributors: Emma Smith, Dylan Freeman, Michael Hernandez, Faith Schultz, Morgan Robertson, Hayley Best, Dr. Silvio Polly, Dr. Zach Farley, Dr. Kurt Neelly, Dr. Jason Crandall, Dr. Mark Schafer

Program: WKU School of KRS

Title: Effects of a Six-Week Bingocize® Program on Exercise Self Efficacy in Older Adults

Description: Low exercise self-efficacy and low enjoyment limit exercise participation among older adults. Bingocize is a game-centered program that integrates exercise and health education into bingo. This study examined the psychosocial outcomes and acceptability of a 6-week Universal Wellness Bingocize® format in older adults.

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Contributors: Cameron Carr-Calvert

Program: College of Health and Human Services, South Central Kentucky Area Health Education Center

Title: Experiential Learning as a Strategy for Health Carrer Exploration: The Future Healthcare Professionals Program

Description: South Central Kentucky's signature high school program, Future Healthcare Professionals (FHP), was developed in 2016. Through experiential, hands-on learning, FHP introduces students to the wide range of healthcare careers available. Students practice skills

such as suturing, intubating, blood typing, assessing vital signs, and more. These activities open the door to discussions about educational pathways, responsibilities, and the rewards and challenges of different careers. The result is that students think more deeply about their options and leave excited to pursue a path in healthcare.

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Contributors: George Cruz, Dr. Dana Sullivan

Program: WKU Master of Social Work Program/ School of Health and Social Services

Title: They Love the Job but They Are Still Burning Out: A Study of First Responder Burnout and Organizational Support

Description: This study examines professional quality of life, perceived organizational support, and barriers to mental health help-seeking among first responders across the United States. Findings highlight relationships among organizational support, burnout, secondary traumatic stress, moral distress, compassion satisfaction, and comfort accessing workplace mental health resources.