

Inaugural Public Health Showcase

Poster Presentation Abstracts (Undergraduate Awards)

#131

Abstract Title: Preliminary results of a randomized-controlled trial of a behavioral parent training intervention for families with deaf or hard of hearing children

Student: Grace Mullikin

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Abstract: Deaf and hard of hearing (DHH) children are at risk for behavior problems but are less likely than peers with typical hearing to receive behavioral interventions. Although early diagnosis and treatment of hearing loss improve language development, improvements in behavior do not necessarily result from these interventions, potentially due to entrenched patterns of parent-child interactions. Parents of preschool aged DHH children report a high prevalence (50%) of behavioral concerns. Behavioral parent training (BPT) interventions have demonstrated effectiveness in reducing child behavior problems and improving parenting practices, but there is a gap in research on behavioral interventions to parents of DHH children. Our team has completed the first year of recruitment, intervention delivery, and data collection in a hybrid effectiveness-implementation trial of an adapted BPT program, the Family Check-Up, modified for parents of young DHH children. Parent-child pairs are being recruited from hearing healthcare practices and randomized to either the adapted FCU-DHH program or control group. FCU-DHH families receive up to 6 parent coaching sessions, focused on effective parenting strategies. The FCU-DHH coaches are parents of DHH children who completed FCU-DHH training and receive ongoing supervision. Enrolled families complete research assessments at baseline and every 6 months for up to 3 years, including standardized measures of parenting and child behaviors, parenting sense of competence, parent depression, parent motivation, parent-child interactions, and child language skills. Baseline, 6-month, and 12-month results will be reported for parent-child dyads (N~33) who will have completed these assessments as of March 2023. Preliminary data will be reported.

Inaugural Public Health Showcase

Poster Presentation Abstracts (Undergraduate Awards)

#85**Abstract Title:** Equity Beyond the Health Care System**Student:** Christopher Otieno**Mentor / e-mail:** Rachel Hogg-Graham / rachel.hogg@uky.edu

Abstract: Background: Emerging research suggests improving health outcomes requires interventions beyond traditional clinical care. A more wholistic approach that focuses on population health and partnerships that integrate health and social services may be particularly important for reducing health inequities. To date, little is known about the association between community diversity and population health system structure. This study explores the association between racial composition of a community and the multisector delivery of population health activities. Methods: We conducted a retrospective cohort study using data from the National Longitudinal Survey of Public Health Systems (NALSYS). NALSYS measures the connectedness of community organizations who are delivering health and social services by asking local public health officials about the availability of 20 core population health activities within their community and the range of sectors that deliver each activity, including hospitals, primary care providers, insurers, employers, schools, and community-based organizations. We categorized communities into quartiles based on the portion of the population that is black. We then descriptively examined multisector contributions to the NALSYS activities based on community quartile. Results: Our results suggest substantial variation in the relationship between diversity and multisector contributions to population health. We found that community health centers, insurers, government agencies, universities, and faith-based organizations increased their participation in population health activities in more diverse communities. Conclusions: Our findings suggest that a subset of sectors may be focusing their population health efforts on diverse populations that have both complex health and social needs.

Inaugural Public Health Showcase

Poster Presentation Abstracts (Undergraduate Awards)

#158

Abstract Title: The Race of Health Workers as A Determinant of Black Women's Childbearing Experiences

Student: Princess Magor Agbozo

Mentor / e-mail: Jessica R. Thompson / Jessica.r.Thompson@uky.edu

Abstract: Background/Introduction: Black women have the highest rates of maternal mortality in the US and more likely to die of pregnancy related issues. Structural racism, implicit bias, and poor quality in healthcare are contributing factors to the disparities black women face with maternal health (CDC, 2022). This research seeks to understand what the current childbearing experiences of black women are and how it differs according to the race/ethnicity of the health worker taking care of them. Methods: We intend on using a qualitative research approach by conducting in-depth interviews to explore the unique childbearing experiences of black women in relation to the race/ethnicity of the healthcare workers who cared for them. Overall, we plan on recruiting and interviewing 10 black women who have given birth or are due to give birth for about 30 to 60 minutes. Data will be analyzed using thematic analyses. Results: According to literature surrounding this topic, we anticipate preliminary results to show that black women experienced several racialized pregnancy stigma and stereotypes requiring several coping strategies. We also anticipate black mothers to also comparatively report better experiences including higher levels of satisfaction, perceived trust and empathy with black health care providers because of racial and ethnic commonalities. Conclusions: This study will contribute unique insights about the intersections of perceptions of healthcare providers' race/ethnicity with black women's' lived experience of childbearing care. Findings may also contribute to public discourse and interventions to address racialized pregnancy stigma in health care to improve maternal and infant outcomes for Black women.

Inaugural Public Health Showcase

Poster Presentation Abstracts (Master's Awards)

#154

Abstract Title: Prevalence and Predictors of Substantial Postpartum Weight Retention Among Participants of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) in Southern California

Student: Hanan Yusuf

Mentor / e-mail: Richard Ingram / richard.ingram@uky.edu

Abstract: Background: Substantial postpartum weight retention (SPPWR) is a risk factor for later obesity and maternal and neonatal complications in subsequent pregnancies. The WIC program offers support to low-income mothers and children, and this study uses its data to identify the prevalence and predictor SPPWR among Southern California WIC mothers during their first postpartum year. Methods: Design: Secondary data analysis. Setting: The 2020 Los Angeles County WIC Survey. Subjects: Mothers of children up to 1-year-old (N = 1019). Measures: Outcome variable: SPPWR (≥ 5 kg above pre-pregnancy weight). Predictors: child's age, mother's age, race, education, employment status since having child, healthcare coverage, food insecurity, depressed mood, instrumental support, emotional support, spouse's participation in child's life, gestational weight gain (GWG), pre-pregnancy BMI, any breastfeeding, and gestational diabetes. Analysis: Weighted descriptive statistics and binary logistic regression. Results: The prevalence of SPPWR was 31%. We found that for every 1 month increase in the child's age (proxy for postpartum duration), the likelihood of SPPWR increased by 9% (AOR = 1.09, CI = 1.04-1.15). Mothers were more likely to have SPPWR when they exceeded GWG guidelines (AOR = 3.43, CI = 2.46-4.79). Compared to mothers with normal pre-pregnancy BMIs, mothers with overweight (AOR = .64, CI = .44-.94) and obese (AOR = .39, CI = .26-.58) pre-pregnancy BMIs were less likely to experience SPPWR. Conclusion: Postpartum duration and maternal anthropometric characteristics were associated with SPPWR during the first postpartum year. Extending WIC eligibility for postpartum mothers to 2 years through the Wise Investment in Children Act may give WIC providers.

Inaugural Public Health Showcase

Poster Presentation Abstracts (Master's Awards)

#116

Abstract Title: Health Impact Assessment (HIA) of Ford BlueOval SK Battery Plant in Glendale, Kentucky

Student: Megan Damico

Mentor / e-mail: Dr. Florence Fulk / Florence.Fulk@uky.edu

Abstract: A Health Impact Assessment (HIA) is a process that uses scientific data and evidence plus local information to evaluate the possible public health consequences of a pending project, plan, or policy. HIA is both a health promotion and health protection tool and makes recommendations that could minimize potential health impacts and promote health benefits. In spring 2022, we conducted a rapid HIA on the planned Ford BlueOval SK Battery Plant in Glendale, KY. The HIA looked at the plant's potential impacts and how it might affect public health within the community and the surrounding environment. We primarily focused on water quality, air quality, housing, traffic volume, and transportation in the area around where the plant would be. We compiled our research into a paper and a presentation. In November of 2022, we were invited to present our HIA to individuals at the Lincoln Trail District Health Department (LTDHD) and discuss the plant's progress from when we initially conducted the HIA. One outcome from this meeting was that the LTDHD plans to use the information from the HIA in future discussions with the community.

Inaugural Public Health Showcase

Poster Presentation Abstracts (Master's Awards)

#143**Abstract Title:** Out of the Matrix: Utilizing Data Simulation for Public Health Research**Student:** Sarah Jane Robbins**Mentor / e-mail:** Amanda Ellis / amanda.ellis@uky.edu

Abstract: Simulations mirror real-world conditions from the patterns of data. Simulation is a computation tool for many tasks, such as examining random variables, independence, discrete and continuous distributions, confidence intervals, hypothesis testing, and efficient estimators. Furthermore, datasets can be simulated based on statistics of annual surveys and protected data. Despite the benefit of simulations, they are often underutilized in public health research. In this motivating example, practical applications of simulations for public health analyses are illustrated using simulated data by biostatisticians in the Biostat CIRCL. The aim was to mirror the expected responses from the Society of Teachers of Family Medicine's (STFM) annual survey, including a module on physician perceptions of abortion clinical care after the Dobbs vs. Jackson ruling (developed by Biostat CIRCL), using simulations before data acquisition. The purpose was to expedite coding and analyses due to 90 days of research exclusivity before data became publicly available. Variables were simulated randomly to mirror statistics from participants responses administered the prior year, and the new module's data from the potential response options. This method proved an efficient and practical approach to prepare statistical code and data visualizations before the "real" data acquisition.

Inaugural Public Health Showcase

Poster Presentation Abstracts (Doctoral Awards)

#72**Abstract Title:** Race- and Sex-Based Differences in the Increase of Emergency Department Visits for Stimulant-Induced Psychotic Disorder in Kentucky**Student:** Meghan Steel**Mentor / e-mail:** Dana Quesinberry / dana.quesinberry@uky.edu**Abstract:** Purpose: This research investigates differences by race and sex in trends related to emergency department (ED) visits for a stimulant-induced psychotic disorder (StIPD). Methods: Data from the Kentucky Outpatient Services Database Files records the application of ICD-10 codes from ED visits related to StIPD stratified by race and sex for each month from 2016 through 2021. Results: Among white female residents from 2016 to 2021, the rate of ED visits increased significantly over time (IRR = 1.021 per month, $p < 0.001$). Compared to white female residents, black female residents did not have a significantly different rate of ED visits for StIPD in mid-2018 (IRR=0.990, $p=0.935$), but the increase in the rate of ED visits over time was significantly higher among black females (IRR=1.015 per month, $p=0.011$). Compared to white female residents, black male residents had a significantly higher rate of ED visits for StIPD (IRR=2.630, $p < 0.001$), and the increase in the rate of ED visits over time was also significantly higher (IRR=1.018 per month, $p < 0.001$). Compared to white female residents, white male residents had a significantly higher rate of ED visits for StIPD (IRR=1.600, $p < 0.001$), but the rate of change in ED visits was not significantly different (IRR=0.966 per month, $p=0.181$). Conclusion: Black male Kentucky residents saw the greatest monthly increase in visits for StIPD from 2016 to 2021. White female residents had the lowest rate of ED visits for StIPD in 2021, though their rate of increase across the time period was similar to that experienced by White male residents.

Inaugural Public Health Showcase

Poster Presentation Abstracts (Doctoral Awards)

#12

Abstract Title: Associations of potential ADRD plasma biomarkers in cognitively normal volunteers

Student: Taylor Estepp

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Abstract: INTRODUCTION: This study examined the relationships between 13 novel blood-plasma biomarkers and dementia-related demographic and health factors in a cohort of 237 cognitively normal research volunteers whose average age was approximately 82 years old and were 63% female. METHODS: We regressed each biomarker on selected covariates to explore associations between the biomarkers and selected factors to assess whether they may contribute to biomarker values. Post hoc sensitivity analyses were done with updated data and consistent variable sets for robustness and batch effects. RESULTS: Biomarker concentrations were largely not associated with demographics or health conditions, but some expected associations (e.g., APOE with A β 42/A β 40) were observed. Post hoc results remained similar to those of the main analysis. DISCUSSION: The absence of strong associations between the biomarkers with age, gender, or medical conditions suggests that changes in these biomarkers, when observed, may be attributable to neuropathological changes.

Inaugural Public Health Showcase

Poster Presentation Abstracts (Doctoral Awards)

#16

Abstract Title: Interrupted Time Series Design to Evaluate the Impact of the COVID-19 Stay-at-home Orders in Kentucky on the Statewide Trend of Emergency Department Visits for Traumatic Brain Injuries

Student: Dandan Wang

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Abstract: Background: Traumatic brain injury (TBI) is a leading cause of injury-related mortality and morbidity. The purpose of this study was to evaluate the changes in the Kentucky statewide trends for TBI emergency department (ED) visits in relation with the Kentucky COVID-19-related stay-at-home orders. Method: We utilized interrupted time series design and segmented regression model to evaluate the impact of the Kentucky executive order to close non-essential businesses and to re-open them on the statewide trend for TBI ED visits. Results: The segmented regression model identified three distinct segments in the study period. There were estimated 250.11 weekly ED TBI visits at the beginning of Pre-COVID-19 period with a statistically significant decrease of 2.84 visits per week. The estimated weekly ED TBI visits increased significantly by 8.88 per week during the COVID-19 Phase 1. But the weekly increase slowed significantly by 7.22 during the COVID-19 Phase 2 compared with Phase 1. By the end of the study period, the estimated weekly number of ED TBI visits returned to the pre-COVID-19 levels. Conclusion: The COVID-19-related executive orders in Kentucky interrupted the established pre-COVID-19 trends in ED TBI visits. With the re-opening of businesses, the statewide trend for ED TBI visits returned to the pre-COVID-19 levels. In-depth studies are needed to investigate whether the changes in the trend reflected a true decrease in TBI injuries in the initial COVID-19 period and if people did not seek proper TBI care due to closures of health care facilities or concerns for COVID-19 exposure in EDs.
