

---

February 2022

## The American Academy of Health Behavior 2022 Annual Scientific Meeting: "The Science of Health Behaviors in Times of Crises"

Follow this and additional works at: <https://newprairiepress.org/hbr>



This work is licensed under a [Creative Commons Attribution-Noncommercial 4.0 License](https://creativecommons.org/licenses/by-nc/4.0/)

---

### Recommended Citation

(2022) "The American Academy of Health Behavior 2022 Annual Scientific Meeting: "The Science of Health Behaviors in Times of Crises", *Health Behavior Research*: Vol. 5: No. 2. <https://doi.org/10.4148/2572-1836.1159>

This Editorial is brought to you for free and open access by New Prairie Press. It has been accepted for inclusion in Health Behavior Research by an authorized administrator of New Prairie Press. For more information, please contact [cads@k-state.edu](mailto:cads@k-state.edu).

---

## The American Academy of Health Behavior 2022 Annual Scientific Meeting: "The Science of Health Behaviors in Times of Crises"

### Abstract

The American Academy of Health Behavior (AAHB) hosted its 22nd Annual Scientific Meeting at the Baker's Cay Resort in Key Largo, FL March 13-16, 2022. The meeting's theme was "The Science of Health Behaviors in Times of Crises". This publication describes the meeting theme and includes the refereed abstracts presented at the 2022 Annual Scientific Meeting.

### Keywords

AAHB



2022 Annual Conference  
Poster and Presentation List



## **PARENTS' HPV VACCINE DECISION-MAKING FOR ADOLESCENTS: EXPLORING THE ROLE OF SOCIAL MEDIA EXPOSURE AND INFORMATION SEEKING SKILLS**

Erika L. Thompson, Sharice M. Preston, Jenny K. R. Francis, Serena A. Rodriguez, Sandi L. Pruitt, James-Michael Blackwell, & Jasmine A. Tiro

**Objective:** Human papillomavirus (HPV) vaccine uptake is suboptimal in the United States. Parental exposure to HPV vaccination information on social media, prior to a healthcare visit, can affect their vaccine decision-making for their children. Parents' Internet health literacy skills may contribute to how parents use that information when deciding on the HPV vaccine. The purpose of this study was to assess parents' vaccine information seeking, use of Internet verification strategies, and confidence in online HPV vaccination content and how these factors are associated with HPV vaccine decision-making for their adolescent.

**Methods:** A cross-sectional study was conducted in North Texas with parents of adolescents ages 9-17 years (n=1,192). Multinomial logistic regression models were estimated in SAS 9.4 for HPV vaccination decision-making stage: (1) vaccinated (reference group), (2) not vaccinated and undecided or do not want HPV vaccine, and (3) not vaccinated and want the HPV vaccine. Covariates included social media exposure, trust in healthcare providers, Internet verification skills, and demographics.

**Results:** Among the sample, 45% of participants had their child vaccinated for HPV, 39% had an unvaccinated child and did not want the vaccine, and 16% had an unvaccinated child and wanted the vaccine. Parents had increased odds of being in the unvaccinated/unwanted group compared to vaccinated group if they distrusted their healthcare provider (aOR=6.37, 95%CI=3.58-11.32) and disagreed information on social media was credible

(aOR=1.90, 95%CI=1.25-2.87). Parents had decreased odds of being in the unvaccinated/unwanted group compared to vaccinated group with increased Internet verification skills (aOR=0.74, 95%CI=0.62-0.88).

**Conclusions:** Overall, we found that trust in healthcare providers, perceptions of HPV vaccine information credibility on social media, and Internet verification skills were related the HPV vaccine decision-making stage of not wanting the HPV vaccine. Online health literacy skill interventions are needed to assist parents with informed healthcare decisions for HPV vaccination.

## **GUEST SUPPORT FOR SMOKE-FREE POLICIES IN A HOMELESS**

Jayda Martinez, Midhat Z. Jafry, Tzuan A. Chen, Michael S. Businelle, Darla E. Kendzor, & Lorraine R. Reitzel

**Purpose:** About 70% of adults experiencing homelessness smoke cigarettes. Smoke-free living/workplace policies are an empirically-supported tobacco control intervention. However, homeless shelters may be reluctant to implement smoke-free policies due to fears of it discouraging current/potential shelter guests from taking refuge there. The current study was meant to characterize guest support for smoke-free policies within a homeless shelter to provide data on this point.

**Methods:** Participants comprised a convenience sample of adult guests of a homeless shelter in Texas (N=394, 28.17% women, 75.89% smokers). Data collected by self-report included participant characteristics (e.g., sociodemographics, smoking status, severe mental illness and/or non-nicotine substance use disorder diagnosis), perceived stress, and health-related quality of life (HRQoL). Two items assessed guest attitudes regarding support for smoke-free shelter policies: one about a partial smoking ban (smoke-free zone in courtyard) and one about a complete ban (strongly agree or agree versus neutral, disagree, or strongly disagree). Data were



2022 Annual Conference  
Poster and Presentation List



**HBR**  
Health Behavior Research  
Official Journal of AAHB

collected in 2 waves. Logistic regressions, controlling for wave of data collection, examined associations between participant characteristics, stress, HRQoL and policy support.

Results: Overall, 63.96% of participants supported a partial, and 31.98% a full smoking ban. Older participants (OR=1.021, CI0.95=1.003-1.039), non-veterans (OR=2.399, CI0.95=1.144-5.031), non-smokers (OR=2.388, CI0.95=1.393-4.093), and those without severe mental illness (OR=1.821, CI0.95=1.143-2.901) had significantly greater odds of supporting a partial smoking ban. Only non-smokers (OR=5.328, CI0.95=3.250-8.736) had significantly greater odds of supporting a complete smoking ban.

Conclusion: The implementation of smoke-free living/workplace policies in homeless shelters may enjoy more support from guests – specifically, non-smokers – than anticipated by shelter administrators. Aside from reducing ambient smoke exposure for non-smokers, these policies can help to reduce ubiquitous smoking cues for those who may want to quit or are undergoing a quit attempt. Interventionists might partner with guests, particularly non-smokers, to inform the roll-out of such policies for maximal acceptance and adoption.

### **PROVIDERS' PERCEPTIONS AND KNOWLEDGE OF STATE-LEVEL POLICIES AND NATIONAL GUIDELINES FOR SYPHILIS SCREENING DURING PREGNANCY**

Kaeli C. Johnson, Ashlyn Kinard, Meaghan Nelsen, Nolan Kline, Erika L. Thompson, & Stacey B. Griner

Background: Syphilis infections during pregnancy are associated with miscarriage, stillbirth, birth defects, and infant death. Syphilis during pregnancy and congenital syphilis rates have been increasing since 2012. State-level policies and national guidelines recommend the testing of all pregnant people for syphilis infections to prevent these outcomes; however, little is

known about provider perceptions of these policies and recommendations. The purpose was to assess perceptions, knowledge, and practice behaviors of physicians in relation to the prenatal syphilis policies and guidelines.

Methods: We recruited prenatal providers (MD/DO; n=201) via an online survey panel. We assessed knowledge of state-level prenatal syphilis screening policies (correct /incorrect, based on state screening requirements) and preference for national guidelines. Prenatal providers indicated how often they discuss and recommend syphilis screening with their prenatal patients and how likely they were to incorporate syphilis screening if a state-level policy (0-10) or a guideline from their professional organization (0-10). Frequencies, descriptive statistics, and bivariate analyses were conducted in SPSS.

Findings: Over 84% of prenatal providers did not correctly identify their state-level syphilis policies. Most participants (75%) selected the American College of Obstetricians and Gynecologists as their preferred guideline source. Physicians who were correct about their state-level syphilis policies were more likely to incorporate syphilis screening into practice if it was a state policy (mean=9.6) than those who were incorrect (mean=9.1; p=0.037). There was no significant difference in the likelihood of adopting syphilis screening between state policies versus organizational guidelines (p=0.1380). Implications: We noted low awareness and knowledge of state-level prenatal syphilis screening policies among providers. It remains unclear if providers are using national guidelines or state-level policies to implement screening recommendations into clinical practice and decision-making processes. Future studies should analyze the sources of guidelines/policies and identify dissemination strategies to inform providers of recommended prenatal screening practices. Implementation of these recommendations into practice improve syphilis screening during pregnancy.



2022 Annual Conference  
Poster and Presentation List



### **SOCIAL COHESION/TRUST IS ASSOCIATED WITH SMOKING STATUS AMONGST ADULTS EXPERIENCING HOMELESSNESS**

Rachel D. Roberts, Haleem A. Brown, Tzuan A. Chen, Michael S. Businelle, Ezemenari M. Obasi, Darla E. Kendzor, & Lorraine R. Reitzel

**Purpose:** Adults experiencing homelessness face myriad daily struggles that can affect their feelings of connectedness/belongingness to their community and their trust in peers with whom they interact and share sheltered residence. Prior research indicates that lower social cohesion/trust has been found amongst domiciled adults who smoke relative to non-smokers; however, whether this association generalizes to sheltered/displaced adults - where smokers are the majority and not the minority – is heretofore unknown.

**Methods:** Participants comprised a convenience sample of 203 adults (24.14% female) experiencing homelessness who were recruited from a homeless shelter in Texas. Participants self-reported sociodemographic information and smoking status (current smoker or not current smoker). Social cohesion/trust was measured with a modified 5-item scale based on Sampson and colleague's work, which queried participant's beliefs about how "People at the [shelter]..." are willing to help, are trustworthy, are close-knit, share values, and get along, each on a scale of strongly disagree (1) to strongly agree (5). Higher scores indicate greater social cohesion/trust. A logistic regression controlling for age, sex, race, education, income, employment status, health insurance, and lifetime length of homelessness assessed the association between social cohesion/trust and smoking status.

**Results:** Overall, 86.7% of participants were current smokers. The mean score for social cohesion/support was 14.53 (+2.70) for the whole sample, 14.38 (+2.72) amongst smokers and 15.48 (+2.39) those who were not smokers. Results indicated that lower

social cohesion/trust was associated with a greater likelihood of being a current smoker (AOR=1.271, CI.95=1.032-1.565).

**Conclusion:** The known association of low social cohesion/trust with smoking found in domiciled adults translates to homeless adults. Lower social cohesion/trust has been previously linked with "miniaturization of community," or more constrained social networks/activities that support continued smoking. Consequently, future work might examine how expanding homeless smokers' networks with pro-cessation advocates can impact social cohesion/trust, and ultimately facilitate cessation.

### **EFFECTIVENESS OF CHRONIC DISEASE SELF-MANAGEMENT EDUCATION (CDSME) PROGRAMS TO REDUCE LONELINESS**

Matthew Lee Smith, Eunice Chen, Christy Ann Lau, Dianne Davis, June Simmons, & Ashley L. Merianos

**Background:** With about half of older adults reporting feelings of loneliness, interventions are needed to improve connectedness among the aging population. The health benefits of small-group Chronic Disease Self-Management Education (CDSME) programs are well documented, but the workshops' ability to reduce loneliness remains unknown. The purpose of this study was to assess the effectiveness of in-person CDSME programs to reduce loneliness scores among participants living with chronic conditions.

**Methods:** A community-based organization in California recruited participants to attend English- and Spanish-language CDSME workshops between September 2018 and January 2020. Using the 3-item Campaign to End Loneliness Measurement Tool, we examined 295 CDSME participants' loneliness changes before and after the 6-week in-person workshops. We conducted generalized estimating equations (GEEs) with an exchangeable structure to fit repeated-measures linear regression models



2022 Annual Conference  
Poster and Presentation List



to assess changes in loneliness scores from baseline to 6-weeks among participants.

Results: On average, participants were age 74.3( $\pm$ 8.9) years and self-reported 3.3( $\pm$ 2.2) chronic conditions. The majority of participants were female (83%) and attended workshops in English (77%). About 32% of participants were Black, with 23% being Asian, 18% White, and 27% another race or multiple races; 27% were Hispanic. Significant reductions in loneliness were observed from baseline to post-workshop (3.16 vs. 2.08;  $\beta$ =-1.01,  $p$ <0.001). Participants who were younger ( $\beta$ =-0.03,  $p$ =0.025), Asian versus White (mean difference=-1.57,  $p$ <0.001), and had more chronic conditions ( $\beta$ =0.17,  $p$ =0.006) had more pronounced improvements in loneliness from baseline to 6-weeks. Reductions in loneliness were universal across CDSME workshop type and language.

Conclusions: Findings expand our understanding about the benefits of small-group CDSME workshops to reduce loneliness among participants. CDSME workshops may reduce loneliness because of their highly interactive and process-driven format and ability to create bonds between participants with chronic conditions and shared experiences. Additional efforts should examine the effects of virtual CDSME workshops on loneliness.

### **MEASURING IMPACT OF STORYLINE ENGAGEMENT WITH A HEALTH-FOCUSED SERIAL DRAMA: AN ONLINE EVALUATION STUDY IN WEST AFRICA**

Phillip Massey, Matthew Kearney, Alexandre Rideau, Adam Peterson, Jessica Gipson, Roch Nianogo, Marta Bornstein, Michael Prelip, & Deborah Glik

Purpose: "C'est la Vie!" (CLV) is a serial drama that entertains, educates, and promotes positive health behaviors and social change for West African audiences. The purpose of this study was to evaluate the impact of health content discussed in CLV

Season 2, focusing on populations in francophone West Africa.

Methods: Between July 2019 and October 2019, viewers of CLV and non-viewers were recruited from Facebook and YouTube. We conducted an online longitudinal cohort study that assessed changes in health knowledge, attitudes, and norms (KAN) between these groups. Participants completed a baseline survey prior to the online airing and up to three follow ups corresponding to specific health stories in the series, including sexual violence, emergency contraception, and female circumcision. We used descriptive statistics to describe viewers and non-viewers, and item response theory (IRT) to identify the effect of viewing CLV on overall KAN.

Results: A total of 1,674 respondents participated in the study. One in four participants (23%;  $n$ =388) had seen one of the three storylines from CLV Season 2. At follow up, viewers were more likely than non-viewers to know when to correctly use emergency contraception ( $p$ <.001), to believe that the practice of female circumcision should end ( $p$ =.001) and that it can lead to death ( $p$ <.001). When examining overall KAN, compared to people who did not see CLV, viewers of the series had 26% greater odds of correctly answering questions about sexual assault, emergency contraception, and female circumcision. Further, the level of engagement with specific storylines was associated with differential impact on overall outcome questions.

Conclusion: Our study demonstrated the feasibility of assessing storyline impact of a health-focused drama among online audiences in West Africa. As internet access continues to grow across the globe, our study provides a novel approach to examining the impact of online health programming.



2022 Annual Conference  
Poster and Presentation List



## **IMPACT OF SODA TAX ON BEVERAGE PRICE, SALE, PURCHASE, AND CONSUMPTION IN THE US: A SYSTEMATIC REVIEW AND META-ANALYSIS OF NATURAL EXPERIMENTS**

Ruopeng An, Jing Shen, & Fan Yang

**Background:** As a primary source of added sugars in the US diet, sugar-sweetened beverage (SSB) consumption is presumed to contribute to obesity prevalence.

**Objective:** We conducted a systematic review and meta-analysis to systematically synthesize and quantify evidence from US-based natural experiments concerning the impact of SSB taxes on beverage prices, sales, purchases, and consumption.

**Participants/setting:** Keyword/reference search was performed in PubMed, Web of Science, Cochrane Library, Scopus, and EconLit. Eligibility criteria included: (1) Participants: consumers, stores, or beverage items within US taxing jurisdictions that implemented a soda tax; (2) Interventions: SSB excise tax (soda tax); (3) Comparisons: consumers, stores, or beverage items outside US taxing jurisdictions that implemented a soda tax; (4) Outcomes: beverage prices, sales, purchases, and consumption; (5) Study design: natural experiment; and (6) Time window of search: from the inception of a bibliographic database to March 1, 2021.

**Results:** Twenty-six natural experiments, all adopting a difference-in-differences approach, were included. Studies assessed soda taxes in Berkeley, Oakland, and San Francisco in California, Philadelphia in Pennsylvania, Boulder in Colorado, Seattle in Washington, and Cook County in Illinois. Tax rates ranged from 1-2 ¢/oz. Soda tax implementation was associated with increased prices of SSBs by 1.10 ¢/oz (95% confidence interval=0.95-1.25), reduced purchases of SSBs by 29.2% (16.4%-42.1%), and reduced consumption of SSBs by 22.0% (9.4%-34.7%). The soda tax pass-through rate was 80.8% (63.0%-98.5%). A 1 ¢/oz increase in soda tax rate was

associated with increased prices of SSBs by 0.95 ¢/oz (0.35-1.54).

**Conclusions:** Soda taxes could be effective policy leverage to nudge people towards purchasing and consuming fewer SSBs. Future research should examine evidence-based classifications of SSBs, more targeted use of revenues generated by taxes to reduce health and income disparities, and the feasibility of redesigning the soda tax to improve its efficiency.

## **COMFORT IN THE TIME OF COVID: PATIENT-PROVIDER COMMUNICATION FOR PRENATAL COVID-19 VACCINE UPTAKE**

Stacey B. Griner, Julia Aiken, Kaeli C. Johnson, Annalyn Galvin, Ashvita Garg, Idara Akpan, & Erika L. Thompson

**Introduction:** COVID-19 vaccination is recommended for all people 12 years and older, including people who are pregnant, breastfeeding, trying to get pregnant now, or might become pregnant in the future. Data suggests COVID-19 infections at delivery can result in significant maternal and neonatal complications, and emerging evidence points toward COVID-19 vaccination being available to pregnant women. This project assessed prenatal providers' practice behaviors related to discussion and recommendation of COVID-19 vaccines.

**Methods:** In June 2021, we sampled 201 prenatal care providers (MD/DO; obstetrician/gynecologists) using an online survey to assess the proportion of pregnant patients with whom they discussed or recommended COVID-19 vaccination. Providers rated their comfort recommending vaccination and patient receptivity on a 1-10 scale, with higher numbers indicating more comfort or patient receptiveness. Using R, we conducted univariate analyses, chi-square tests, Fisher's Exact Tests, and t-tests to assess relationships. A p-value of <.05 was considered significant.

**Results:** Most providers (85%) discussed and recommended (83%) COVID-19



2022 Annual Conference  
Poster and Presentation List



vaccines to their prenatal patients. Providers rated their comfort recommending COVID-19 vaccines to pregnant patients highly (mean=8.5; SD=2.4); however, they gauged patient receptivity slightly lower (mean=6.4; SD=2.4). COVID-19 vaccine discussion with a higher proportion of patients (>51%) was related to higher provider comfort (mean=8.9; SD=2.0) and higher patient receptivity (mean=6.7; SD=2.3) compared to those discussing the vaccine with <50% (means=6.4 and 4.7, respectively;  $p<0.000$ ). Providers recommending COVID-19 vaccines to >51% of their patients reported more comfort (mean=9.2; SD=1.3) and patient receptivity (mean=6.8; SD=2.1) than those who recommended it to fewer patients (means=5.2 and 4.6, respectively;  $p=0.000$ ). Discussion: Results suggest that physician's comfort discussing COVID with their patients and outcome expectancies for that conversation are related to behavior. Further exploring the role of patient-provider communication in COVID-19 vaccine uptake among prioritized populations can guide provider and system-level interventions to reduce COVID-19-related maternal and neonatal complications.

### **THE ASSOCIATION BETWEEN PERCEIVED STRESS AND OBESITY-ASSOCIATED INFLAMMATORY MARKERS IN MINORITY CHILDREN**

Velia M. Nunez, Jazmine Victoria, Myriam Forster, Marc J. Weigensberg, Claudia M. Toledo-Corral

Purpose: Psychosocial stress has been linked to physiological dysregulation of the body's inflammatory response system and such alterations to the inflammatory response can have long-term, deleterious effects on the health outcomes of children. Despite the important health implications, few studies have examined the role of perceived stress and inflammation response in minority children. The aim of this study is to investigate the relationship between perceived stress and obesity-associated

inflammatory markers (adipocytokines) in children.

Methods: Cross-sectional data from Diabetic Risk due to Ectopic Adiposity in Minority youth (DREAM) study (N=245) was used. Study participants were from the greater Los Angeles area, between 8 – 17 years old, African American and Latino, and had a body mass index classifying them as overweight or obese. Adipocytokines measured using Luminex technology from fasting serum samples included hepatocyte growth factor (HGF), interleukin-1, interleukin-6, interleukin-8, leptin, nerve growth factor, monocyte chemoattractant protein-1, and tumor necrosis factor alpha. Perceived stress was measured with Perceived Stress Scale-14. Linear regression models assessed the relationship between perceived stress and adipocytokines.

Results: An increase in perceived stress was associated with a significant 9.21pg/mL decrease in HGF, controlling for age, sex, BMI, and race/ethnicity ( $\beta = -9.21$ ; 95% CI: -17.54, -0.88;  $p=0.030$ ). There was no relationship between perceived stress and other adipocytokines.

Conclusion: The role of HGF in stress, obesity and disease is still not well understood, however there is evidence that shows HGF may have anti-inflammatory effects. Our results suggest that higher perceived stress may associate with lower anti-inflammatory effects, via lower HGF in minority youth with overweight and obesity. Next steps will focus on assessing whether HPA axis may serve as a mediator in the relationship between perceived stress and adipocytokines, as a large body of evidence has shown that HPA axis dysregulation due to stress can alter the physiological inflammatory response.





2022 Annual Conference  
Poster and Presentation List



## **PSYCHOSOCIAL DETERMINANTS OF CHANGE IN ELECTRONIC NICOTINE DELIVERY SYSTEMS AND CANNABIS USE IN LOW-INCOME EMERGING ADULTS DURING THE COVID-19 PANDEMIC**

Wura Jacobs, Kwinchan Jeon, Ashley L. Merianos, Erika Westling, Melvin N. Wilson, & Daniel S. Shaw

**Background:** Particularly among low-income emerging adults, there are preliminary indications that the COVID-19 pandemic and associated mitigation efforts caused an increase in cannabis and electronic nicotine delivery systems ([ENDS] such as e-cigarettes, vape pens, mod pods, personal vaporizers) use. Thus, the current study assessed the associations between changes in ENDS and cannabis use patterns during the COVID-19 pandemic with potential psychosocial factors.

**Methods:** Data were obtained via online surveys in January/February 2021, from a diverse sample of emerging adults participating in the Early Steps Multisite Study (N=320; 58.4% female, Mean age=18.67, SD=0.57). Participants reported changes in their ENDS and cannabis use (increase, decrease, no change, no use) since March 2020, when pandemic restrictions began in the US, as well as their current symptoms of depression, anxiety, loneliness, financial stress, and perceived social support.

**Results:** Almost 40% of participants reported cannabis use, and 34% reported ENDS use since March 2020. Higher depression and anxiety scores were associated with higher likelihood of reporting an increase in ENDS (aOR=1.07, 95%CI=1.03-1.11 and aOR=1.04, 95%CI=1.01-1.07, respectively) use. Higher depression and anxiety scores were associated with higher odds of reporting increased (aOR=1.11, 95%CI=1.07-1.15 and aOR=1.09, 95%CI=1.06-1.12 respectively) or sustained (aOR=1.05, 95%CI=1.01-1.09 and aOR=1.03, 95%CI=1.002-1.07 respectively) cannabis use. Higher financial stress scores

were associated with higher odds of reporting increased cannabis use (aOR=1.06, 95%CI=1.01-1.11). Social support from family was associated with lower odds of reporting increased (aOR=0.76, 95%CI=0.62-0.93) cannabis use.

**Conclusion:** Depressive symptoms, anxiety, and financial stress are important contributors to cannabis and ENDS use escalation during the COVID-19 pandemic. Low-income emerging adults are particularly vulnerable to the psychosocial toll of the pandemic, highlighting the need for targeted programs to prevent youth substance use escalation during future disasters or infrastructure disruption.

## **ANALYZING TWITTER CHATTER ABOUT TOBACCO USE WITHIN INTOXICATION-RELATED CONTEXTS OF ALCOHOL USE: “CAN SOMEONE TELL ME WHY NICOTINE IS SO FIRE WHEN YOU'RE DRUNK?”**

Alex M. Russell, Jason B. Colditz, Adam E. Barry, Robert E. Davis, Shelby Shields, Juanybeth M. Ortega, & Brian Primack

**Introduction:** Alcohol and tobacco are commonly used together. Social influences within online social networking platforms contribute to youth and young adult substance use behaviors. This study used a sample of alcohol- and tobacco-related tweets to evaluate: (1) sentiment toward co-use of alcohol and tobacco, (2) increased susceptibility to tobacco use when consuming alcohol, and (3) the role of alcohol in contributing to a failed attempt to quit tobacco use.

**Methods:** Data were collected from the Twitter API from 2019-01-01 through 2019-12-31 using tobacco-related keywords (e.g., vape, ecig, smoking, juul\*) and alcohol-related filters (e.g., drunk, blackout\*). A total of 78,235 tweets were collected, from which a random subsample (n = 1,564) was drawn for coding. Cohen's Kappa values ranged from 0.66-0.99.



2022 Annual Conference  
Poster and Presentation List



**Results:** Most tweets were pro co-use of alcohol and tobacco (75%). One of every ten tweets reported increased susceptibility to tobacco use when intoxicated. Non-regular tobacco users reported cravings for and tobacco use when consuming alcohol despite disliking tobacco use factors such as the taste, smell, and/or negative health effects. Regular tobacco users reported using markedly higher quantities of tobacco when intoxicated. Individuals discussed the role of alcohol undermining tobacco cessation attempts less often (2.0%), though some who had quit smoking for prolonged periods of time reported reinitiating tobacco use during acute intoxication episodes.

**Conclusions:** Tobacco cessation interventions may benefit from including alcohol-focused components designed to educate participants about the association between increased susceptibility to tobacco use when consuming alcohol and the role of alcohol in undermining tobacco cessation attempts.

**PROMOTING CANCER HEALTH EQUITY: A QUALITATIVE STUDY OF MENTEE AND MENTOR PERSPECTIVES OF A TRAINING PROGRAM FOR UNDERREPRESENTED SCHOLARS IN CANCER HEALTH DISPARITIES**

Anastasia Rogova, Isabel Leal Martinez, Maggie Britton, Shine Chang, Kamisha H. Escoto, Kayce Solari Williams, Crystal Roberson, Lorna H. McNeill, & Lorraine R. Reitzel

**Background:** Women and individuals from minoritized groups remain underrepresented in cancer disparities research despite racial/ethnic linkages to higher cancer risk, incidence, and mortality rates. We examine a 1–2-year, NCI-funded program – a collaboration between a minority-serving research university and a comprehensive cancer center – to train underrepresented/minority scholars and encourage their pursuit of careers in cancer-related and cancer disparities research. We qualitatively explored diverse mentees’

(undergraduate, graduate, postdoctoral fellows) and mentors’ program experiences and perspectives to identify effective strategies to diversify this workforce.

**Methods:** We undertook an exploratory, qualitative study, conducting face-to-face, online interviews between June–August 2021, with 15 mentees (2 males) and 7 mentors (2 males). Two analysts employed thematic analysis and constant comparison to code, categorize, and summarize data into themes.

**Results:** Mentees and mentors shared 5 themes identifying contributions to program success: 1) conditions for building successful mentoring relationships: clear communication and expectations, commitment, compassion and understanding; 2) role of mentor/mentee similarities or differences and their impact on effective collaboration; sex and being first-generation students outweighed race/ethnicity; 3) program elements that fostered developing knowledge, skills, and confidence among students underrepresented in the sciences; 4) program supportive opportunities: networking, funded scholarship, peer support, community service; 5) challenges and benefits of in-person vs virtual program delivery. Most mentees found program participation decisive in defining their career path and academic success. Compared to other mentees, mentors highly rated program mentees’ motivation and ability to pursue a career in research and/or health care.

**Conclusions:** Mentees and mentors reported that this training program was successful; their views were essential to evaluating program effectiveness and enhancing program design, implementation, advancement, and equity. These findings contribute to improving the quality of training/mentorship programs for historically excluded trainees to advance their cancer disparities research careers and offers a successful model that can guide similar programs.



2022 Annual Conference  
Poster and Presentation List



**HBR**  
Health Behavior Research  
Official Journal of AAHB

## **MINIMUM DISTANCE REQUIREMENTS ARE NOT SUFFICIENT FOR PREVENTING THE INEQUITABLE DISTRIBUTION OF LIQUOR STORES IN A LOWER-INCOME, LARGE NORTHEASTERN CITY**

Anna Greer

**Background:** Minimum distance requirements are common zoning policies used to regulate the location of liquor stores. Minimum distance requirements typically limit the distance between liquor stores themselves and the distance between liquor stores and sensitive uses (e.g., school and churches). Cities often use these policies to avoid inequities in liquor store distribution. In 1995, a large lower-income Northeastern city increased the minimum distance requirement between liquor stores themselves and liquor stores and sensitive uses from 250 feet to 1500 feet.

**Purpose and Methods:** Using Geographic Information Systems (GIS) and publicly available US Census Bureau data, we compared the median household income (MHI) and percent of households below the poverty threshold (%HH<PT) between census tracts which included and did not include liquor stores before (1995) and twenty years after the increased minimum distance requirement policy was implemented (2017). Descriptive and t-test statistics were used.

**Results:** There were 38 liquor stores in 1995 and 37 in 2017. Prior to the 1995 policy change, there were no significant differences in MHI (\$32,339 versus \$32,516) and PT (16.91% versus 20.51%) between those census tracts with and without liquor stores ( $p>.05$ ). Twenty years after the policy was implemented (2017), there were. Specifically, census tracts containing liquor stores have a lower MHI (\$40,598 versus \$59,898,  $p<.05$ ) and a higher %HH<PT (26.74% versus 16.77%,  $p<.05$ ) than census tracts without liquor stores.

**Conclusion:** The findings indicate that the minimum distance requirement policy was not sufficient to prevent inequities in liquor store distribution. Policymakers should

consider more comprehensive liquor outlet zoning policies which require the examination of census tract/neighborhood characteristics before new liquor store outlets are approved.

## **HOW TO MEASURE MID-ADULT HPV VACCINATION KNOWLEDGE?**

Ashvita Garg, Christopher W. Wheldon, Christopher, Annalynn M. Galvin, Annalynn, Jonathan D. Moore, Jonathan, Stacey B. Griner, & Erika L. Thompson

**Purpose:** As of 2019, adults ages 27-45 can receive the HPV vaccine based on a shared decision with their healthcare provider. This places an onus on the patient to discuss HPV vaccination with their provider, deeming HPV vaccine knowledge essential to initiate the conversation. Previous HPV vaccine knowledge scales have focused on young adults or parents of vaccine eligible adolescents. Therefore, this study aimed to develop and validate a mid-adult HPV vaccine knowledge scale informed by the latest vaccine recommendations.

**Methods:** A cross-sectional survey was distributed to an online panel of HPV-unvaccinated U.S. adults ages 27-45 ( $n=706$ ) in April-May 2020. The sample was randomly split in half for exploratory and confirmatory factor analyses to identify latent constructs in a 13-item mid-adult HPV vaccine knowledge scale. We assessed sociodemographic differences in knowledge levels using ANOVA and t-tests. Analyses were conducted in SAS v.9.4 and R.

**Results:** On average, participants had an HPV knowledge score of 5.9 ( $SD=2.8$ ; range=0-13). With good construct validity and reliability, the exploratory and confirmatory factor analyses identified a three-factor structure for the HPV vaccine knowledge items. These factors included: (1) HPV infection (e.g., HPV is a sexually transmitted infection; 6-items); (2) HPV vaccination prevention (e.g., HPV vaccine works better if you have never had sex, 3-items); and (3) HPV vaccine misinformation (e.g., HPV vaccine only works for kids and



2022 Annual Conference  
Poster and Presentation List



teenagers, 4-items). HPV vaccine knowledge differed significantly by sex, race, educational level, annual income, health insurance, and marital status.

Conclusions: This knowledge scale can be used for U.S. mid-adults to assess HPV vaccination knowledge. This mid-adult HPV vaccine knowledge scale can measure basic knowledge important for informed decision-making. The results from this study will help guide future adaptation and development of HPV vaccine knowledge scales and compare the psychometric properties of this scale to other knowledge scales.

### **AN ANALYSIS OF SOCIAL MEDIA DISCOURSE SURROUNDING EXCLUSIONARY POLICIES FOR TRANSGENDER STUDENT ATHLETES IN SCHOOL-SPONSORED SPORT AND PHYSICAL ACTIVITY**

Andrew C. Pickett & Danny Valdez

Purpose: Recent policies enacted in multiple states have reduced transgender student athletes' access to interscholastic sport. This study explores social media posts related to such bans in school sport, to highlight the politicized nature of trans athletes' physical activity participation.

Methods: We collected a dataset of 18,593 tweets related to anti-trans athlete orders passed in Florida and South Dakota between March and July 2021. We used Latent Dirichlet Allocation to identify topics. Then, using unsupervised natural language processing tools (Cognitive Distortion Schemata [CDS], Valence Aware Dictionary and SEntiment Reasoner [VADER] and Linguistic Inquiry and Word Count [LIWC]) we examined sentiment and psychological indicators in posts.

Results: Themes across the dataset related to biological sex, muscle mass, inclusiveness, and trans visibility, among others. Evidence of cognitive distortions (i.e., rigid/biased/irrational thinking) were present in 39.7% of the tweets. Sentiment was bimodal, with negatively and positively framed tweets (VADER= -.5 and .5) being

more common than neutral (VADER= 0). LIWC indicated generally high levels of authority (i.e., confidence/ certainty in the post; M= 69.3, SD= 23.4) and analysis (i.e., logical, consistent thinking; M= 69.8, SD= 26.8), but low levels of authenticity (i.e., personal, self-revealing terminology; M= 18.9, SD= 23.3).

Conclusions: Online discourse surrounding trans athlete bans was highly polarized. This was evident in the LDA, which revealed supportive (e.g., importance of visibility, inclusion) and adverse (e.g., unfair, oppose) attitudes towards trans athletes and athletic bans. Tweets often contained confident, declarative statements rather than more authentic, self-revealing posts. Exclusionary policies seem to be developed with little concern for trans athletes' access to healthy activity and social development. Rather, our findings suggest the discourse around trans athletes' participation rarely reflects the perspective of the athletes themselves and is highly politicized.

### **LIFE COURSE SOCIAL CONNECTEDNESS, MARITAL TRANSITIONS, AND PHYSICAL ACTIVITY IN LATER LIFE**

Elizabeth Teas, Kristine Marceau, & Elliot Friedman

Purpose: Social relationships are beneficial for health. They are also dynamic, and types and quality of social connections change over time. The purpose of this study was to determine whether social connectedness across the life course and marital transitions predict physical activity (PA) in later life.

Methods: Data are from the longitudinal Midlife in the United States study (MIDUS; n=6909; Mage=46.91). To determine life course social connectedness at Wave 1, retrospective reports of parental affection and discipline and current reports of social support, social strain, and positive relations with others (PRWO) were used to derive latent profiles. A 4-profile solution best represented the data: the largest group (reference; n=3549) had affectionate



2022 Annual Conference  
Poster and Presentation List



parental relationships, high social support, and high PRWO); the smallest group (n=715) had the least parental affection, social support, and PRWO; two profiles had average scores on all domains, but one group had low support (n=888) and the last group had very low PRWO (n =1757). The latent groups were used to predict physical activity (self-reported moderate/vigorous activity; Wave 2) in a linear regression model (Mplus). Marital transitions between waves (divorce, widowhood) were included to capture potential times of relationship-related crises. Covariates included sex, race/ethnicity, education, marital status at baseline, smoking, and alcohol abuse.

Results: Compared to the reference group, the two groups with very low social support ( $\beta = -.12$ ,  $p < .01$ ) and PRWO ( $\beta = -.08$ ,  $p < .01$ ) also had less PA. Experiencing divorce ( $\beta = .17$ ,  $p < .001$ ) predicted greater PA, whereas experiencing widowhood predicted less PA ( $\beta = -.33$ ,  $p < .001$ ).

Conclusions: Warm, supportive relationships across the life course are favorably associated with PA. Moreover, while experiencing widowhood is detrimental to PA, experiencing divorce may be beneficial for PA (contrary to hypotheses). Overall, results highlight the value of life course perspectives on social connectedness and marital transitions in predicting PA in later life.

### **SOCIAL INFLUENCE ON FAD DIET USE: A SYSTEMATIC REVIEW OF THE LITERATURE**

Mandy N. Spadine & Megan S. Patterson

Background: A fad diet is a broad term used to describe dieting methods that recommend altering the intake of macronutrients to specific proportions or instruct people to intake or avoid particular foods, often with the goal of rapid weight loss. Previous literature reviews report social influence impacts general diet behavior (e.g., eating unhealthy food with friends; changing eating behavior because of family members), but have yet to examine fad diets, specifically. Therefore,

the purpose of this systematic review was to synthesize literature related to social influence on an individual's fad diet use and understand the sociocultural factors related to diet use.

Methods: Using PRISMA guidelines, Medline, PsycInfo, Embase, CINAHL, and CENTRAL databases were searched to identify articles investigating the impact of social influence (e.g., social media use, interpersonal relationships) on fad diet use. Covidence was used to manage the review process and Garrard's Matrix Method was used to extract data from reviewed articles (n=13).

Findings: A majority of reviewed studies examined interpersonal influence (62%) and reported social influence impacting a variety of fad diet behaviors (92%). Interpersonal and media influence were highlighted as motivating factors for adopting unhealthy dieting methods (54%), and studies showed interpersonal support impacted adoption and maintenance of fad diet use (23%). Also, social norms were reported to influence unhealthy weight control behaviors (15%).

Discussion: Findings suggest fad diet use and/or adoption is impacted by various forms of social influence. Interpersonal influence was the most commonly reported factor impacting someone's decision to follow a specific fad diet, indicating a need to further investigate social network dynamics relative to fad dieting. Specifically, understanding how individual-level (e.g., body dissatisfaction) and interpersonal-level (e.g., composition of someone's network who fad diets) factors associate with fad diet use is needed.



2022 Annual Conference  
Poster and Presentation List



## **EVALUATING CHANGES IN BELIEFS ABOUT HPV VACCINATION AMONG ONLINE AUDIENCES OF THE WEST AFRICAN HEALTH SERIES "C'EST LA VIE!"**

Matthew Kearney, Darren Barefoot, Alexandre Rideau, Deborah Glik, & Philip Massey

**Purpose:** The purpose of this study was to evaluate a simultaneously released storyline and Facebook campaign promoting HPV vaccination for viewers of the West African health education series C'est La Vie! (CLV). We assessed the storyline and campaign's impact on audience knowledge and behavioral intentions in order to inform future social media content about the HPV vaccine. **Methods:** We recruited participants on Facebook to complete pre/post cross-sectional surveys. Participants were randomized to one of four exposure conditions: HPV-related videos, HPV-related ads, both, or neither. Surveys assessed knowledge and attitudes about HPV, whether participants had seen CLV content on Facebook, and participant demographics. We utilized an age- and gender-matched case-control analysis to build multivariable logistic regression models for HPV knowledge and attitudes.

**Results:** The matched analysis included 3,828 from baseline and 777 from endline (5:1 ratio). Compared to participants who did not see HPV content, participants who saw HPV content had 94% higher odds of knowing that HPV was a virus that caused cervical cancer (OR=1.94;  $p<.001$ ) and 64% higher odds of knowing there was a vaccine to prevent cervical cancer (OR=1.64;  $p<.001$ ). Participants who saw HPV content had 69% higher odds of intending to vaccinate their child against HPV (OR=1.69;  $p<.001$ ). Facebook's audience insights tool showed the typical CLV viewer was between 18 and 34 years old, completed high school and/or attained a university degree, and lived primarily in an urban setting.

**Conclusions:** Regardless of type of content (i.e., ads, videos, or both), participants who

remembered seeing CLV HPV content on Facebook demonstrated greater changes in knowledge and behavioral intention. Taking together survey findings and Facebook insights, CLV's production team adjusted their online content to better cater to their primary viewership and address knowledge gaps. Online evaluations may also enable researchers to continue ongoing work disrupted due to COVID-19.

## **EFFECT OF FREQUENT SOCIAL MEDIA USE ON INTERNALIZING MENTAL HEALTH PROBLEMS IN A REPRESENTATIVE PANEL SAMPLE OF U.S. ADOLESCENTS: A LATENT GROWTH CURVE MODELING APPROACH TREATMENT FOR ADOLESCENT SUBSTANCE USE DISORDERS: TRENDS AND DISPARITIES BY SOURCES OF SERVICE**

Shieun Lee, David K. Lohrmann, Juhua Luo, & Angela Chow

**Purpose:** This study examined the relationship between frequent social media use and subsequent mental health in a representative sample of U.S. adolescents. Also investigated were sex differences in multi-year growth trajectories of mental health problem internalization relative to social media use.

**Methods:** Four waves (2013-2018) of nationally representative, longitudinal Population Assessment of Tobacco and Health data were analyzed. A total of 5,114 U.S. adolescents aged 12-14 years at baseline had repeated data across all waves. Statistical analysis involved testing a series of sequential weighted single-group and multi-group latent growth curve models (LGCMs) using R version 3.6.2.

**Results:** Of the 5,114 respondents, 2,491 were girls (48.7%). The percentage of frequent social media use was 26.4% at Wave 1 and 69.1% at Wave 4 for boys compared to 38.3% and 80.6% for girls ( $p < 0.001$ ). Boys showed an improving (-0.218,  $p=0.005$ ) but girls showed a deteriorating linear trend (0.229,  $p=0.028$ ) for mental



2022 Annual Conference  
Poster and Presentation List



health at the full multi-group LGCM. Social media use accounted for mental health conditions across Wave 1 to 3 for boys ( $p < 0.01$ ) but only at Wave 1 for girls ( $p = 0.035$ ). With the addition of the social media use variable alone, model fit dramatically improved, and residual variances of growth patterns (i.e., random effect) became nonsignificant for boys. Substantial sex differences existed in baseline status, directionality, and shape of mental health growth trajectories as well as interplay of social media use with other factors.

Conclusions: Social media use appears to affect adolescent mental health negatively and substantially.

### **THE ASSOCIATION OF SOCIAL MEDIA USE AND VACCINE HESITANCY DURING PREGNANCY**

Abigail Rodriguez-Ramirez, Ricardo Garcia-Rodriguez, Ana L. Melchor-Orozco, David E. Hinojosa-Gonzalez, Gloria P. Rodriguez-Gomez, Alejandro Fernandez-Gomez, Melchor Cantu-Santos, & Diego Ramonfaur

Introduction: Coronavirus disease 2019 (COVID-19) vaccination is a safe and effective approach to prevent infection, even among pregnant women. Vaccine intervention success depends not only on its effectiveness, but also its acceptance by the population. Vaccine hesitancy is defined as “the delay in acceptance or refusal of vaccination despite availability of vaccination services”. Social media (SoMe) is an important source of information among the young. Its role in vaccine hesitancy or acceptance among pregnant women is unclear.

Methods: A cross-sectional survey to assess SoMe exposure and sources of information among pregnant women in September 2021 was conducted. Those who attended a regular follow-up appointment or were admitted to labor and delivery were surveyed using an electronic tablet at a maternity hospital in north Mexico. The survey inquired about the sociodemographic characteristics,

SoMe use and sources of information. Vaccine hesitancy was defined as not having received a COVID-19 vaccine and either being undecided or declining to be vaccinated during pregnancy. Univariate and a multivariate logistic regression models adjusting for age and urban living were employed to estimate the association between SoMe time and vaccine hesitancy. Results: 912 responses were recorded. 531 (58%) had been previously vaccinated, 15% were underage. Median weeks of gestation was 37 +/- 7. Median number of hours dedicated to SoMe was 2 +/- 2, SoMe as primary source of COVID-19 information was reported by 27%. Among the unvaccinated, 181 (48%) were undecided, and 117 (30%) denied wanting to get vaccinated during pregnancy. In our cohort, higher SoMe time per day was associated with less vaccine hesitancy (OR 0.88 [0.81-0.97],  $p = 0.011$ ). Multivariate analysis yielded similar estimates.

Conclusions: SoMe is an impactful source of information among pregnant women. Efforts to deliver relevant and accurate information regarding the pandemic and vaccines through this means may inform decision-making in the population.

### **COVID-19 PERSPECTIVES AMONG PREGNANT WOMEN AND RISK FOR VACCINE HESITANCY**

Ana L. Melchor-Orozco, Ricardo Garcia-Rodriguez, Abigail Rodriguez-Ramirez, David E. Hinojosa-Gonzalez, Gloria P. Rodriguez-Gomez, Alejandro Fernandez, Melchor Cantu-Santos, & Diego Ramonfaur

Introduction: Vaccine hesitancy (VH) is highly prevalent among many populations and represents a public health threat, especially amid the coronavirus disease 2019 (COVID-19) pandemic. Pregnant women are at increased risk of severe COVID-19, although limited data on safety and efficacy in this population may beget VH. Describing and understanding perspectives among vaccine hesitant individuals may



2022 Annual Conference  
Poster and Presentation List



inform policy and decision making to address VH.

**Methods:** We conducted a cross-sectional study to assess VH and COVID-19 perspectives among pregnant women in September 2021. We surveyed patients attending regular follow-up appointments or those who were admitted to labor and delivery at a maternity hospital in Monterrey, Mexico. Survey items included demographics, and personal, and obstetric/gynecological history. We defined VH as not having received a COVID-19 vaccine and either being undecided or declining to be vaccinated during pregnancy. Vaccinated individuals were excluded from analyses. Unadjusted and adjusted logistic regression models adjusting for age were employed to estimate the association between COVID-19 perspectives and VH.

**Results:** 1,041 responses were recorded, 431 (41%) were unvaccinated, and 177 (17%) had VH. The largest age group (44%) was between 18-24 years. Median weeks of gestation was 37 (IQR 32-39). In bivariate analysis, items associated with risk of VH were: belief that 1) COVID-19 variants are not more dangerous (n=568 [54%]; OR 1.49 [1.07–2.08]), 2) COVID-19 vaccines are not effective (n=113 [11%]; OR 5.9 [3.9–9.1]), 3) COVID-19 vaccines may affect fertility (n=106 [10%]; OR 3.53 [2.29–5.44]), and 4) COVID-19 vaccines are a threat to their unborn child (n=221 [21%]; OR 9.72 [6.79–13.9]). Estimates were similar in adjusted models.

**Conclusions:** VH is highly prevalent among pregnant women. Our study disentangles beliefs and rationale behind VH among pregnant women. Addressing these beliefs may improve vaccine uptake and aid transmission and COVID-19-related complications among pregnant women.

### **INSIGHTS TO ADDRESSING COVID-19 VACCINE HESITANCY AMONG UNDERAGED PREGNANT WOMEN**

Ricardo Garcia-Rodriguez, Ana L. Melchor-Orozco, Abigail Rodriguez-Ramirez, David E. Hinojosa-Gonzalez, Gloria P. Rodriguez-

Gomez, Alejandro Fernandez, Melchor Cantu-Santos, & Diego Ramonfaur

**Introduction:** Coronavirus disease 2019 (COVID-19) in pregnant women is associated with worse prognosis and risk of obstetrical complications. Global consensus endorses routine vaccination for pregnant women. Nevertheless, vaccine hesitancy remains a problem, hampering vaccination efforts especially among the young. Our study aims to describe COVID-19 and vaccination perspectives among underage pregnant women.

**Methods:** A survey to assess sociodemographic factors, and COVID-19 vaccine perspectives was applied to pregnant women who attended a regular follow-up appointment or were admitted to labor and delivery at a third level maternity hospital in Mexico during the weekdays for 4 weeks starting in mid-September, via an electronic tablet. Vaccine hesitancy was defined as being unvaccinated and declining to be vaccinated during pregnancy. Underage was defined as being less than 18 years of age. Results of logistic regression models to assess the relationship between being underage and perspectives of COVID-19 and vaccination are expressed as (Odds Ratio (OR) [95% Confidence Intervals]).

**Results:** A total of 912 pregnant women responded to the survey; 134 (15%) were underage, of these, 4% had received a COVID-19 vaccine, and 60% reported having received other vaccines during pregnancy. 97% reported being homemakers, and 8% having finished high school. Being underage was associated with a higher likelihood of vaccine hesitancy, but also of being influenced by incentives and by social restrictions (OR 10.2 [6.6-15.4]; 1.8 [1.16-2.03]; 1.4 [0.97-2.03], respectively). Results for the likelihood of believing vaccination affects fertility, pregnancy being a risk factor for severe COVID-19, and that vaccines are effective interventions were non-significant compared to their adult counterparts.

**Conclusions:** Underage pregnant women have an increased likelihood of being





2022 Annual Conference  
Poster and Presentation List



vaccine hesitant. However, they may be more prone to policy interventions such as social restrictions or monetary incentives to accept the vaccine.

### **NARRATIVE CHARACTERISTICS OF A STORY TO PROMOTE HIV TESTING AMONG AFRICAN AMERICAN WOMEN IN THE SOUTH**

Alyssa G. Robillard & Chelsea Perry

**Purpose:** Black women account for 55% of women newly diagnosed with HIV. Prevention remains critical to reduce HIV incidence. The Model of Culture-Centric Narratives in Health Promotion posits that story effectiveness is based partly on cultural resonance. The purpose of this pilot study was to preliminarily assess the relationship between narrative characteristics of an HIV prevention story and HIV testing intentions in a sample of African American women.

**Methods:** This cross-sectional pilot study recruited a convenience sample of African American women (N=51) to complete a web-based survey after listening to an audio story entitled, "I Knew Better." Study measures included: narrative characteristics, identification, transportation, social proliferation, and behavioral intentions for HIV testing.

**Results:** The sample varied in age and was highly educated (80% reporting a Bachelor's degree or higher). Approximately 61% had either never been married, or were separated, widowed, or divorced. Over 50% reported being somewhat or very likely to get tested for HIV after hearing the story. Women who were not married were significantly more likely to report an intention to get tested after hearing the story. Ordinal logistic and generalized linear regressions were conducted on HIV testing intentions after hearing the story. Covariates included perceived HIV risk, HIV testing history, marital status, and education. Perceived HIV risk, transportation, and social proliferation were significant positive predictors of HIV testing intentions. Higher scores on each

were associated with increased odds of getting tested after listening to the story.

**Conclusions:** This pilot study suggests story resonance with the sample. Transportation, social proliferation and perceived risk emerged as factors significantly related to HIV testing intentions. Findings regarding social proliferation suggest narratives may be a useful tool for story diffusion within this population.

### **DO LAW ENFORCEMENT COUPLES EXPERIENCE MORE MISCARRIAGES: A PRELIMINARY STUDY**

Aspen E. Streetman, Ainslie Kehler, Filip Kukić, Jennifer Miller, Katie M. Heinrich

**Purpose:** We examined preliminary data on pregnancy complications and outcomes in law enforcement couples versus law enforcement officers (LEOs) whose partners did not work in law enforcement. We hypothesized that the risk of miscarriage would be higher in LEO couples, likely due to adverse effects of both partners' occupational behaviors (e.g., shift work, occupational stress, environmental exposure).

**Methods:** An online cross-sectional survey was completed by female LEOs. Participants were current U.S. LEOs, aged 18-65, and had at least one pregnancy during their time of service. Survey data included demographics, details about female officers' pregnancies including complications and outcomes, and occupational behaviors.

**Results:** Of the 275 individuals who accessed the survey link, 162 participants screened into and completed the survey. Fifty (31%) participants indicated their partner was also a LEO. The total sample miscarriage rate was 19.1%. In first pregnancies, 10 (20%) LEO couples experienced miscarriages. Similarly, LEO's with non-law enforcement partners (n = 61) reported 10 miscarriages (16%). Second pregnancies (n = 44) fared better for LEO couples, with 4 (9%) miscarriages. Nine miscarriages (20%) were reported in second pregnancies (n = 45) of officers with non-law



2022 Annual Conference  
Poster and Presentation List



enforcement partners. Differences were not significant between groups. The most common occupational exposures were shift work (64% and 62% for first and second pregnancies, respectively) and stress (46% and 50% for first and second pregnancies, respectively).

Conclusions: Having a LEO partner did not result in greater miscarriage rates than those who did not, although the overall sample did have a higher miscarriage rate than the general U.S. population (10%). Law enforcement is a highly stressful and potentially dangerous occupation, although having a partner who was a LEO in this sample did not increase miscarriage risk. Allowances that protect the health and well-being of pregnant officers and their unborn children must be encouraged.

#### **FACTORS ASSOCIATED WITH INCREASED SOCIAL RISK OF EXPECTANT MOTHERS SEEN AT A COMMUNITY HEALTH CENTER**

Abbie B. Luzius, Maya Merriweather, Page D. Dobbs, Savannah N. Busch, & Olivia L. James

Purpose: The purpose of this study was to assess the relationship between potential risk factors and social determinants of health (SDoH) among expectant mothers seen at a Community Health Center (CHC).

Methods: This retrospective study analyzed patient data of 345 patients who visited a CHC between January 2019 and December 2020. Level of SDoH risk was measured using the Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE) tool, with risk level ranging from low, moderate, high, and urgent. Chi-square analyses were completed to explore relationship exists between the levels of risk and potential risk factors (i.e., mothers' age, race/ethnicity, educational attainment and preferred language). Next, a multivariate logistic regression examined the association between each risk factor and SDoH (indicated as above low risk).

Results: Those who were Hispanic and those who preferred to speak to their healthcare provider in Spanish had 2.35 and 5.39 times the odds, respectively, as English speakers of having a PRAPARE score that measured moderate, high or urgent risk levels of SDoH. Further, when controlling for other risk factors, expectant mothers' who had not completed high school were at increased odds (aOR=7.38) of moderate-urgent-level SDoH. The analysis did not find significance in mothers' age for those with low or greater risk.

Conclusions: With the goal of improving health equity and positive health outcomes, CHCs across the country are screening patients to better understand the impact of SDoH. This study found expectant mothers are at an increased risk of having greater social needs if they are Hispanic, prefer to speak Spanish, and did not complete high school. By identifying indicators that increase social risk level, CHCs can connect patients in need to social services that will support the social needs of the mother and ultimately the health of the mother and child.

#### **PERCEIVED DISEASE RISK AND CESSATION INTERVENTION PREFERENCES BY SEX AMONGST HOMELESS ADULT CONCURRENT TOBACCO PRODUCT USERS AND CONVENTIONAL CIGARETTE-ONLY USERS**

Haleem A. Brown, Rachel D. Roberts, Tzuan A. Chen, Michael S. Businelle, Ezemenari M. Obasi, Darla E. Kendzor, & Lorraine R. Reitzel

Purpose: Homeless individuals smoke conventional cigarettes and engage in concurrent tobacco product use at very high rates; however, little is known about how use patterns, perceived disease risk, and smoking cessation intervention preferences differ by sex in this group. The current study was meant to redress this gap.

Methods: Participants comprised a convenience sample of 626 adult conventional cigarette smokers (CCS; 32.1%



2022 Annual Conference  
Poster and Presentation List



women) experiencing homelessness. Participants were asked about their smoking history, mental health and substance use diagnosis history, other concurrent tobacco product use (CU), disease risk perceptions, and preferences regarding tobacco cessation interventions. Chi-square and t-tests were used to examine differences between concurrent tobacco product users and smokers-only in sex-stratified analyses. Results: CU rates were 58.1% amongst men and 45.3% amongst women CCS. In both sexes, CUs starting smoking earlier ( $p < .001$ ) and were more likely to have been diagnosed with a non-nicotine substance use disorder ( $p < .014$ ) relative to CCS. Among men only, CU were younger, smoked more cigarettes per day, and were more likely to identify as White ( $p < .003$ ) than CCS. Male CUs reported a greater risk of developing smoking-related diseases if they did not quit for good and were less likely to prefer medications to quit smoking relative to male CCS ( $p < .04$ ). On the other hand, female CUs reported a greater risk of developing smoking related diseases even if they quit for good ( $p < .05$ ) and did not differentially prefer any cessation medication over others. Both sexes endorsed “cold turkey” (vs. medications/counseling) as their best option to successfully quit smoking.

Conclusion: Findings confirm high rates of CU among both sexes of adults experiencing homelessness, characterize those who may be more likely to be CUs, and reveal opportunities to educate homeless men and women on the benefits of evidence-based interventions for smoking cessation.

**NEGOTIATING CANCER ALONE: A QUALITATIVE STUDY EXPLORING CANCER CARE DISRUPTIONS AMONG RACIALLY AND ETHNICALLY DIVERSE WOMEN DIAGNOSED WITH BREAST CANCER DURING COVID-19**

Isabel Martinez Leal, Chiara Acquati, Anastasia Rogova, Tzuan A. Chen, Shahnjayla Connors, Arooba A. Haq, Nicole Jacobs, Pooja Agrawal, Lorna H. McNeill, & Lorraine R. Reitzel

Background: The COVID-19 pandemic has disrupted the delivery of cancer care services and contributed to significant reductions in the rates of cancer screenings, diagnoses, and surgeries. The resulting altered care protocols have significantly impacted Black and Hispanic/Latinx women who already suffer more aggressive and advance stage breast cancer tumors due to interacting social and biological determinants. This study qualitatively explored a sample of diverse women’s experiences of undergoing breast cancer care during the COVID-19 pandemic.

Methods: Adopting an exploratory, qualitative design, 15 breast cancer patients (4 Black, 4 Hispanic/Latinx, and 7 White) participated in online semi-structured interviews from March–November 2021. A grounded theory approach guided data analysis of the processes informing women’s experiences of receiving treatment for breast cancer during COVID-19.

Results: All women prioritized promptly treating breast cancer, yet feared hospital/provider visits, given their increased COVID-19 vulnerability and exposure. Our core category exemplified the process of “negotiating cancer alone,” uniting women’s experiences of their cancer journey as disrupted, defined, and strained by COVID-19 isolation/social distancing measures. These disruptions included: 1) psychological distress – as women negotiated significant markers in their cancer journey (diagnosis, medical appointments, surgery, treatment) unaccompanied, without loved ones’ immediate support – despite reporting strong social networks; 2) provider/healthcare system delays in diagnosis and treatment; 3) heightened anxiety about treatment delays causing cancer progression; and 4) supportive care limitations, including the absence of peer support groups and burdensome caregiver COVID-19 precautions, restricting social interactions. Black and Hispanic women described greater delays in care, financial challenges, and insurance limitations relative to non-Hispanic White women.



2022 Annual Conference  
Poster and Presentation List



**HBR**  
Health Behavior Research  
Official Journal of AAHB

**Conclusions:** Women experienced significant effects on their psychological well-being and cancer care trajectory because of the pandemic. This study illustrates pandemic-related psychological, healthcare system and health equity challenges that should be addressed to deliver equitable and patient-centered breast cancer care in a post-acute COVID-19 environment.

### **CAN YOU HEAR ME? A CRY FOR (MENTAL) HEALTH**

Kombe Kapatamoyo

African migrants represent a vulnerable population within the context of the COVID-19 pandemic. This study explored the impact of the pandemic on educational experiences of African international students in the United States between March, 2020 and May, 2021. In addition, I explored the impact of the pandemic on their mental health and what, if any, measures they took to stabilize their mental health. This qualitative case study was conducted virtually with a sample of 13 participants. Structured interviews lasted, on average, 30 minutes. Following data coding, results showed that social isolation, social distancing protocols, navigating visa policies, and rules of remote learning were prominent themes. I also found that African international students felt ignored and overlooked regarding their mental health during the pandemic. The pandemic undeniably impacted African international students. This study highlights the need for increased focus on the mental health needs of African international students at universities.

### **CHARACTERIZING THE #PHYSICALACTIVITY COMMUNITY ON TWITTER BEFORE AND DURING COVID-19**

Zachary S. Farley, Kalyn McDonough, Elizabeth A. Richards, & Carissa R. Smock

**Introduction:** Twitter, a microblogging service allowing users to generate short message

content (i.e. Tweets) and use hashtags to link content—creating online communities—enables dissemination of health information. The objective of this study is to examine Twitter's #PhysicalActivity community for content characteristics, including differences in community response before and during the COVID-19 pandemic.

**Methods:** A thematic analysis of #PhysicalActivity tweets from before (March 2019–February 2020) and during the COVID-19 pandemic (March 2020–February 2021) was conducted using a codebook developed with relevant content from CDC's Clear Communication Index and evidence-based tools. Tweets were double-coded for characteristics of users, community response, tweet elements, and intended audience. T-tests examined differences in NET-response (replies + retweets + likes) between COVID-19 and comparison year(s). **Results:** Most tweets (N = 400) were from personal accounts (80%) followed by organizational accounts (15%). Over half (52.2%) were from account handles indicating a professional degree (e.g., PhD, Dr., and Professor). Some tweets gave behavioral recommendations (29.3%) of which (56.8%) provided rationale. Nearly all tweets (95.3%) used at least two tweet components (e.g., text, photo, and links) with text (77.1%) and photos (38.3%) most common. Most often, the general public was the intended audience (50.7%), followed by health professionals (46.8%). Half of tweets (48.8%) were from the pandemic year; 27.7% contained references to COVID-19. NET-response was greater during COVID-19 (M = 139.6, SD = 156.8) than pre-COVID-19 (M = 116.8, SD = 105.1) however not statistically significant (p = 0.091).

**Conclusions:** The COVID-19 pandemic increased barriers to safe PA. The Twitter platform provided an opportunity for dissemination of PA evidence and ideas while adhering to public health recommendations to #StaySafeStayHome. Our findings help to provide an overview of this online community to support future research of how PA information and evidence can be disseminated.



## IMPLEMENTATION AND OUTCOMES OF A COMPREHENSIVE TOBACCO-FREE WORKPLACE PROGRAM IN OPIOID TREATMENT CENTERS IN TEXAS

Vijay Nitturi\*, Matthew Taing\*, Tzuan A. Chen, Bryce Kyburz, Isabel Martinez Leal, Virmarie Correa-Fernandez, Ezemenari M. Obasi, Teresa Williams, Kathleen Casey, Daniel P. O'Connor, Litty Koshy, Maggie Britton, Kelli Drenner & Lorraine R. Reitzel

\* Shared co-first authorship

**Purpose:** Tobacco use is exceedingly high among individuals receiving care for opioid addiction (~84-94%) but not commonly addressed by clinicians in treatment settings. Taking Texas Tobacco Free (TTTF) is a comprehensive tobacco-free workplace program that builds treatment centers' capacity to address tobacco use with evidence-based tobacco cessation policies and practices. Here, we examine the process and outcomes of the TTTF program's implementation within 7 opioid addiction centers serving >100,000 adults annually.

**Methods:** Pre- and post-implementation data were collected from client-facing and non-client facing employees to assess changes in education, training receipt, knowledge, and intervention behaviors. Centers also reported whether tobacco screenings were conducted and nicotine replacement therapy (NRT) was delivered through 6 months post-implementation.

**Results:** 64.56% of employees across centers participated in TTTF-delivered tobacco education, with a 54.9% knowledge gain ( $p < 0.0001$ ). Employees had significant increases in exposure to education about tobacco use and its harms among individuals with opioid use disorder ( $p = 0.0401$ ). There were significant gains in clinicians' receipt of training in 9/9 tobacco education areas ( $p \leq 0.0118$ ). From pre- to post-implementation, there were increases in the use of the 5A's (ask, advise, assess, assist, and arrange) and other evidence-based interventions for tobacco cessation, with statistically significant gains seen in NRT

provision/referral ( $p < 0.0001$ ). While one center withdrew due to competing COVID-19 concerns, the remainder implemented 100% tobacco-free workplace policies and reported conducting tobacco screenings and dispensing NRT through 6 months post-implementation. Most program goals were achieved or exceeded; however, only 50% of centers participated in specialized clinical trainings (e.g., Motivational Interviewing), falling short of the 100% goal.

**Conclusion:** Overall, the TTTF program improved participating opioid treatment centers' capacity to address tobacco use and may serve as a model for future tobacco control efforts in similar settings. Such efforts could reduce the disproportionately higher smoking rates among individuals with opioid use disorder.

## SEXUAL HEALTH VULNERABILITY AMONG LATINX ADULTS IN THE UNITED STATES: USING LATENT CLASS ANALYSIS FOR STI PREVENTION

Alice Ma

**Purpose:** Vulnerability to poor sexual health among Latinx adults in the United States (U.S.) is poorly understood, despite high sexually transmitted infection (STI) rates. The purpose of this study was to examine how vulnerability typologies differ in their STI preventive behaviors.

**Methods:** Using secondary data from the 2016 National Health Interview Survey, latent class analysis was conducted to test the association between sexual health vulnerability and HIV testing, hepatitis testing or vaccination, and HPV vaccination from a subsample of Latinx adults. Sexual health vulnerability was operationalized using seven indicators across four domains that were grounded in literature, theory (the General Model of Vulnerability), existing evidence from prior work, and social determinants of health: socioeconomic stability (employment status), health care access (health insurance coverage and routine care), psychosocial characteristics



2022 Annual Conference  
Poster and Presentation List



**HBR**  
Health Behavior Research  
Official Journal of AAHB

(social support, mental health, and alcohol use), and personal characteristics (gender).

**Results:** Three latent classes emerged: Under-Employed Females with Health Care Access, Slightly Under-Employed Females with Some Health Care Access, and Employed Males without Health Care Access. Slightly Under-Employed Females with Some Health Care Access were associated with lack of HIV testing, hepatitis B and C testing, and HPV vaccination. Employed Males without Health Care Access were associated with lack of HIV testing and HPV vaccination.

**Conclusions:** The Latinx community is often considered and measured as a homogenous group, despite evidence that the health of Latinx subgroups differs by sociodemographic, ethnic, and cultural characteristics. This study presents one tool to uncover and understand the heterogeneity of a population, so that subgroups who may be more highly impacted by poor sexual health outcomes may be identified. Our study found that sexual health vulnerability among Latinx adults in the U.S. may be associated with certain STI preventive behaviors, which can inform and refine future sexual health promotion programming.

### **PREDICTORS OF STEALTH VAPING AMONG COLLEGE STUDENTS ON TOBACCO-FREE CAMPUSES: AN APPLICATION OF THE THEORY OF PLANNED BEHAVIOR**

Meng Yang, Alex M. Russell, Adam E. Barry, Ashley L. Merianos, & Hsien-Chang Lin

**Purpose:** E-cigarettes have gained popularity among college students. Studies have shown some college students “stealth vape” on tobacco-free campuses where e-cigarette use is prohibited. Studies have also revealed that passive vapers are also exposed to the risk of harmful e-cigarette chemicals through second-hand e-cigarette aerosols. Following the Theory of Planned Behavior (TPB), this study aimed to investigate whether the TPB constructs (i.e., attitudes, subjective norm, and perceived

behavioral control) were associated with on-campus stealth vaping behaviors among U.S. college students.

**Methods:** College student participants aged 18-26 were recruited from four American universities with policies prohibiting the use of all forms of tobacco on campus (N=863) in the fall of 2020. On-campus stealth vaping behaviors were captured by past 30-day stealth vaping status and frequency. Adjusted hurdle models along with logistic and negative binomial regressions were conducted to explore the aforementioned associations, controlling for participant sociodemographics and e-cigarette dependency.

**Results:** Participants with more positive attitudes toward stealth vaping were more likely to practice stealth vaping on campus (OR=1.16,  $p<0.01$ ). Participants who believed more people around them stealth vaped were more likely to stealth vape on campus more frequently (IRR=1.03,  $p<0.01$ ). Perceived behavior control was not significantly associated with past 30-day stealth vaping status and frequency ( $ps=0.441$  and  $0.475$ , respectively).

**Conclusions:** Attitudes toward and subjective norm of stealth vaping were significantly associated with on-campus stealth vaping behavior. Results highlight the need to intervene on students’ attitude and normative belief about stealth vaping on campus. Efforts should be made to educate college students about the risk of e-cigarette use to both vapers and their bystanders. It is also imperative to enhance enforcement of campus tobacco policies aiming to reduce on-campus stealth vaping.

### **STRESSFUL LIFE EVENTS AND POLYSUBSTANCE USE AMONG U.S. LATE MIDDLE-AGED AND OLDER**

Tzung-Shiang Ou, Lesa Huber, Jonathan Macy, & Hsien-Chang Lin

**Purpose:** Concerns have been raised regarding polysubstance use among middle-aged and older adults. Although stressful life events are shown as a risk factor of general



2022 Annual Conference  
Poster and Presentation List



substance use, few studies have explored the association between stressful life events and polysubstance use. This study identified polysubstance use clusters and their associations with stressful life events among U.S. late middle-aged and older adults, and how gender moderates the associations.

**Methods:** Adults aged 50 and older (N=14,738) from the National Epidemiological Survey on Alcohol and Related Conditions Wave 3 were included. Latent class analysis was conducted to identify the clusters of past-year polysubstance use (examined substances included use of marijuana, excessive alcohol, and cocaine, as well as misuse of prescription painkillers, sedatives/tranquilizers, and stimulants). Weighted generalized structural equation modeling along with multinomial logistic regressions was conducted to investigate the associations between stressful life events and polysubstance use clusters.

**Results:** Three different polysubstance use clusters (no/low use; marijuana and excessive alcohol use; painkiller, sedative, or/and tranquilizer misuse) were identified. Higher levels of stressful life events were associated with co-use of marijuana and excessive alcohol as well as co-use of prescription painkillers and sedatives/tranquilizers (ORs=1.33, 1.65, respectively; both  $p < .001$ ). Gender moderated the association between stressful life events and co-use of painkillers and sedatives/tranquilizers.

**Conclusions:** Substance use interventions should incorporate polysubstance use behaviors. Our findings also suggested that stressful life events should be taken into account when identifying at-risk populations of polysubstance use as well as designing gender-specific substance use prevention programs for late middle-aged and older adults.

## HOUSEHOLD TOBACCO USE AND PARENTAL PERCEPTIONS OF SCHOOL SAFETY FOR U.S. CHILDREN

Ashley L. Merianos, Matthew Lee Smith, & E. M. Mahabee-Gittens

**Purpose:** Tobacco use is one of the largest U.S. population health issues. Research indicates families of lower socioeconomic status live in less safe neighborhoods, which can be associated with other environmental hazards. This study examines the association of household tobacco use and other child characteristics with parents' perceptions of safe school environments among U.S. school-aged children

**Methods:** Children ages 6-11 years were included in this secondary analysis of 2018-2019 National Survey of Children's Health data (N=17,300). Parents reported whether they believed their child was safe at school using a 4-point scale ranging from "definitely agree" to "definitely disagree." Household tobacco use documented if the child lived with a smoker and, if yes, did they smoke outside or inside the home. Other covariates included the child's age, sex, and race/ethnicity; the parent's education; the family's household structure and federal poverty level. A weighted adjusted ordinal logistic regression model was fitted.

**Results:** Concerning household tobacco use, 13.2% of children lived with a smoker who smoked outside the home and 1.7% lived with a smoker who smoked inside the home. Compared to children who did not live with a smoker, children who lived with a smoker who smoked outside (AOR=0.77, 95%CI=0.61-0.97) or inside the home (AOR=0.62, 95%CI=0.39-0.99) were less likely to be safe at school. Additionally, children who were younger (AOR=0.95, 95%CI=0.91-0.99), Hispanic (AOR=0.64, 95%CI=0.51-0.80), lived in a single parent household (AOR=0.78, 95%CI=0.64-0.95), and had a poverty level of 200-299% (AOR=0.71, 95%CI=0.57-0.89), and had a poverty level of 300-399% (AOR=0.73, 95%CI=0.58-0.93) were less likely to be safe at school.



2022 Annual Conference  
Poster and Presentation List



Conclusions: Intervention efforts are needed to enhance parental awareness about environmental risks that can influence the health of their children, especially related to home and school environments within less affluent communities.

### **STAY-AT-HOME, SAFE AT HOME? A SURVEY OF PARENTAL HOME SAFETY PRACTICES BEFORE AND DURING THE COVID-19 PANDEMIC**

Kristin Roberts, Rebecca McAdams, & Lara McKenzie

Purpose: The objective of the study was to describe parental safety perceptions and confidence, safety device purchase and installation, and injury prevention practices and behaviors, in homes with children  $\leq 6$  years of age, before and during the COVID-19 stay-at-home order.

Methods: A cross-sectional survey with a convenience sample of US participants,  $\geq 18$  years, was conducted from November 2020 to February 2021. Parents of children ( $\leq 6$  years) were recruited via social media posts on Facebook and Twitter and invited to complete an anonymous, online survey about their home safety practices before and during the COVID-19 stay-at-home order. Upon completion, parents could participate in a drawing to receive a \$100 gift card.

Results: A total of 499 participants completed the survey. Most (47.9%) were 45-54 years of age and reported their time at home increased for them (93.9%) and their children (90.6%) during the stay-at-home period. Parents considered their homes safe (36.9%) but recognized room for improvement and felt confident in their ability to make their homes safe for their children (72.8%). From the time before until the COVID-19 stay-at-home orders were in place, parents increased their home injury prevention practices (42.3%). Parents that had identified unsafe areas in the home before the stay-at-home order were significantly more likely to increase their safety behaviors, take childproofing actions, and purchase or install safety devices during

the stay-at-home order ( $p < 0.0001$ ). Parents with younger children were significantly more likely than parents with older children to take childproofing actions ( $p < .0001$ ) including purchasing and installing safety devices ( $p < 0.0001$ ).

Conclusions: Spending more time at home during the COVID-19 pandemic may have helped parents, especially those with younger children, identify unsafe areas in their home and encouraged them to modify their behaviors, and purchase and install safety devices to help make their homes safer for their children.

### **ASSOCIATION BETWEEN INCLUSION OF E-CIGARETTES IN STATEWIDE COMPREHENSIVE SMOKE-FREE INDOOR AIR LAWS AND VAPING BEHAVIORS: RESULTS FROM A LONGITUDINAL POPULATION STUDY**

Meng Yang, Alex Russell, & Hsien-Chang Lin

Purpose: Several states have included e-cigarettes in their comprehensive smoke-free indoor air laws (i.e., aerosol-free policies), prohibiting the use of e-cigarettes—in addition to combustible tobacco products—in workplaces, restaurants, and bars. However, whether these policies contribute to reductions in e-cigarette use remains largely unknown. This study utilized a nationally representative longitudinal sample to examine the association between the implementation of statewide aerosol-free policies and e-cigarette use behaviors.

Methods: This longitudinal retrospective study implemented a quasi-experimental design. Waves 1-4 data (2013-2018) from adult participants (weighted  $N = 22,838,787$ ; unweighted  $N = 8,663$ ) in the Population Assessment of Tobacco and Health (PATH) study were analyzed. The generalized difference-in-difference approach along with weighted hurdle and multinomial logistic regressions were conducted to examine the associations between aerosol-free policies and three measures of e-cigarette use (past 30-day e-cigarette use status and number of





2022 Annual Conference  
Poster and Presentation List



use days, and use frequency) pre- and post-policy implementation.

**Results:** Results indicated there were not statistically significant differences in e-cigarette use behaviors between participants living in states with and without the aerosol-free policies (ps ranged from 0.301 to 0.831), considering pre- and post-policy implementation.

**Conclusions:** Findings indicated that the effectiveness of the aerosol-free policies on e-cigarette use behaviors was not supported by longitudinal national data. States that have implemented aerosol-free policies should make pertinent efforts to enhance the awareness of these policies and to strengthen their enforcement. Future investigation into e-cigarette use in places where it is prohibited and implications with regard to effectiveness of aerosol-free policies is warranted.

#### **CHARACTERISTICS AND ADOPTION OF JUUL-LIKE DISPOSABLE E-CIGARETTES AMONG COLLEGE STUDENT E-CIGARETTE USERS: A QUALITATIVE STUDY**

Su-Wei Wong, Ganghui Suh, & Hsien-Chang Lin

**Purpose:** JUUL-like disposable e-cigarettes (e.g., Puff Bar, AirBar) which are all-in-one, self-contained e-cigarette devices, have emerged as a popular type of e-cigarette product to young people in recent years. Additionally, these products are currently not subject to the federal flavor restriction. This study investigated the attributes that drive the adoption of JUUL-like disposable e-cigarettes among college student e-cigarette users.

**Methods:** A total of 30 college-attending e-cigarette users who had used JUUL-like disposable e-cigarettes from a Midwestern (n=15) and two Southern state universities (n=6 and 9) participated in this study. A semi-structured in-depth interview was conducted for each participant. Audio recordings were transcribed and analyzed following a hybrid process of inductive thematic approach. This

study adopted the Diffusion of Innovation (DOI) Theory to guide construct selection, theme emergence, and interview instruments; additional themes emerged from collected data.

**Result:** The primary reasons that college student e-cigarette users adopted JUUL-like disposable e-cigarettes include the wider range of flavor selection, stronger physical sensation (e.g., “hit” or “buzz”, palatability), and better convenience of these products (e.g., no need to recharge battery or refill e-liquid). However, users also experienced inconvenience such as unpredictable lifespan and low quality of these products. Additionally, perceived acceptability and perceived regulation enforcement also contributed to the adoption of disposable e-cigarettes. This study also found word of mouth emerged as the main communication channel in JUUL-like disposable e-cigarette adoption.

**Conclusions:** We identified themes such as better convenience, heightened physical sensation, increased perceived availability, higher public exposure, and more flavors of JUUL-like disposable e-cigarettes that drove the adoption among college students. DOI constructs were proven applicable for identifying the aforementioned product characteristics. Our findings shed light on a deeper understanding of the e-cigarette product characteristics that may be appealing to young adult users, which may inform future e-cigarette product regulation and surveillance.

#### **COMPARING DETERMINANTS OF PHYSICAL ACTIVITY PARTICIPATION BETWEEN NORMAL AND OVERWEIGHT MILITARY SPOUSES**

Shannon Speed, Paul Branscum, & Alice Gresla

**Purpose:** Many factors relate to the etiology of obesity, and physical activity (PA) is among the most important modifiable behaviors. The Department of Defense spends approximately \$2.1 billion annually in medical care for military beneficiaries, and



2022 Annual Conference  
Poster and Presentation List



overweight and obesity are among the top concerns. To offset this health issue, there are national guidelines for both aerobic and muscular strengthening PA, but many U.S. adults do not meet these recommendations. Research that highlights the social, cognitive and environmental determinants of physical activity among military spouses is greatly needed. Therefore, the purpose of this study was to evaluate theory-based determinants of aerobic and muscle-strengthening PA among female military spouses, using the Reasoned Action Approach (RAA).

**Methods:** Participants were recruited via social media to complete a self-reported online valid and reliable survey measuring the RAA constructs for aerobic and muscle strengthening PA. Separate regression models were used to predict intentions of both types of physical activity for normal and overweight/obese military spouses. The following served as independent variables for each model: instrumental attitudes, experiential attitudes, injunctive norms, descriptive norms, capacity and autonomy.

**Results:** Overall, the RAA constructs predicted a significant amount of the variance for both aerobic intentions [normal weight (adjusted R-squared=0.449) and obese/overweight (adjusted R-squared=0.464) spouses] and muscular strengthening intentions [normal weight (adjusted R-squared=0.521) and obese/overweight (adjusted R-squared=0.510) spouses].

**Discussion:** This study contributes to literature by examining theory-based determinants of aerobic and muscle-strengthening PA among normal weight and overweight/obese military spouses using the RAA. Results indicate interventions should differ by normal weight and overweight/obese female military spouses due to differences in predictors of PA. It would be useful to test these findings in experimental studies evaluating the effectiveness of intervention program designs to create PA adherence based on normal weight versus overweight/obese military spouses.

## **EXAMINING THE IMPACT OF CLASS STANDING ON BYSTANDER INTERVENTION INTENTIONS TO PREVENT SEXUAL ASSAULT: APPLICATION OF THE REASONED ACTION APPROACH**

Paul Branscum, Sarah Rush Griffin, & Christine L. Hackman

**Background:** Sexual violence disproportionately impacts first-year college students, with the majority of sexual assaults against women on college campuses committed in the first six to eight weeks of their first year. Bystander Intervention (BI) training is a common approach used on college campuses to promote the prevention of sexual assault, and is often required for first-year students with some training disseminated over the remaining years. A model helpful in understanding predictors of BI engagement is the Reasoned Action Approach (RAA).

**Purpose:** To examine differences in determinants of BI behavior between undergraduate first-year and upperclass participants using the RAA.

**Methods:** Undergraduate students (n=291) were recruited from general education courses at two universities in the US, and completed an online survey evaluating intentions, attitudes, perceived norm, and perceived behavioral control for engaging in BI. Separate regression models were used to evaluate determinants of intentions to engage in BI.

**Results:** Participants were mostly women (60.1%) and first (45.7%) or second year (34.7%) students. First-year students exhibited significantly higher knowledge ( $p=0.016$ ), intentions ( $p=0.002$ ), perceived norms ( $p=0.049$ ), and perceived behavioral control ( $p=0.005$ ) towards engaging in BI compared with upperclass participants. Both regression models showed RAA constructs predicted a significant amount of variance of intentions to engage in BI [first-year participants (adjusted  $R^2=.454$ ), upperclass participants (adjusted  $R^2=.582$ )]. Perceived norm was a significant predictor for



2022 Annual Conference  
Poster and Presentation List



upperclass participants ( $p=0.024$ ), but not for first-year ( $p=0.879$ ).

Conclusions: Results from this study indicate stronger intentions to engage in BI during the first year of college, with intentions decreasing over time. Findings highlight the need for comprehensive and ongoing training throughout the college years. Further research examining the impact of class standing on BI behavior is essential for developing effective university programming at multiple points in time and levels of intervention.

### **THE RELATIONSHIP BETWEEN NUTRITION AND VACCINE BEHAVIORS IN FIVE WEST AFRICAN COUNTRIES**

Alyssa D. McNulty, Brian Colwell, David Washburn, & Jay E. Maddock

**Purpose.** The goal of this study was to examine the relationship between nutrition among children 6 to 24 months of age and the likelihood of a child receiving vaccines. **Methods.** The nationally representative, Demographic and Health Surveys (DHS) from five countries in West Africa were used for this analysis. The countries analyzed were Gambia ( $N=2,336$ ), Guinea ( $N=2,999$ ), Liberia ( $N=1,792$ ), Senegal ( $N=1,980$ ), and Sierra Leone ( $N= 3,117$ ). Surveys asked if the following foods were consumed in the last 24 hours: plain water, baby food, juice, milk, grain, other fruits, fish, beans, potatoes, yellow vegetables, and leafy greens. A nutrition index was generated based off these items to measure the variety of a child's diet. The vaccine variables were pentavalent 3, polio 3, and measles 1. T-tests were conducted for each vaccine against the nutrition index. Multivariable logistic regression models were also run to examine the relationship between the nutrition index and vaccine uptake for pentavalent 3, polio 3, and measles 1, while controlling for the mother's education level, wealth, and urban or rural status.

**Results.** Across all five countries, a nutrition index significantly predicted measles 1 vaccine behavior. In these countries, the

odds ratios for a child receiving a measles 1 vaccine were 1.6, 1.1, 1.3, 1.3, and 1.3 respectively. Polio 3 and pentavalent 3 were less likely to have significant results across the regression models in all five countries. Nutrition index did not predict polio 3 behavior in Guinea and Sierra Leone.

Conclusions. This study demonstrates that, despite odds ratios close to one, nutrition behaviors can play a role in predicting vaccine behaviors while controlling for demographics. The variety of diet that a mother can give her child was related to the likelihood of the mother giving her child a vaccine.

### **SOCIOECONOMIC DETERMINANTS OF MAMMOGRAPHY UTILIZATION AMONG JORDANIAN WOMEN AGED 40-49**

Petronella Ahenda, David Washburn, Brian Colwell, & Jay E. Maddock

**Purpose:** Breast cancer is the leading cause of cancer-related deaths among Jordanian women, and promotion efforts to expand screening have increased in recent years. National guidelines recommend beginning screening at age 40, however uptake has been slow. This study identified social determinants of mammogram utilization among women aged 40-49 years.

**Methods:** We utilized the nationally representative Demographic Health Survey collected in 2017 and 2018 in Jordan. 4,706 women aged 40-49 were included in the sample. Bivariate and multivariate logistic regression analyses were conducted to assess the variables associated with mammography uptake. While the dependent variable was mammography use, independent variables included geographic setting, ethnicity, education, marital status, wealth, access and frequency to a media outlet, smoking, and health insurance coverage.

**Results:** Overall, 11.8% women reported undertaking a mammogram test in the 12 months before the survey. In bivariate analyses mammogram screening rates increased with advanced education, greater



2022 Annual Conference  
Poster and Presentation List



wealth, and higher frequency of access to a radio or television. Factors associated with mammography utilization through multivariable analyses were higher education (OR = 2.51, 95% CI: 1.35 to 4.69) when compared to no education, health insurance coverage (OR = 1.28, 95% CI: 1.04 to 1.59) when compared to those without health insurance, and among the highest wealth quintile (OR = 2.35, 95% CI: 1.69 to 3.28) compared to the lowest wealth index.

Conclusions: Despite the high breast cancer mortality rates exhibited in Jordan, the prevalence of breast cancer screening rates with mammography are low and they vary according to socioeconomic factors including education, wealth, and health insurance coverage. These results highlight the need for improved early breast cancer screening awareness programs in Jordan. The national campaign strategies should aim for strategic measures particularly among those who are most vulnerable.

### **THE ASSOCIATION BETWEEN SUBSTANCE USE AND RISK FOR COVID-19 AND SEVERITY OF ILLNESS**

Jazmine Victoria, Lyuda Golets, Velia Nunez, Claudia Toledo-Corral, & Jennifer Unger

Purpose: Environmental stressors can increase risk for maladaptive coping behaviors such as substance use. Increased substance use during the COVID-19 pandemic calls for ongoing research to determine the degree to which these coping behaviors affect individuals' risk for disease and hospitalization. This study helps fill this gap by examining the relationship between the most commonly used substances, alcohol and marijuana, and rates of COVID-19 and severity of illness in an ethnically and socioeconomically diverse population of California adults.

Methods: Data are cross-sectional survey responses (N=1998) of non-college adults (n=1049) and college adults (n=949). Survey questions asked about disease status,

COVID-19 hospitalization, and substance use.

Results: Recent marijuana and alcohol users had significantly higher odds of COVID-19 infection (OR: 1.82, 95% CI: 1.28-2.70 and OR: 1.17, 95% CI: 1.10-1.24) as well as increased odds of hospitalization (OR: 3.30, 95% CI: 1.95-5.57 and OR: 1.26, 95% CI: 1.17, 1.35). College students had significantly lower odds of hospitalization from COVID-19 (OR: 0.20, 95% CI: 0.10-0.39) compared to the non-college adults.

Conclusions: Similar to national surveillance data, substance use can heighten susceptibility to COVID-19 infection and exacerbate severity of illness among younger and older adults. Future prevention efforts will benefit from considering the effect of substance use on disease and hospitalization during COVID-19 and future pandemics.

### **ADVERSE CHILDHOOD EXPERIENCES AND ADHERENCE TO COVID-19 HEALTH RECOMMENDATIONS**

Larisa Albers, Christopher J. Rogers, Jazmine Victoria, Myriam Forster, & Jennifer B. Unger

Background: Along with COVID-19's threats to physical health, the effects on behavioral health are a growing concern. Adverse childhood experiences (ACE) can increase the sensitivity and magnitude of responses to life stressors in adulthood such as the COVID-19 pandemic. Compared to their peers, adults with a history of ACE experiencing distress are often more likely to engage in risky behaviors, ultimately making behavior change for this population more challenging. This study assessed the role of ACE in adults' adherence to COVID-19 pandemic health recommendations. We hypothesized that those with a history of ACE would have lower odds of adherence to COVID-19 pandemic health recommendations.

Methods: Survey data were collected from California non-college adults in May, 2020 and California university students in October,



2022 Annual Conference  
Poster and Presentation List



2020 (N=1,767). The sample was 62% female, 52% White/Caucasian, 25% Hispanic/Latino, 15% Asian, 6% Black/African American, and 2% "other" ethnicity. Logistic regression models assessed the association between ACE (coded as 0, 1-3, or 4+) and adherence to six COVID-19 pandemic health recommendations (e.g. avoiding restaurants, bars, clubs, family gatherings/social gatherings).

Results: Approximately 55% of the sample reported no ACE, 26% experienced 1-3, and 19% reported 4 or more ACE. Less than half (45%) of respondents were willing to avoid all of the aforementioned activities for 2 months or more. In comparison to adults with 0 ACE, respondents with 4 or more ACE had lower odds of adherence to health recommendations relating to social outings/gatherings (AORs: 0.739-0.744; 95% CIs: 0.558-0.985).

Conclusions: Adults who have experienced multiple traumatic stressors are at elevated risk for engaging in activities that increase their own, and thus their families' and communities', susceptibility for infection. Sensation-seeking, low self-worth, and behavior dysregulation are mechanisms proposed to describe high-risk behaviors in this segment of the adult population. Implications for future research and practice are discussed.

### **ASSOCIATION BETWEEN EMPLOYMENT STATUS AND MENTAL DISTRESS AMONG US ADULTS: FINDINGS FROM THE 2020 BRFSS SURVEY**

Chimuanya Princess Osuji, Kido Uyamasi, Samia Tasnim, & Lisako Jones Mckyer

Purpose: Millions of people in the U.S. lost their jobs due to the economic fallout of the pandemic in 2020. Job loss is one of the key economic stressors affecting mental well being of the individuals. The present study aims to examine the association between short and long term out-of-work status with mental distress among the US population.

Method: We examined a nationally representative survey database, Behavioral Risk Factor Surveillance System (2020; N=188,806). Participants were categorized as having mental distress if they reported having poor mental health > 13 days in the past 30 days. A logistic regression analysis assessed the collective contribution of demographic and socio-behavioral covariates on poor mental health, controlling for age, gender, race/ethnicity, urban-rural differentials, marital status, health insurance coverage, education, income status, smoking habits, and health related quality of life predictors.

Results: The overall prevalence of mental distress was 15.13%. The odds of having mental distress decreased with higher income. Compared to racial/ethnic minorities, Whites were significantly more distressed. Men were less likely to have mental distress than women (OR= 0.62, P<0.001). Individuals aged 18-34 years experienced greater mental distress than older adults (35-49= 0.78, p>0.001; 49-64= 0.54, p<0.001). Individuals with both short and long term out-of-work status were more likely to be distressed than employed ones (OR=1.53, p<0.001; OR=1.44, p<0.001). Exercise and having a partner reduced mental distress while smoking, heavy alcohol consumption, poor physical health and urban residence increased mental distress.

Conclusion: Employment contributes to the prevalence and severity of mental health outcomes particularly among young people. This could be due to variation in the response to financial hardships, income to debt ratio and sleep quality. To combat mental distress in young adults, multiple stressors and indicators should be studied during periods of economic boom and crisis.



2022 Annual Conference  
Poster and Presentation List



## **CONTENT ANALYSIS OF SKIN CANCER SCREENINGS ON PINTEREST**

Julie W. Merten, Ashley Dedrick, & Jessica L. King

**Background:** Nearly half of the 478 million Pinterest users report the platform as a “go-to” resources for health information.

**Objective:** This study used content analysis to examine how skin cancer screenings were portrayed on Pinterest.

**Methods:** Using the search terms “skin cancer screening” and “skin cancer exam, researchers sampled every fifth pin to collect 274 relevant pins. Two researchers coded pins and interrater agreement was established at 94%.

**Results:** Of the sample, twenty-two percent depicted skin cancer screening in a negative way yet 41.5% noted that early detection leads to better outcomes. The pins were geared toward younger, white, women with minimal depiction of people of color. Few pins included comprehensive information about skin cancer risk factors, importance of routine self-screenings, or what to expect with a medical provider. Fifty-eight percent of pins included links to personal blogs.

**Limitations:** This study is only a snapshot of the skin cancer screening information shared. The study doesn’t address attitudes, knowledge, or behaviors.

**Conclusion:** Social media has become a powerful source of health information yet much of the posted information is incomplete. These findings present public health experts with an opportunity to disseminate more comprehensive skin cancer screening information on social media.

## **REASONS FOR PURCHASING TOBACCO AND E-CIGARETTES ONLINE**

Jessica L. King, Anna Bilic, Kayla Rebentisch, & Julie W. Merten

**Background:** When COVID-19 restrictions were first introduced, consumers shifted to online purchases for many products,

including tobacco and e-cigarettes. These shifts have occurred alongside internet tobacco purchasing restrictions being proposed and enacted across the US. To better understand potential impacts of such policies, we conducted an exploratory study to identify reasons for and against purchasing tobacco and e-cigarettes online. **Methods:** We conducted a cross-sectional survey of US adults who reported ever purchasing tobacco or e-cigarettes and past 30-day use. Participants who reported purchasing tobacco or e-cigarettes online were asked to describe their reasons for doing so. Those who reported never purchasing online were asked to describe their reasons. Responses were double-coded and categorized.

**Results:** Of 463 respondents, 330 (71.3%) had purchased tobacco or e-cigarettes online. We identified 17 reasons for purchasing tobacco or e-cigarettes online across four categories: price (cost less online, discounts, bulk purchases, avoid taxes), product characteristics (availability, quality), experience (convenient, saves time, safety, avoid shame, discreet, avoid people, receive guidance), and curiosity. The most common reasons were low prices (28.7% of responses), convenience (27.8%), and availability 24.2%). Safety reasons included COVID-19 concerns, noted by 12%. We identified 13 reasons for not purchasing tobacco or e-cigarette products online across six categories: price, quality, experience (convenience, time, safety, discreet, receive guidance, seeing the product, support local), consumption, unaware, and uninterested.

**Conclusion:** In this exploratory study to identify reasons for purchases online we identified a variety of reasons people purchase tobacco and e-cigarettes online. Despite the survey being conducted during COVID, only 12% of people noted this as a reason for purchasing tobacco or e-cigarettes online. The most common reasons included lower cost. Regulators may seek to further examine how internet sales may be circumventing local, state, federal restrictions on price and taxes to provide low-cost products to consumers.



2022 Annual Conference  
Poster and Presentation List



### **WITHIN-PERSON LONGITUDINAL ASSOCIATIONS BETWEEN ELECTRONIC NICOTINE DELIVERY SYSTEMS USE AND SMOKING CESSATION EFFORTS AMONG U.S. CONTINUING ADULT CIGARETTE SMOKERS**

Dae-Hee Han, Shin Hyung Lee, & Dong-Chul Seo

**Objectives:** Prior studies that examined the role of electronic nicotine delivery systems (ENDS) use in smoking cessation have shown divergent conclusions. This study examined the time-course of ENDS-associated smoking abstinent behaviors among continuing cigarette smokers who were willing but unable to quit smoking.

**Methods:** Data were drawn from the four waves of the Population Assessment of Tobacco and Health Study. Of the 1,684 smokers who tried to quit smoking completely at Wave 1, a total of 1,094 who were continuing smokers until Wave 4 and were not lost to follow-ups comprised the sample. Using generalized linear mixed modeling, we fitted weighted negative binomial regression models to examine within-person associations of ENDS use with quit attempts and number of days abstinent from smoking.

**Results:** Quit attempt frequency and smoking abstinent days were highest at Wave 1, dropped at Wave 2, and then either increased a little or remained stagnant in later waves. ENDS use to quit smoking was associated with more frequent quit attempts (aIRR=1.67, 95% CI=1.42–1.95) and more abstinent days (aIRR=3.28, 95% CI=2.43–4.44), and the magnitude of such associations became stronger over time. ENDS use was associated with becoming a non-daily smoker among baseline daily smokers.

**Conclusions:** ENDS use among continuing smokers may help increase the number of quit attempts and smoking abstinent days. Given that the study sample is continuing smokers who failed in complete smoking cessation, future research would be

desirable that evaluates whether such abstinent behaviors sustain and manifest harm reduction with improved health outcomes.

### **ASSOCIATION OF PREFERRED FLAVORINGS AND DEVICE TYPE WITH BOX/PACK PURCHASE BEHAVIOR OF ELECTRONIC NICOTINE DELIVERY SYSTEMS**

Dae-Hee Han, Shin Hyung Lee, & Dong-Chul Seo

**Introduction:** Box/pack electronic nicotine delivery systems (ENDS) purchase is associated with more frequent use. This study examined the associations of preferred flavorings and device type of ENDS with box/pack purchase behavior using a U.S. nationally representative data.

**Methods:** Data were drawn from the most recent wave (2018-2019) of the Tobacco Use Supplements to the Current Population Survey, a nationally representative cross-sectional data. Current ENDS using adults who purchased their own ENDS were analyzed (N = 2,442). We fitted weighted logistic regression models that assessed the potential correlates of ENDS box/pack purchase.

**Results:** Approximately one-third of the respondents purchased ENDS by box or pack (n = 877). Daily users (adjusted odds ratio [aOR] = 2.20, 95% CI = 1.59 – 3.05), those who used menthol/mint flavor only (aOR = 1.78, 95% CI = 1.15 – 2.77), prefilled replaceable-cartridge pods (aOR = 24.53, 95% CI = 17.59 – 34.22) or disposables (aOR = 5.27, 95% CI = 3.16 – 8.77), and those who purchased ENDS from the Internet (aOR = 2.84, 95% CI = 1.82 – 4.43) were more likely than their counterparts to purchase ENDS by box/pack. Significant interactions were found between device type and flavor (disposables × menthol/mint: aOR = 13.93, 95% CI = 2.64 – 73.41; prefilled replaceable-cartridge pods × menthol/mint, aOR = 3.23, 95% CI = 1.01 – 10.31). This indicates that the magnitude of the association between menthol/mint-flavored



2022 Annual Conference  
Poster and Presentation List



ENDS use and box/pack purchase behavior was stronger among disposable device and pod-based device users compared to tank/mods users.

Conclusions: Those who primarily use menthol/mint flavors, pod-based device, and disposables appear to be more likely to purchase in boxes/packs. Our findings suggest that there is a policy need to regulate flavors to thwart ENDS box/pack purchase behavior.

### **AN EMPIRICAL TEST OF AN EXPANDED VERSION OF THE THEORY OF PLANNED BEHAVIOR IN PREDICTING SINGLE-USE PLASTIC BEHAVIOR ON CAMPUSES**

Erin Largo-Wight, Holly Minichiello, Juliette Hill, Heather Barnes Truelove, Amy N.S. Suida, Shannon Gowans, & Jesse Sherry

Background: Increasing consumption of single-use plastics has devastating consequences on the natural environment and human health. The study of environmental health behaviors, such as reducing consumption of single-use plastic, is thus an emergent focus in public health. The purpose of this study is to examine the determinants of single-use plastic consumption behavioral intention.

Method: A census of freshman students from two coastal college campuses in the Southeast U.S. were invited to complete an inclusion survey as part of a larger funded study on single-use plastic behavior. Of the interested participants, 165 students were invited to complete a 110-item survey guided by an expanded version of Theory of Planned Behavior (TPB) during the week of November 8, 2021. TPB constructs (attitude, subjective norm, and perceived behavioral control) as well as moral obligation, self-identity, and descriptive norm related to single-use plastic behavior were measured. Single-use plastic use was quantified by use of snack wrappers, straws, cups, lids, take out containers, bags, utensils, bottles, masks, and hygiene products.

Results: 104 students (63% response rate) completed the expanded TPB survey. The

TPB regression model explained 24% of the variance in single use plastic intention,  $F(3, 100) = 10.630$ ,  $p < .001$ , with attitude toward behavior ( $B = .324$ ,  $p < .001$ ) and perceived behavioral control ( $B = .256$ ,  $p = .006$ ) as significant predictors. The expanded TPB regression model explained 60% of the variance in single use plastic intention, with moral norm ( $B = .434$ ,  $p < .001$ ) and self-identity ( $B = .338$ ,  $p < .001$ ) as significant predictors,  $F(6, 97) = 21.453$ ,  $p < .001$ .

Discussion: Using behavior change theory to understand single-use plastic behavior is a prerequisite to evidenced-based plastic reduction interventions. These findings should be used to guide future research and environmental health plastic reduction efforts.

### **THE NEED FOR AFFECT AND COGNITION: INDIVIDUAL DIFFERENCES IN VACCINE INFORMATION SEEKING PREFERENCES AMONG PARENTS IN THE UNITED STATES**

Shawn C. Chiang, Philip M. Massey, Matthew D. Kearney, Haley Cowlin, & Jennifer A. Manganello

Purpose: Informed by Elaboration Likelihood Model, the purpose of this study was to assess the relationship between the need for affect/cognition and vaccine information-seeking practices among a sample of US-based parents.

Methods: We used a cross-sectional survey programmed in Qualtrics to collect data from 452 parents of children ages 9 to 14 living in different community types across the United States. Participants came from a survey panel maintained by CloudResearch. Survey questions asked about demographics, political affiliation, social media use, health and vaccine information sources, and attitudes and behaviors regarding the HPV and COVID-19 vaccines.

Results: Our sample of parents ( $n=452$ ) has an average score of 7.33 out of 10 for need for cognition and 12.27 out of 14 for need for affect. A higher need for affect was associated with daily use of social media,





2022 Annual Conference  
Poster and Presentation List



including Twitter, Instagram, TikTok, and YouTube (all  $p < .05$ ). When accessing vaccine information, parents with a higher need for cognition are more likely to utilize search engines (e.g., Google) or specific websites to look up vaccine information, while parents with a higher need for affect are more likely to utilize social media (e.g., Twitter). Additionally, a higher need for cognition was associated with finding scientific evidence trustworthy ( $p < .001$ ) and considering comments from other parents on social media less trustworthy ( $p < .01$ ).

Conclusions: Our findings suggest when designing a health communication effort, components such as message source, channels, and design should be tailored to an audience's need for cognition and affect. Future research should also consider the incorporation of need for affect and cognition in existing theoretical frameworks.

### **PERCEIVED IMPACT OF COVID-19 ON COMMUNITY-BASED ORGANIZATIONS: PERSPECTIVES OF AGENCY MEMBERS SERVING VULNERABLE POPULATIONS IN FLORIDA**

Sofia B. Fernandez, Maria Pinzon-Iregui, Katherine Perez, Michael Anastario, Gladys Ibanez, Hui Huang, & Melissa Howard

Purpose: The Office of Minority Health and Health Equity provides funding to community-based organizations (CBO) through the Closing the Gap grant program (CTG) to reduce racial/ ethnic health disparities across 11 health domains (e.g., HIV, diabetes) in Florida. The purpose of this study was to explore the ways that COVID-19 impacted CBOs who serve medically underserved populations in Florida.

Methods: During July of 2021, 21 agency members across 11 CBOs who receive CTG funding were recruited to participate in 1-hour, in-depth interviews as a part of a larger evaluation study. Interviews were conducted virtually by trained research staff using a semi-structured protocol designed to explore program success, challenges, community relationships, and internal evaluations.

Interviews were audio recorded, transcribed verbatim, and thematically analyzed using a two-step coding process. For this analysis, all data related to COVID-19 was organized under a primary code. Next, researchers identified relevant emerging sub-codes and two analysts met to discuss the major themes through consensus. NVivo 12 software was used to organize data.

Results: CBO members described that many in-person activities paused/ stopped due to COVID-19. This was particularly relevant to organizations that performed community HIV testing, A1c testing, or blood pressure checks. Other crisis-related changes primarily affected recruitment, outreach, and service provision modalities. Most modifications to recruitment, outreach, and services included the use of technology.

Conclusion: Identifying modifications to CBO services during the crisis is necessary to proactively anticipate potential consequences. Reduction in outreach and recruitment as well as modifications to services may differentially impact certain groups who are less likely to already be actively engaged in services or who have limited technology and English language skills. This information is critical to meet emerging needs of clients and suggests the need to be wary of potential impacts of COVID-19 on existing local priority health issues.

### **YOUNG ADULTS WITH MAJOR DEPRESSION: TRENDS AND DISPARITIES IN PERCEIVED REASONS FOR UNMET TREATMENT NEEDS**

Wenhua Lu, Melissa Bessaha, & Miguel Muñoz-Laboy

Purpose: To examine trends and disparities in perceived reasons for unmet treatment needs among young adults (YAs) with major depression.

Methods: Publicly available data for YAs aged 18-29 ( $N = 370,602$ ) from the National Survey on Drug Use and Health 2011-2019 were analyzed. Chi square tests and multivariable logistic regression analyses



2022 Annual Conference  
Poster and Presentation List



were conducted to examine trends and sociodemographic differences in YAs' perceived reasons for unmet treatment needs for depression. All analyses adjusted for complex survey design, and adjusted odds ratios (AOR) were reported.

Results: From 2011 to 2019, between 40.7% and 46.2% of YAs with depression did not receive any mental health treatment ( $P = 0.99$ ). In 2019, 34.4% of YAs who did not receive treatment for depression reported that they did not know where to go, 20.6% said they did not have time, 18.8% indicated fear of being committed, and 16.0% did not think treatment would help. Other cited reasons included "insurance did not pay enough" (15.4%), "fear of neighbors' negative opinion" (14.5%), "concerns about confidentiality" (13.5%), and "did not think treatment was needed" (8.4%). Significant time increases were noted in most of the endorsed reasons, except for perceived "no help" ( $P = 0.14$ ) and "no need" ( $P = 0.07$ ) of treatment. Compared to Whites, Asians (AOR = 2.19;  $P < 0.001$ ) and Hispanics (AOR = 1.47;  $P < 0.01$ ) were more likely to indicate not knowing where to seek help. Females were less likely than males to perceive that treatment would not help (AOR = 0.71;  $P < 0.05$ ) or have concerns about confidentiality (AOR = 0.73;  $P < 0.05$ ). Overall, YAs aged 22-25 (AOR = 2.41;  $P < 0.001$ ) and 26-29 (AOR = 1.91;  $P < 0.01$ ) were more likely to indicate that their insurance did not pay enough but less likely to endorse other reasons than those aged 19-21.

Conclusion: To address sustained unmet treatment needs for depression among YAs, interventions are needed that target their perceptions and concerns about mental health treatment.

### **SLEEP QUALITY DIFFERENCES AFTER COVID-19**

Suzette A. Moyers, Ashleigh L. Chiaf, Erica K. Crockett, & Julie M. Croff

Background: Lockdown and social distancing measures enacted to slow the spread of COVID-19 in March 2020 had

major impacts on patterns of health behaviors. Specifically, previous reports note that self-reported decreases in sleep duration and quality were seen (Gupta et al., 2020), as well as an increase in daytime napping. However, the majority of reported sleep data is cross-sectional and self-reported, and comparisons between groups measuring pre-and post-pandemic sleep are needed.

Method: This study data was collected as part of a larger ongoing RCT that was in mid-recruitment when the pandemic was declared. Female participants between the ages of 18 and 24 were recruited pre-pandemic ( $n = 13$ ) and post-pandemic ( $n = 7$ ). Non-self-reported sleep was measured with the Ōura ring, a commercially available wearable biosensor. Sleep characteristics including total sleep, time in bed, sleep efficiency, REM, sleep latency, and restfulness were recorded over 14 days and averaged for each participant. Independent t-tests were performed to compare the groups recruited pre- and post-pandemic on all measured sleep characteristics.

Results: Independent t-tests comparing pre- and post-pandemic sleep variables revealed no significant differences in mean total sleep, time in bed, sleep efficiency, REM, or sleep latency between the groups recruited before and after the pandemic. However, there was a significant difference in restfulness between the pre-and post-pandemic groups ( $t(17) = 3.24, p = .005$ ). This suggests that on average participants recruited after the pandemic had less wake-ups, less excessive movement, and less frequent interruptions to sleep during the night than those recruited before the pandemic.

Conclusion: This data suggests that the group of participants that were recruited before the pandemic had more "restless" sleep compared to the group recruited after the pandemic. Restless sleep is less restorative than uninterrupted sleep, and it is a key source of daytime sleepiness. As such, the sample recruited after the pandemic seemed to show higher levels of uninterrupted sleep, possibly contributing to lower daytime levels of fatigue.



2022 Annual Conference  
Poster and Presentation List



### **INCREASED PSYCHOSOCIAL COMORBIDITY FOR FRAIL OLDER ADULTS ADMITTED TO AN EMERGENCY GENERAL SURGERY CLINIC**

Christopher B. Robbins & Ashley D. Meagher

**Purpose:** The purpose of this study was to examine the quality of life (QOL), anxiety, and depression status of frail older adults at baseline and two months following admission to an emergency general surgery (EGS) clinic.

**Study Design:** A prospective non-randomized study design comparing the psychosocial outcomes of older adults with frailty versus adults without frailty admitted to a Level I trauma center. Primary outcomes were scores on the Patient Health Questionnaire-9 (PHQ-9) for depression, physical component summary scores (PCS) and mental component summary scores (MCS) from the SF-36 QOL measure, and the Generalized Anxiety Disorder Assessment (GAD-7) scale.

**Results:** Seventy-five (N=75) patients were prospectively enrolled and followed for two months post EGS. Average age was 55 ( $\pm 13$ ), 57.3% female, and 43.7% of participants determined to be frail. At baseline, participants that were frail scored significantly higher on the PHQ-9 ( $m=11.75$  vs 6.12,  $p<.001$ ) for depressive symptoms. QOL scores at baseline were worse for the frail adults (PCS,  $m=24.7$  vs 35.3,  $p<.001$ ; MCS,  $m=27.1$  vs 43.5,  $p<.001$ ). Frail patients scored significantly worse at baseline for anxiety (10.8 vs 5.9,  $p,.001$ ). At two months post injury those with frailty still had lower scores than non-frail adults for depression, anxiety, and QOL. Change in scores showed some improvement for frail adults over time but were still significantly different for PHQ-9 ( $p=.009$ ), and MCS ( $p=.042$ ) with no significant difference between groups for PCS ( $p=.168$ ) and GAD-7 ( $p=.074$ ) scores. There was no significant difference in any outcome measure between surgical or non-surgical patients.

**Discussion:** Scores for depression, anxiety, and QOL for non-frail subjects remained stable over time however those with frailty had worse scores at baseline and two-month follow-up. There may be an opportunity for an intervention for adults with frailty to improve psychosocial outcomes following a hospitalization.

### **FIREARMS RELATED DEATHS AND INJURIES DURING THE COVID-19 PANDEMIC**

Christopher B. Robbins & Ashley D. Meagher

**Purpose:** The purpose of this study was to determine if there was an increased prevalence of unintentional firearms deaths and injuries during the initial stay at home order for the Covid-19 pandemic.

**Study Design:** A retrospective review using publicly available data from the Gun Violence Archive. The data includes firearms deaths and injuries from March-June for both 2019 and 2020 across the United States. Primary outcome was gunshot wounds resulting in either death or injury with independent variables to include time, age group, gender, and Gifford's Law Center rankings for each state (graded A through F).

**Results:** There were 118 firearm deaths in 2019 vs 163 in 2020, 205 injuries in 2019 and 307 injuries in 2020 during the stay-at-home period (both  $p<.001$ ). There was no difference in deaths between years for any age group however there was a decrease in deaths among those over 18 and teens 12-17 but a 9% increase in children 0-11 years old. No difference in deaths between genders and state ranking. There was no difference in injuries between age groups with no age group seeing a  $> 5\%$  difference between years. No differences in gender and injuries as well as state ranking with only those states with an 'A' and 'C' rating reporting increases. There was an unprecedented surge in background checks related to gun sales during the initial months of the pandemic however there was no significant correlation noted between gun



2022 Annual Conference  
Poster and Presentation List



sales and deaths ( $p=.157$ ) or injuries ( $p=.200$ ).

Discussion: With social isolation policies and an unprecedented surge in firearm sales there were some predictions that this could lead to an increase in unintentional injury with firearms. While there was clearly a spike in deaths and injuries there were no changes within demographic factors or a significant relation to overall gun sales.

### **EVALUATION OF A MEDIA LITERACY EDUCATION PROGRAM FOR SEXUAL HEALTH PROMOTION IMPLEMENTED IN FOUR SOUTHEASTERN UNIVERSITIES**

Sarah B. Maness, Sarah H. Kershner, Tracy P. Gregory, Jennifer T. Pozsik, Mallory Gibson, & Denise Marcano

Purpose: Young adults ages 18-24 have high rates of sexual risk behaviors and poor sexual health outcomes. This study explored the effectiveness of Media Aware, a web-based comprehensive sexual education health program implemented at four southeastern universities between 2019 and 2021.

Methods: Media Aware was implemented on college campuses either in a group setting, one-on-one, or online. Participants included students from four universities in the southeastern United States ( $n=457$ ). Media Aware contains four sections on sexual health promotion including on how media messages influence sexual health. The study design was a one group pre-test post-test design. SPSS Version 26 was used by researchers to conduct all analyses.

Results: Over a third of participants reported engaging in either vaginal intercourse ( $n=171$ , 37.4%) or oral sex ( $n=151$ , 33%) in the last 30 days. Less than half of participants reported using a birth control other than condoms at baseline ( $n=99$ , 43.5%) and just over half reported having seen a healthcare provider for sexual health ( $n=266$ , 58.2%). There was a significant difference in participants familiar with the IUD between the survey time points (90.790,  $p<.0001$ ). Results also showed a significant

increase of participants with intent to visit a healthcare provider for sexual health services ( $p<.001$ ) and intent to use condoms ( $p=.004$ ) after participation in Media Aware. Conclusions: It should be noted that over a third of participants ( $n=178$ , 38.94%) started the Media Aware program after March 2020 and completed it during the COVID-19 pandemic. Overall, participants demonstrated positive sexual health effects after participation. There were significant increases for all of the study's main variables, including intention to use birth control, condoms, familiarity with LARCS, and intention to visit a healthcare provider for sexual healthcare. Future research should replicate the implementation of Media Aware, focusing on implementation in different settings.

### **SOCIAL AND POLITICAL DETERMINANTS OF HEALTH: EXAMINING PREDICTORS OF COUNTY-LEVEL CHANGES IN OPIOID USE DISORDER MEDICAID CLAIMS**

David L. Albright, Justin T. McDaniel, Shanna McIntosh, Ellen Robertson, & Korede Ajogbeje

Background: The Healthy People 2030 initiative provides a model of social determinants of health, inclusive of economic stability, education access, health care access, neighborhood factors, and community context. Given the increasing interconnectedness between political beliefs and health behaviors, we propose adding community-level political environment as a determinant of opioid use disorder (OUD).

Methods: We obtained data from the Alabama Medicaid claims administrative database, the United States Census Bureau, the Federal Communications Commission, the Drug Enforcement Agency, the United States Department of Agriculture, and the Massachusetts Institute of Technology election results database in order estimate a least squares regression model of the social and political determinants of changes in OUD claims at the county level ( $n = 67$ ).



2022 Annual Conference  
Poster and Presentation List



**Results:** In Alabama counties, claims for OUD increased by an average of 3.75% (SD = 18.01) from the period of October-December 2020 to January-March 2021. The addition of county-level political environment significantly increased the explained variance of our social determinants model ( $F = 4.05$ ,  $p = 0.04$ ). An increase in the percent share of republican voters from 2016-2020 was associated with an increase in the percent change of average OUD claims in the 3 months prior to and following the 2021 presidential inauguration ( $\beta = 0.28$ ,  $p = 0.04$ ). **Conclusion:** Models of the social determinants of health should consider community-level political environment, as such a factor may be associated with health behaviors, particularly the misuse of opioids.

### **CHILDREN OF MILITARY FAMILIES LESS LIKELY TO BE EXPOSED TO SECONDHAND SMOKE THAN CHILDREN OF CIVILIAN FAMILIES**

Justin T. McDaniel, David L. Albright, Merit Sullivan, Ginny Kreckman, & Elijah Lockhart

**Aim:** Although studies have explored the prevalence of childhood secondhand smoke exposure (CSSE) among the general public and in military families separately, no studies have directly compared these two populations in a single nationally representative study. As such the purpose of the present study was to test the null hypothesis of equal likelihood of CSSE in active duty military families and civilian families. We also explore demographic, socioeconomic, and geographic risk factors for CSSE.

**Methods:** Data for the present study were obtained from the 2015-2019 waves of the National Health Interview Survey (NHIS). We delimited the dataset to individuals who reported having children aged < 18 years living in their household. Our analytic sample, after a 2:1 nonparametric age matching procedure, included 1,192 civilian families and 596 military families. Using the NHIS survey-design weights, we estimated a design-based F statistic for differences in

CSSE by military service status. Additionally, we estimated population-stratified, survey-weighted multivariable logistic regression models in order to determine risk factors for CSSE.

**Results:** While 6.05% of children in military families experienced CSSE, approximately 13.98% of children in age-matched civilian families experienced CSSE ( $F = 24.46$ ,  $p < 0.001$ ). Regarding the multivariable models, results showed that both population-stratified models were statistically significant, overall (Civilian  $F = 3.25$ ,  $p < 0.001$ ; Military  $F = 6.28$ ,  $p < 0.001$ ). For civilian families, results showed that significant risk factors for secondhand smoke exposure included older child age, lower parental educational attainment, and residence in a region other than the northeastern United States. For military families, significant risk factors for secondhand smoke exposure included older parent age, lower family income, and residence in the midwestern United States.

**Conclusions:** Although military affiliation may be a protective factor for CSSE, military families with incomes < \$35,000 should be targeted smoking.

### **HEMOGLOBIN A1C SELF-TESTING DURING COVID-19 AMONG AFRICAN-AMERICANS WITH TYPE 2 DIABETES: THE TX STRIDE STUDY**

Jihun Woo, Hiro Tanaka, Henry Lehrer, Susan Dubois, Erum Whyne, Jaylen Wright, Taha Alhalimi, Tianyu Wang, Victoria Saba, & Mary Steinhardt

**Background:** As telehealth services and remote intervention programs become more common, there is a growing demand for hemoglobin A1c (HbA1c) self-testing. HbA1c self-testing using point-of-care (POC) devices provides financial and logistical advantages compared with hospital-based laboratory methods, but research on the feasibility of self-testing is limited, particularly in African Americans who are at risk for type 2 diabetes and complications from the disease.



2022 Annual Conference  
Poster and Presentation List



**Methods:** This sub-study of the TX STRIDE clinical trial occurred in two phases: an implementation phase at home (Phase 1) and a POC device comparison phase at group testing sites (Phase 2). During the COVID-19 pandemic, Phase 1 examined the ease that untrained participants ( $n=85$ ) had in using the A1CNow® Self Check as part of the TX STRIDE remote data collection process. When in-person research resumed, Phase 2 compared HbA1c results collected simultaneously by research staff using the A1CNow and the DCA Vantage™ Analyzer ( $n=89$ ) serving as a reference standard.

**Results:** The participants were middle-aged and older African American adults with type 2 diabetes ( $61\pm 15$  years). In Phase 1, the failure rate of A1CNow self-testing at home was 26%. However, 99% of participants successfully completed the self-testing when testing was repeated to obtain at least one HbA1c value. Test-retest reliability of two HbA1c measurements was high ( $r=.971$ ,  $p<.001$ ). In Phase 2, the failure rate of the A1CNow was 3%. HbA1c values obtained with A1CNow and DCA measurements were strongly correlated ( $r=.926$ ,  $p<.001$ ). However, mean HbA1c obtained with A1CNow ( $7.2\%\pm 1.5$ ) was significantly lower ( $t(88)=-10.38$ ,  $p<.001$ ) than obtained with DCA ( $7.8\%\pm 1.6$ ).

**Conclusions:** HbA1c self-testing in community settings is feasible and reliable. However, the A1CNow device underestimated HbA1c values when compared with the reference standard. Ongoing improvements in POC devices have the potential to expand research and clinical care, especially in underserved communities.

### **PRESCRIBING BEHAVIORS: UTILITY OF OPIOID STEWARDSHIP PROGRAM INTERVENTIONS FOR DECREASING OPIOID USE WITHOUT COMPROMISING PATIENT PAIN**

Kerry A. Howard, Lior Rennert, Kevin B. Walker, Douglas L. Furmanek, Dawn Blackhurst, Vito Cancellaro, Mackenzie Stuenkel, & Alain H. Litwin

Opioid use disorders (OUD) and deaths have been increasing alarmingly nationwide. There is evidence that overprescribing to opioid-naïve surgical patients substantially contributes to OUD, making it critical to address clinician prescribing behaviors. Opioid stewardship programs (OSP) within healthcare settings provide an avenue for introducing interventions to regulate prescribing. This study examined the association of OSP policies limiting exposure on changes in opioid outcomes and patient pain to inform safety and quality improvement. An OSP within a large healthcare system implemented four policies between 2016 and 2018: use of non-opioid medication during surgery, sequential decrease of available opioid dosage vials, standardization of opioid in-patient practices, and limit to initial post-surgery supply. Generalized linear mixed effects models assessed the impact of each policy on changes in outcomes and patient pain on 9,262 opioid-naïve patients undergoing elective surgery. Outcomes were discharge pain, morphine milligram equivalent (MME) in the first prescription post-surgery, and opioid prescription refill. The results showed decreases in all outcomes following onset of OSP interventions (all  $p$ 's  $<.001$ ). The influence was supported by decreases associated with specific policies. Standardization of in-patient prescribing practices through electronic health record alerts had the greatest impact on decline in post-surgical prescriptions. Importantly, there was no evidence of an increase in discharge pain related to any of the interventions. This study promotes the potential of OSPs to affect opioid prescription behaviors without causing unnecessary harm. Standardization of in-patient prescribing practices through electronic health record alerts, the policy that was observed to have the greatest impact, is also that which works most directly on prescribers' behaviors. This suggests that reminding prescribers to re-evaluate the patient's need, rather than prescribing out of habit, is effective in changing behavior. These findings offer considerations for policy



2022 Annual Conference  
Poster and Presentation List



implementations by OSPs in health systems nationwide to help combat the opioid epidemic.

### **AGING-IN-COMMUNITY (AIC) - FIVE DIMENSIONS KEY TO LIVE A HEALTHIER LIFESTYLE: A COMPARATIVE CASE STUDY AMONG THREE COMMUNITY-BASED PROGRAMS PROMOTING HEALTHY AGING**

Su-I Hou & Samuel Towne

**Purpose:** Aging-in-community (AIC) has been a preferred way to aging among many older adults. This study examines and compares five dimensions key to living a healthy lifestyle among three community-based programs promoting AIC.

**Methods:** The five dimensions measure (FAITH, FOOD, FITNESS, FOCUS, and FRIENDS), adapted from a faith-based healthier life program, was used. Older adults from three community-based programs were studied: a university-based lifelong learning group, a county neighborhood lunch program, and a village program sample.

**Results:** A total of 289 older adults participated, with 38% from lifelong, 29% from neighborhood lunch, and 33% village programs. Mean age was 72.4 (SD=8.68) years. All the five dimension scales of healthier life showed satisfactory reliabilities, with Cronbach's alphas ranged .79 to .89 (CITC ranged .401 ~ .830). ANOVA analyses showed significant differences on FAITH, FITNESS, and FRIENDS. Post-hoc analyses showed that participants in the lifelong learning group scored higher on FAITH, compared with lunch or village programs ( $p=.001$ ). Village participants scored lower than lunch program participants on FITNESS ( $p=.010$ ). Older adults from the lunch program scored higher on FRIENDS compared with the lifelong or village participants ( $p=.016$ ). There were no statistical significant differences on FOOD or FOCUS among groups.

**Discussion:** Results showed interesting and somewhat surprising findings on the higher

FRIENDS scores among the senior lunch program participants, and no significant differences on FOOD or FOCUS comparing with the other two membership-paying groups. These validated measures have implications on assessing key dimensions towards healthy aging as older adults seek to aging-in-community.

### **WHERE DO COMMUNITY-DWELLING OLDER ADULTS GET HEALTH INFORMATION AND HOW TO MAXIMIZE CANCER PREVENTION PROGRAM DELIVERY EFFORTS? – LESSONS LEARNED FROM A FLORIDA VILLAGE CASE STUDY**

Su-I Hou & Samuel Towne

**Purpose:** Village to Village (VtV) Network is a voluntary national membership organization that provides networking and information sharing among individual Villages to promote older adults aging in community. This study examined source of health information and program strategies among two villages in Florida, USA for planning effective cancer prevention program among community-dwelling older adults.

**Methods:** Members and volunteers from two villages, both are members of the VtV network, in Central Florida participated.

**Results:** A total of 96 village members and volunteers participated. About 79% were females, 91% were whites, 56% were married, 86% had college education, and 46% living alone. Mean age was 70.7 (SD=10.10). Overall there were no differences between villages on sources of health information, topics of interests, preferred day or time of the week, frequency or delivery mode of the program. Data showed that overall, on a 5-point Liker scale, the most frequent sources of health information were doctors / nurses (3.56), Internet (3.28), and newsletters / magazines (3.26), with social media among the lowest (1.78). The most interested topics were keeping my community healthy (89%), giving back and help others (87%), and brain health



2022 Annual Conference  
Poster and Presentation List



(82%). Talking about early detection of cancers was, however, among the least interested topics (56%). Monday (62.2%) was the best day of the week, with afternoons (53.3%) being the most preferred time for health promotion programs. Most desired program frequency was on a weekly basis (40%) and delivered in small group modes (78%).

**Discussion:** Current findings highlight frequent sources of health information and most interested health topic areas with recommended health program delivery day, time, frequency, and mode among community-dwelling older adults. Results have implication on planning effective community-based cancer prevention programs for community-dwelling older adults.

### **PREDICTORS OF DEPRESSION AND PTSD DURING THE COVID-19 PANDEMIC**

Annie Nguyen, Erin K Thayer, Mariam Davtyan, Jeff Taylor, Chris Christensen, Franklyn Toatley, & Alejandra Cabral

**PURPOSE:** Rates of depression and PTSD have increased during the COVID-19 pandemic. Financial loss during the pandemic is a risk factor while coping is a protective factor for mental distress. Factors like age and HIV status may also have an impact on mental distress. The literature shows that older age is associated with the ability to maintain a better outlook on life while people living with HIV may be at greater risk for mental distress and experience high baseline rates of depression and PTSD even prior to the pandemic. In our analyses, we disentangle these factors by examining the relationship among financial loss, coping, age, and HIV status on depression and PTSD.

**METHODS:** Data were collected from 91 older adults with HIV and 69 without HIV (N=160) living in the Coachella Valley, California via online surveys. We used stepwise linear regressions to model coping, financial loss, and covariates on depression and PTSD separately.

**RESULTS:** Most respondents were white (89%), male (75%), and sexual minorities (82%). The mean age of participants was 66 years (min: 60, max: 74). In bivariate analyses, living with HIV and younger age were associated with both probable depression and probable PTSD. In the unadjusted regression models, higher depression and PTSD scores were associated with lower coping and living with HIV; financial loss was not associated with depression or PTSD. In the final adjusted models, depression was associated with lower coping ( $p<.001$ ), younger age ( $p=.004$ ), living alone (vs. others;  $p=.05$ ), and renting a home (vs. owning;  $p=.03$ ). PTSD was associated with lower coping ( $p=.01$ ), younger age ( $p=.001$ ), and income  $< \$35,000$  (vs.  $\$35,000$ - $\$49,000$ ;  $p=.02$ ).

**CONCLUSIONS:** Greater coping and older age were salient protective factors for depression and PTSD. Findings support proactive adaptation theories of aging that suggest older adults have greater resilience and better adaptive coping.

### **DOES YOUTH SATISFACTION WITH LIFE PREDICT SELF-ESTEEM LEVELS IN HIGH SCHOOL STUDENTS?**

Brooke A. Crawford, Cassandra M. Beattie, Aspen E. Streetman, Victor Andrews, Jason George, & Katie M. Heinrich

**Introduction:** Self-esteem (i.e., a person's confidence in their own abilities and worth) is an important indicator of future success (i.e., academic, career, and personal success) in current high school students. High school students report having exceptionally low self-esteem when dissatisfied with their current life circumstances (e.g., parental or peer relationships, past or current trauma, intrinsic and extrinsic academic pressure, etc.). Current literature on self-esteem and life satisfaction has been primarily conducted on adult and older adult populations. Looking at self-esteem and life satisfaction in high school students can further our understanding of how self-esteem and life





2022 Annual Conference  
Poster and Presentation List



satisfaction are related, allowing us to find solutions for improving both.

**Purpose:** This study aims to examine the relationship between satisfaction with life and self-esteem levels amongst high school students enrolled in physical education classes. We hypothesized that satisfaction with life will predict high school students' self-esteem.

**Methods:** Thirty participants (male=22, female=8, mean age=15.8±1.06 years) completed two surveys; the 5-item Satisfaction with Life Scale and Rosenberg Self-Esteem Scale. A Pearson's correlation analysis was run followed by a simple linear regression analysis to test if satisfaction with life significantly predicted self-esteem.

**Results:** Self-esteem scores averaged 28.6±5.3 (of 40), while satisfaction with life scores averaged 25.1±6.4 (of 35). Self-esteem and satisfaction with life were positively correlated ( $r=0.41$ ,  $p=0.012$ ). Satisfaction with life significantly predicted 17% of the variance in self-esteem,  $F(1,29)=5.72$ ,  $p=0.024$ . For every one-point increase in satisfaction with life, self-esteem increased ( $\beta = 0.412$ ).

**Conclusion:** Satisfaction with life is positively correlated with and predicts 17% of variance in self-esteem amongst high school students. Future studies should examine this relationship over time and explore how this may differ depending on peer influence and family socio-economic status. Future research should also examine if satisfaction with life shares a relationship with adolescent cognitive performance.

### **EXPLORING SOCIAL RELATIONSHIPS THAT MIGHT DRIVE FAD DIET USE: AN EGOCENTRIC NETWORK ANALYSIS**

Mandy N. Spadine & Megan S. Patterson

**Purpose:** The Tripartite Influence Model proposes that peer, parental, and media influence affect body image and eating disturbances. This study investigated social relationships that could intensify fad diet use among college students. Multilevel modeling determined individual-, dyadic-, and network-

level factors related to college students connecting with people who 1) make them feel guilty about their diet, and 2) make them feel good about their looks.

**Methods:** 1,178 dyadic relationships were explored between 239 undergraduate students and their network ties. Participants completed an online survey and were asked about personal attributes (i.e., body satisfaction, fad diet use) and up to five people they felt close to in their life. Participants reported fad diet use, level of support concerning health goals, diet advice provided and meal preparation support for each of their network ties. Also, participants reported guilt they feel from ties about eating behavior and the degree to which a network ties makes them feel good about their looks. **Results:** Students who reported higher body dissatisfaction ( $\beta=0.01$ ,  $p<.001$ ) and having an egocentric network composed of more fad dieters ( $\beta=0.004$ ,  $p<.001$ ) were more likely to be connected to people who induced guilt about their diet. Network ties who offered the participants more health support were less likely to induce guilt ( $\beta=-0.07$ ,  $p=.014$ ). Ties who provided the ego more support ( $\beta=0.40$ ,  $p<.001$ ), those who the ego went to for food advice ( $\beta=0.07$ ,  $p=.017$ ) and grocery shopped or prepped meals with ( $\beta=0.06$ ,  $p<.029$ ) were more likely to make the ego feel good about their looks.

**Conclusions:** This study sets the groundwork for future research exploring how egocentric network properties correlate with an ego's tendency toward feeling guilty about dietary behavior and body image through social ties, both of which are associated with fad diet use.

### **INDIVIDUAL AND EGOCENTRIC NETWORK FACTORS ASSOCIATED WITH FAD DIET USE AMONG COLLEGE STUDENTS**

Mandy N. Spadine & Megan S. Patterson

**Purpose:** Although fad diets have existed for centuries, changes in social influence have impacted their popularity and spread. College students are especially susceptible



2022 Annual Conference  
Poster and Presentation List



to peer influence, and dietary behaviors established during college years are likely to be maintained throughout the students' life course. Therefore, the purpose of this study was to examine individual-level health factors and egocentric network characteristics related to fad diet use among college students.

**Methods:** 239 undergraduate students completed an online questionnaire and were asked to provide information regarding fad diet use, eating patterns, and egocentric networks. Participants nominated a collective 1,178 social ties and indicated attributes such as demographic and fad diet information for each. Egocentric network variables were calculated using E-Net. Descriptive statistics and a three-step hierarchical binary logistic regression analysis predicting individual fad diet use were conducted in SPSS version 26.0.

**Results:** Students who were enrolled in college longer (AOR=1.468,  $p=.028$ ) and were White (AOR=2.488,  $p=0.020$ ) had a greater likelihood of reporting fad diet use. Cognitive restraint and emotional eating scores were also significantly related with fad diet use, with each point increase on those scales increasing odds of fad diet use by 1.04 (AOR=1.04,  $p<0.001$ ) and 1.02 (AOR=1.02,  $p=.011$ ) times, respectively. Egocentric network variables explained an additional 5.6% of variance in fad diet use above individual-level factors in this sample. Also, being connected to another fad dieter increased the ego's odds of reporting fad diet use 1.02 times (AOR=1.016,  $p=0.032$ ).

**Conclusions:** This study makes an important contribution to the literature because it provided insight into individual and interpersonal factors in association to fad diet use among college students. Most importantly, egocentric network composition variables based on ego's perceptions of nominated alters' fad diet behavior added depth to understanding personal fad diet choices.

## **ASSESSING ABORTION BELIEF SYSTEMS IN PILOT QUALITATIVE INTERVIEWS ABOUT ABORTION IDEOLOGY: NATURAL LANGUAGE PROCESSING AND OPINION MINING INSIGHTS**

Danny Valdez, Katherine R. Haus, Kristen N. Jozkowski, Brandon L. Crawford, & Marijn C. ten Thij

**Background.** Although Pro-Choice and Pro-Life are synonymous with abortion ideology, empirical assessments of how people communicate personal abortion views are lacking. Advances in big-data science now afford opportunities to study words, or patterns of words, that may denote inflexible and/or rigid ways people communicate beliefs.

**Purpose.** This pilot study applies Natural Language Processing (NLP) methods to compare qualitative interview transcripts about abortion beliefs against a lexicon comprised of n-grams (or a series of words) indicative of cognitive distortions. Cognitive distortions are linguistic markers used in Cognitive Behavioral Therapy (CBT) to identify inflexible or rigid thinking.

**Methods.** We ran interview transcripts against a cognitive distortion lexicon and tallied the number of cognitive distortions spoken per interview divided by interview length to standardize our findings.

**Results.** We found that people who strongly identified as Pro-Choice or Pro-Life used more cognitive distortions to express their views than people who identified as equally Pro-Choice and Pro-life or did not associate with either Pro-Choice or Pro-Life labels. The three most represented classes of cognitive distortions included (1) dichotomous reasoning (or, black and white thinking e.g., ...abortion is always wrong) (2) mind reading (or, believing one's views are mirrored in others, e.g., ...you know what I mean when I say abortion is awful) and (3) normative thinking (or, expressing one's views as morally correct e.g., ...I think the government should never intervene when it comes to abortions).



2022 Annual Conference  
Poster and Presentation List



**Discussion & Conclusion.** Our findings suggest that polar abortion views may be grounded in inflexible thinking patterns that suggest strong attachment to their beliefs. By contrast, people with moderate or uncertain abortion views may be more open-minded or conflicted in their beliefs. These findings suggest strong attachment to social issues may hamper the ability to think openly about the issue or consider points contrary to one's own belief system.

### **EXPLORING COMPULSIVE EXERCISE BEHAVIORS WITHIN CROSSFIT GYMS: A SOCIAL NETWORK ANALYSIS**

Megan S. Patterson, Allison N. Francis, Christina Amo, Katie M. Heinrich, Jocelyn Hunyadi, Tyler Prochnow, & Sydney Miller

**Introduction:** While exercise generally results in copious health benefits, compulsive exercise (CE) can be harmful. CE describes a rigid/driven urge to exercise with an inability to stop despite negative consequences. Athletes, including CrossFit participants, are vulnerable to CE. Research suggests the social environment can impact, both positively and negatively, someone's susceptibility for CE. This study aimed to use social network analysis (SNA) to determine whether CE scores were related to social connections and network positions within two CrossFit gyms.

**Methods:** Members from two CrossFit gyms (Gym 1:  $n=103$ ; Gym 2:  $n=56$ ) completed online surveys measuring their network ties at the gym, CE behaviors, depressive symptoms, and sense of belonging. Network centrality scores (closeness, eigenvector centrality) were computed for each participant, providing information about how each person was positioned relative to others in their network. Linear network autocorrelation models (LNAMs) determined if respondents shared similar CE behaviors as their network ties (i.e., network effects) and if network position was related to CE behaviors in these networks.

**Results:** LNAMs suggest eigenvector centrality (i.e., being connected to

popular/important people within the network; Gym 1:  $\beta=.51$ ,  $p<.01$ , Gym 2:  $\beta=.39$ ,  $p=.02$ ) and network effects (i.e., having similar CE scores as direct network ties; Gym 1:  $\beta=.07$ ,  $p<.01$ , Gym 2:  $\beta=.19$ ,  $p<.01$ ) were related to CE among participants in these CrossFit gyms.

**Conclusions:** This study suggests: 1) CrossFit members may adopt similar CE behaviors as their social ties at the gym, and 2) similar to previous SNA studies, being connected to popular/important people within the network is related to higher CE. Future research should use a longitudinal design to test whether CrossFit members select ties at the gym because they share similar CE behaviors (i.e., social selection), or if a person might adopt similar CE behaviors as their ties over time (i.e., social influence).

### **FRIENDS AND FAD DIETS: THE IMPACT OF PERSONAL NETWORKS AND DIET USE ON COLLEGE STUDENTS' EXERCISE BEHAVIORS**

Megan S. Patterson, Maddie Walter, Cheyenne Zigmond, Myrka Lila, Victoria Madi, & Mandy N. Spadine

**Introduction:** Beauty standards and social norms often drive college students' exercise and diet habits, potentially leading to disordered eating and/or exercise. In attempt to meet beauty standards, college students may resort to quick fixes, such as fad diets (weight-loss plans that guarantee drastic results that in turn are not long term) or excessive exercise. The purpose of this study is use social network analysis to explore fad diet use at the individual and network level relative to exercise behaviors in a sample of college students

**Methods:** 239 undergraduate students completed online surveys assessing their egocentric networks, along with fad diet use, eating patterns (cognitive restraint, uncontrolled eating, emotional eating) and exercise behaviors. A hierarchical linear regression analysis determined if characteristics of a students' personal network were related to their exercise



2022 Annual Conference  
Poster and Presentation List



**HBR**  
Health Behavior Research  
Official Journal of AAHB

scores, with a specific focus on diet and eating patterns.

Results: Fad dieting at the individual ( $\beta=.146$ ,  $p=.025$ ) and network-level (e.g., having a higher proportion of social ties that used fad diets;  $\beta=.125$ ,  $p=.046$ ) was associated with greater exercise scores in this sample. Having more people in one's network following the same diet (e.g., keto diet;  $\beta=.202$ ,  $p=.010$ ), and having a smaller effective size (e.g., redundancy in ties within an egocentric network;  $\beta=-.171$ ,  $p=.005$ ) was related to higher exercise scores. Finally, identifying as White Non-Hispanic ( $\beta=.152$ ,  $p=.015$ ), registering higher cognitive restraint scores ( $\beta=.128$ ,  $p=.046$ ) and lower emotional eating scores ( $\beta=-.288$ ,  $p<.001$ ) were related to higher exercise scores.

Discussion: This study supports previous work linking fad diet use to higher exercise scores, as well as the association between social networks and eating/exercise behaviors. Future research should explore whether the exercise being completed by fad dieters, particularly those who are surrounded by fad dieters, is compulsive or harmful, given the unattainable image ideals that might be driving both behaviors.

### **EXPLORING SOURCES OF SOCIAL SUPPORT FOR UNDERGRADUATE STUDENTS WHO HAVE AN EMOTIONAL SUPPORT ANIMAL: AN EGOCENTRIC NETWORK ANALYSIS**

Megan S. Patterson, Zahra Abu-Esba, Sarah Flora, Natalie Lin, Blair Nugent, & Beth Lanning

Introduction: Social and emotional support are critical to the wellbeing of people who have mental health problems. While emotional support animals (ESAs) provide relief to people experiencing mental health problems, less is known about how an ESA owner experiences social support through their social networks. The purpose of this study is to determine factors related to the support received through social network ties of people owning an ESA.

Methods: 521 dyadic relationships between undergraduate ESA owners ( $n=176$ ) and their network ties were assessed. ESA owners completed online surveys assessing personal support networks. Participants indicated five people they felt closest to in their life. Respondents indicated their relationship to each nominee, if that person owned an animal/pet, frequency of contact with each person, and the degree of support each person provided. Multilevel modeling determined social network properties related to participants receiving social support through their network ties.

Results: Respondents reported more support from social ties who were animal owners ( $B=.26$ ,  $p<.001$ ) compared to those who did not own animals. Participants reported more support from parents in their social network ( $B=1.61$ ,  $p<.04$ ), and less support from significant others ( $B=-.93$ ,  $p<.001$ ), as compared to friendship ties. Participant demographic information and frequency of contact with social ties were not related to support provision.

Conclusion: This study explores the social support received by ESA owners in addition to the support they experience from their ESA. Results suggest parents and other animal owners provided the highest level of support provision to those who own ESAs. Future studies could investigate how to improve support provision through peer/friendship ties, particularly when ESA owners are residential college students likely surrounded by peers. Connecting ESA owners to one another, or to other pet owners, could be an important starting point in creating socially supportive network ties for ESA owners.

### **I CROSSFIT; DO YOU? PHYSICAL ACTIVITY PEER SIMILARITY IN GROUP HIGH INTENSITY FUNCTIONAL TRAINING**

Tyler Prochnow, Christina Amo, Megan S. Patterson, & Katie M. Heinrich

Purpose: Physical activity (PA) is essential for physical, mental, and emotional health;



2022 Annual Conference  
Poster and Presentation List



however, few adults engage in enough PA for health benefits. Group environments such as those established in CrossFit can promote sustained exercise habits through social influence, support, and norms. This study aims to examine possible social influences on PA for adults participating in CrossFit.

**Methods:** CrossFit members (n=62) reported PA, workout logging frequency, and anyone at their gym they 1) work out with and 2) go to with personal matters. Linear network autocorrelation models (LNAMs) were used to determine significant associations between reported PA, demographics, workout logging frequency, and network effects. Network effects determine if individuals reported similar PA scores as those of their social ties at CrossFit that they work out with and/or those they go to for personal matters. Separate LNAMs were conducted for each network.

**Results:** Participants reported a mean of 2,740.55 MET-minutes/week (SD=1,847.08), working out with a mean of 9.89 members (SD=6.26), and speaking to a mean of 2.66 members about personal matters (SD=3.68). Workout logging frequency was significantly associated with reported PA in both models (Bw=404.62, p=.01; Bp=314.58, p=.03). An individual's PA was significantly associated with the PA of the social connections to whom they go with personal matters (B=0.08, p<.01). However, an individual's PA was not associated with the PA of the social connections with whom they work out (B=0.02, p=.21).

**Discussion:** Results indicate presence of social influence on reported PA when a deeper connection is made between members. Fostering and promoting these deeper connections between members may help promote healthful PA and continued exercise habits. These results have important implications for gyms looking to restart in-person group exercise programs to facilitate these relationships.

## **ASSOCIATIONS BETWEEN SENSE OF COMMUNITY, SUPPORT, AND AN ONLINE GAMING NETWORK**

Ashley Khanhkham & Tyler Prochnow

**Purpose:** As more adolescents and young adults become involved in online gaming, it is important to explore online gaming's effects on mental health. Online games connect people to meet and interact, providing young adults with social opportunities they might not have otherwise. During the COVID-19 pandemic, many people were isolated through stay-at-home orders and social distancing. With more people staying at home, there was more opportunity to become involved in online gaming. This presentation uses social network analysis to investigate the relationship between sense of community, support, and mental health among a network of online gamers during the COVID-19 pandemic.

**Methods:** In March 2020, members of an online gaming website were asked to report demographic information, online game hours, depressive symptoms, online social support, "in-real-life" (IRL) social support, and sense of community online. Members were also asked to nominate those in their gaming network with whom they spoke to about important life matters. Linear network autocorrelation models (LNAM) determined the association between variables while controlling for the effects of the network. An LNAM was used to determine if online gaming participation was significantly associated with depressive symptoms.

**Results:** Gamers' depressive symptoms were significantly associated with online support (B=3.41, p=.01), IRL support (B=-3.23, p<.01), age (B=0.17, p=.04), and hours spent on the gaming website (B=-0.11, p=.08), yet not sense of community online (B=1.16, p=.35). Additionally, there was not a significant association between a gamer's depressive symptoms and the depressive symptoms of the users they chose to discuss important life matters with online (B=-0.01, p=.78).



2022 Annual Conference  
Poster and Presentation List



**Conclusions:** Although gamers' depressive symptoms were not linked with having a sense of community online, other parameters show the mental health benefits of participating in online gaming. These results suggest online games provide opportunities for young adults to make connections amidst the COVID-19 pandemic stay-at-home orders.

### **EFFECT OF THE COVID-19 PANDEMIC ON SUBSTANCE USE RELATED OUTCOMES AMONG COLLEGE STUDENTS**

Christina Amo, Anas Nabil, Megan S. Patterson, Adam Barry, & Tyler Prochnow

**Purpose:** This investigation examined associations between a college student's social network and their substance use-related behaviors over the course of the COVID-19 pandemic.

**Methods:** Respondents (n=355) consisting of college students at a large southeastern university in the United States (70% female, 30% freshmen, 53% Non-Hispanic white). Students completed an online survey measuring perceived changes to their alcohol, tobacco, and illicit drug use during the COVID-19 pandemic, as well as respondents' personal connections (egocentric networks). Linear regression models assessing individual and network-level factors relative to changes in substance use were conducted using R statistical software.

**Results:** Individual and network-level properties were related to perceived increases in use of tobacco products ( $R^2=.40$ ,  $p<.001$ ) and illicit drugs ( $R^2=.40$ ,  $p<.001$ ) during COVID-19 pandemic. Perceived increases in tobacco use was inversely associated with respondents' vaccination status ( $\beta=-.60$ ,  $p=.01$ ) and positively correlated with more alcohol consumption among network members ( $\beta=0.58$ ,  $p=.02$ ), and more loneliness across network members ( $\beta=0.35$ ,  $p=.03$ ). Perceived increases in drug use were associated with more drug use across

network members ( $\beta=.59$ ,  $p<.001$ ) and greater depression reported among network members ( $\beta=-0.83$ ,  $p=.02$ ).

**Discussion:** Mental health symptoms and substance use behavior patterns present within college students' networks were significantly associated with larger changes in personal tobacco and drug use throughout the COVID-19 pandemic. Given substance-use outcomes tend to be frequent among college students, further research should examine how these relationships change over time and ways social networks might be leveraged to improve college student health.

### **COVID-19'S IMPACT ON MENTAL HEALTH AMONG COLLEGE STUDENTS**

Christina Amo, Anas Nabil, Megan S. Patterson, Adam Barry, & Tyler Prochnow

**PURPOSE:** The COVID-19 pandemic negatively impacted the mental and social well-being of most people. For decades, college students have been recognized as a vulnerable population for experiencing stress, anxiety, and other mental health illnesses. The COVID-19 pandemic presented a novel event with the potential to exacerbate the mental health of college students. The aim of this study was to use egocentric network analysis to assess the general mental health of current college students related to one's egocentric network, during the COVID-19 pandemic.

**METHODS:** During fall 2021, students (n=355, 70% female, 30% freshmen, 52% Non-Hispanic white) responded to a one-time online survey measuring mental health factors, including depression, anxiety, sadness, and loneliness. Questions were asked for both the respondent and their three closest personal contacts. Linear regression models determined significant associations between network composition and 1) depressive symptoms, 2) hopelessness, and 3) loneliness/isolation and calculated using R.

**RESULTS:** Students reported significantly more depressive symptoms ( $r^2=.13$ ) when one's network included depressed



2022 Annual Conference  
Poster and Presentation List



supporters ( $\beta = .32$ ,  $p = .01$ ). Students also reported greater sense of isolation ( $r^2 = .13$ ) when they perceived their network to be lonely ( $\beta = .39$ ,  $p = .02$ ) or healthy ( $\beta = .16$ ,  $p = .05$ ). Likewise, students reported more hopelessness ( $r^2 = .14$ ) when they perceived their network to be depressed ( $\beta = .35$ ,  $p = .01$ ), healthy ( $\beta = .15$ ,  $p = .04$ ), or not vaccinated ( $\beta = .19$ ,  $p = .03$ ).

**CONCLUSIONS:** College students' mental health, and the mental health of their close personal contacts, have been affected by the COVID-19 pandemic. Investigating these interpersonal impacts suggest an unmet need from college students. COVID-19 recovery efforts should include (or prioritize) social support opportunities to curb isolation, depression, and hopelessness.

### **THE WEBS WE WEAVE: INTER-ORGANIZATIONAL COLLABORATION WITHIN THE OLYMPIC PENINSULA HEALTHY COMMUNITY COALITION**

Sara A. Flores, Tyler Prochnow, Megan S. Patterson, Joseph Sharkey, & M. Renee Umstatter Meyer

**Purpose:** Community coalitions have the potential to increase community capacity and improve health outcomes at the local level. Social network analysis (SNA) can measure constructs of Community Coalition Action Theory (CCAT), which seeks to explain or predict improved coalition structure, function, and effectiveness. This study examined factors driving inter-organizational collaboration within the Olympic Peninsula Healthy Community Coalition (OPHCC) of Clallam County, Washington.

**Methods:** Representatives of organizations within OPHCC ( $n = 19$ ) reported organization characteristics and coalition-related perceptions. To determine networks, representatives reported which organizations they collaborated with most frequently in the past year, as well as which organizations they received funding from most frequently. Quadratic Assignment Procedure (QAP) correlations determined whether the collaboration network was

correlated with the funding network. Multiple regression QAP (MR-QAP) tested associations between networks while controlling for covariates.

**Results:** QAP correlation results indicated a significant, moderate association between the collaboration and funding networks ( $r = .35$ ). MR-QAP results indicated a significant model associated with the collaboration network ( $R^2 = .37$ ). Receiving funds from an organization ( $\beta = 3.92$ ,  $p < 0.001$ ), higher activity ( $\beta = 4.07$ ,  $p < 0.001$ ), higher perceived ability of the coalition to move from talk to action ( $\beta = 1.09$ ,  $p < 0.01$ ), and similar perceptions of trust increased likelihood of collaboration ( $\beta = 6.12$ ,  $p < 0.001$ ). Organizations of the same type were less likely to collaborate ( $\beta = 7.66$ ,  $p < 0.001$ ).

**Conclusions:** Significant findings in this study reflect tenets of CCAT related to coalition development and function. A balance of organizational type, high levels of participation, and more positive or similar perceptions about the coalition may encourage collaborative relationships among organizations. Improved understanding of social mechanisms driving inter-organizational collaboration has important implications for community health coalitions.

### **MEDICAL REASONS FOR MARIJUANA USAGE AMONG ADULT AMERICANS WITH CHRONIC HEALTH CONDITIONS: RESULTS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2017-2020**

Anas K. Nabil, Yen-Han Lee, & Adam Barry

**Purpose:** Although many individuals use marijuana for recreational purposes, some persons use marijuana and marijuana-based products for medical and therapeutic purposes, such as alleviating symptoms of chronic health conditions or treating persistent pain. This investigation examined medical reasons for marijuana use among individuals who have long-standing health conditions.



2022 Annual Conference  
Poster and Presentation List



**Methods:** This research analyzed the Behavioral Risk Factor Surveillance System database (BRFSS, 2017-2020), a nationally representative telephone survey that estimates health risk behaviors and chronic health conditions. A logistic regression analysis assessed whether medical reasons for marijuana use were associated with individuals who have one or more of distinct chronic health conditions (i.e., heart attack/myocardial infarction, angina/coronary heart disease, stroke, asthma, skin cancer, other types of cancer, COPD, arthritis, depressive disorder, kidney disease, diabetes, HIV/AIDS), above and beyond the influence of demographics: age, sex, race/ethnicity, education level, and employment status.

**Results:** Individuals who have other types of cancer were more likely to use marijuana for medical reasons than those who do not have other types of cancer across all four years: 2017 (OR=2.00,  $p<0.01$ ); 2018 (OR=1.42,  $p<0.01$ ); 2019 (OR=1.32,  $p<0.05$ ); 2020 (OR=1.93,  $p<0.01$ ). Additionally, individuals who have depressive disorder were more likely to use medical marijuana compared to those who do not have a depressive disorder, 2017 (OR=2.13,  $p<0.01$ ); 2018 (OR=1.80,  $p<0.01$ ); 2019 (OR=1.83,  $p<0.01$ ); 2020 (OR=1.95,  $p<0.01$ ). Finally, persons who have arthritis were more likely to use medical marijuana in contrast to others who do not have arthritis, 2017 (OR=2.52,  $p<0.01$ ); 2018 (OR=2.50,  $p<0.01$ ); 2019 (OR=2.94,  $p<0.01$ ); 2020 (OR=2.52,  $p<0.01$ ).

**Discussion:** Given that the legalization of medical/non-medical marijuana is a significant health policy issue among legislators in the U.S. States, future research should explore the medical reasons among persons with chronic health conditions who use marijuana to evaluate whether medical and/or non-medical reasons drive their marijuana-use behaviors.

## **MARIJUANA USAGE AMONG ADULT AMERICANS WITH CHRONIC HEALTH CONDITIONS: FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2017-2020**

Anas K. Nabil, Yen-Han Lee, & Adam Barry

**Purpose:** This examination explored the long-term association between current marijuana use among adult Americans with chronic health conditions. Specifically, we investigated the relationship between number of chronic conditions and whether or not one used marijuana in the past thirty days.

**Methods:** This investigation analyzed the Behavioral Risk Factor Surveillance System database (BRFSS, 2017-2020), a nationally representative telephone survey that estimates health risk behaviors and chronic health conditions among the American population. A logistic regression analysis assessed whether current marijuana use was associated with an individual having multiple chronic health conditions (0, 1, 2, 3, 4, 5, 6 or more), above and beyond the influence of demographic characteristics, such as age, sex, race/ethnicity, education, and employment status.

**Results:** Findings suggest that in contrast to females, males were more likely to use marijuana across all four years: 2017 (OR=2.25,  $p<0.01$ ); 2018 (OR=2.01,  $p<0.01$ ); 2019 (OR=1.73,  $p<0.01$ ); 2020 (OR=1.65,  $p<0.01$ ). Individuals who have 6 or more chronic health conditions were more likely to utilize marijuana currently, 2017 (OR=4.15,  $p<0.01$ ); 2018 (OR=4.26,  $p<0.01$ ); 2019 (OR=3.55,  $p<0.01$ ); 2020 (OR=3.68,  $p<0.01$ ), compared to persons who do not have any chronic health conditions. Moreover, the likelihood of current marijuana use increased significantly as individuals suffered from additional chronic health conditions from 2017 to 2020.

**Discussion:** Among national samples spanning multiple years (2017-2020), marijuana use was significantly associated with chronic health conditions, such that likelihood of being a marijuana user increase





2022 Annual Conference  
Poster and Presentation List



significantly as the number of chronic health conditions increased. Given the association between having a chronic health condition and marijuana use, future research should seek to determine whether medical or recreational reasons are influencing marijuana use.

### **A ONE-YEAR LONGITUDINAL TREND ANALYSIS OF SELF-REPORTED PHYSICAL ACTIVITY AND DIETARY BEHAVIORS DURING THE COVID-19 PANDEMIC**

Andrew C. Pickett, Matthew L. Smith, Joel Martin, Shane Caswell, Nelson Cortes, & Ali Boolani

**Purpose:** Throughout the COVID-19 pandemic, many facets of daily life have been altered, due to work-from-home, lockdown, and social distancing recommendations. The purpose of this study was to track self-reported physical activity and unhealthy dietary behaviors across one year of the COVID-19 pandemic.

**Methods:** Participants (n= 75) completed monthly online surveys about their overall health behaviors for 12 months beginning in June 2020. Moderate (MPA) and vigorous physical activity (VPA) were measured using the International Physical Activity Questionnaire (IPAQ), while unhealthy dietary behaviors (DB) were measured using the Rapid Eating Assessment for Participants (REAP-S) scale; both have been extensively tested and validated elsewhere. Longitudinal trends were examined using a time series regression model.

**Results:** Across each outcome variable, significant longitudinal trends were observed, with major inflection points at approximately four months into the pandemic. Participants' MPA significantly decreased across the 12-month period ( $p < .001$ ), following a quadratic trend. Overall participant VPA also decreased across the entire year ( $p < .001$ ). Participants' DB became less healthy across the pandemic year ( $p < .001$ ), again with a quadratic trend.

**Conclusions:** Across one year of the pandemic, individuals' physical activity levels and dietary behaviors declined. Interestingly, for both MPA and unhealthy DB, major inflection points were observed at approximately the 4-month period (i.e., September 2020). Similarly, VPA declined across the pandemic year, with only a minor spike around the same 4-month period. These data indicate that participants became generally less active and began eating more unhealthy food items. Our results suggest individuals' may have engaged in more healthful behaviors in the earliest periods of the pandemic, but these behaviors were not maintained as long-term habits. These trends also mirror demotivation to follow public health recommendations (i.e., pandemic fatigue) markers and may suggest an interrelated nature between wider COVID messaging and health behaviors.

### **DISPARITIES IN OBESOGENIC ENVIRONMENTS BY INCOME, RACE/ETHNICITY, AND RURALITY ACROSS ALL US COUNTIES**

Andrew Kaczynski, Marilyn Wende, Jan Eberth, Angela Liese, Alexander McLain, Ellen Stowe, Shirelle Hallum, Kara Davis, & Renee Umstatt Meyer

**Purpose:** Research is needed that explores inequities in physical activity and healthy eating resource access for children on a national scale. Therefore, the purpose of this study was to examine disparities in childhood obesogenic environments across all United States (US) counties by income, race/ethnicity, and rurality.

**Methods:** Ten variables were selected through a comprehensive literature review, expert input, and data availability to comprise a Childhood Obesogenic Environment Index (COEI). Using publicly available sources, county-level data for four physical activity variables (exercise opportunities, school proximity, walkability, crime) and six nutrition variables (grocery stores, farmers markets, fast-food restaurants, full-service restaurants, convenience stores; births at



2022 Annual Conference  
Poster and Presentation List



baby-friendly hospitals) were collected for all counties in the US ( $n=3,142$ ). Variables were ranked and allocated a percentile for each county (with positive environmental variables reverse scored) and a total obesogenic environment score was created by averaging variable percentiles. One way ANOVA analyses were used to assess differences by tertiles of county-level median household income (low/intermediate/high), percentage non-Hispanic White residents (low/intermediate/high), and rurality (rural/micropolitan/metropolitan).

Results: There were significant differences in COEI values according to tertiles of median household income ( $F=260.9, p<0.0001$ ), non-Hispanic White population ( $F=34.5, p<0.0001$ ), and rurality ( $F=175.9, p<0.0001$ ). Specifically, low income counties ( $M=54.3, SD=8.3$ ) had more obesogenic environments than intermediate ( $M=49.9, SD=7.9$ ) or high ( $M=45.9, SD=8.8$ ) income counties. As well, low percentage White counties ( $M=51.8, SD=9.8$ ) had more obesogenic environments than intermediate ( $M=48.7, SD=8.4$ ) or high ( $M=49.5, SD=8.5$ ) White counties. Finally, rural counties ( $M=52.9, SD=8.8$ ) had more obesogenic environments than micropolitan ( $M=50.3, SD=8.1$ ) or metropolitan ( $M=46.5, SD=8.4$ ) counties.

Conclusions: This study found that not all counties are created equal, with some environments less supportive of physical activity and healthy eating, including low-income counties, those with a lower percentage of non-Hispanic White residents, and rural areas. Targeted policy and environmental approaches and initiatives aimed to address concerns specific to underserved communities are needed.

## DEVELOPMENT AND VALIDATION OF SELF-EFFICACY AND INTENTIONS MEASURES FOR SPENDING TIME IN NATURE

Jay E. Maddock, Courtney Suess, Gregory N. Bratman, Carissa Smock, Debra Kellstedt, Jeanette Gustat, Cynthia Perry, & Andrew Kaczynski

Purpose: The purpose of this study was to develop and evaluate the reliability and validity of self-efficacy and intentions measures for time spent in nature (TSN). TSN is related to improvement in psychological well-being and health, yet most people spend very little time in such settings. Theory-based interventions based on the Theory of Planned Behavior have been effective in increasing physical activity, a related behavior, and may be one mechanism to increase TSN. However, Theory of Planned Behavior scales for nature have not yet been developed and are needed to develop effective interventions.

Methods: Scales were developed using a sequential nine-step procedure: identification of the domain and item generation; content validity; pre-testing of questions; sampling and survey administration; item reduction; extraction of factors; tests of dimensionality; tests of reliability; and tests of validity. The 14-member multidisciplinary, researcher and practitioner investigative team generated 50 unique items for self-efficacy and 24 unique items for intentions. After subjecting items to content validity and pre-testing, item sets were reduced to 21 assessing self-efficacy and 9 assessing intentions. A nationwide sample of 2,109 adult participants (49.7% female, Mean Age = 58.1; 59.8% White, 18.4% Hispanic, 13.3% Black) answered these items via an on-line survey.

Results: Using split-half measures, principal components analysis indicated a one-factor solution for both scales. The factor structure was upheld in confirmatory factor analyses and had high internal consistency ( $\alpha = .93$  self-efficacy;  $.91$  intentions). The scales were moderately correlated with each other ( $r =$



2022 Annual Conference  
Poster and Presentation List



.56,  $p < .001$ ) and were strongly related to TSN with large effect sizes ( $\eta^2 > .20$ ).

Conclusions: The study resulted in reliable and valid self-efficacy (14 items) and intentions (8 items) scales that can be used to develop future theory-based interventions to increase TSN and thereby improve population health.

### **USING INNOVATIVE TECHNOLOGIES TO ADVANCE HIV PREVENTION FOR AFRICAN AMERICAN COLLEGE STUDENTS DURING COVID-19**

Nicole Kinzeler, Ashley Browning, Jon-Michael Huber, Milana Vann, Ray Gaddis, & Jo Ann Ford

Background: The Peer Movement Project (PMP), a SAMHSA funded prevention program, was created to address the unique substance abuse, HIV, and STD challenges faced by African American college students in Southwestern, Ohio. Based on data collected from a Community Needs Assessment conducted early in the project, PMP implemented a multi-level approach to HIV prevention including HIV and Hepatitis-C testing, environmental strategies, and a culturally appropriate prevention program called Life on the Yard.

Methods: Two-hundred and fifty-four students were enrolled in Life on the Yard, which consists of five interactive sessions covering topics on HIV, condom usage, substance abuse, and risk perception. All participants were also offered confidential rapid HIV and Hepatitis-C testing. Surveys were given at baseline, exit, and three-month follow-up to assess changes in attitudes and behavior. With COVID-19, PMP was able to continue service provision with the help of emerging technologies including HIPAA-compliant video conferencing, DocuSign, and social media for recruitment and prevention messaging.

Results: From baseline to follow-up, students significantly increased their awareness of the risks associated with marijuana use and of having sex while under the influence of alcohol/drugs ( $p < .001$ ), decreased the

number of days they drank alcohol ( $p = .012$ ), and increased their confidence in asking their partner to use a condom ( $p = .030$ ). Repeated measures ANOVAs did not reveal any significant differences in outcomes for students who participated in programmatic activities in-person before COVID compared to those who participated after the COVID-related modifications were implemented.

Conclusions: Based on the needs of students, PMP has successfully implemented intervention strategies that have positively impacted student behavior. While COVID-19 has created some challenges, PMP has utilized several different innovative technologies to engage students in programmatic activities. The results support that these changes upheld the integrity of the program and continued to produce positive outcomes.

### **EXPLORATORY FACTOR ANALYSIS OF COVID-19 PREVENTIVE BEHAVIORS: IT MAY NOT BE "ALL OR NOTHING"**

Jon Agle, Yunyu Xiao, Esi E. Thompson, Xiwei Chen, & Lilian Golzarri-Arroyo

Purpose: This study examined whether intentions to perform COVID-19 preventive behaviors formed a single cohesive scale or whether they clustered differentially.

Methods: A nationally representative US sample ( $n = 1,017$ ) from Prolific Academic participated in a randomized, controlled trial in January 2021. During the study, participants were asked to indicate their intentions (1: unlikely to 7: likely) to perform seven COVID-19 preventive behaviors recommended by the US Centers for Disease Control and Prevention using question framing from the Theory of Planned Behavior. The small percentage of respondents who were already vaccinated for COVID-19 had a "7" imputed for that intention. Exploratory factor analysis (maximum likelihood with varimax rotation) was used to determine whether preventive behaviors formed a single-factor scale.

Results: One-factor and two-factor solutions were viable. Eigenvalues suggested a two-



2022 Annual Conference  
Poster and Presentation List



factor solution explaining 46% of the variance ( $\chi^2=124.1$ ,  $p<.0001$ ). Factor one included "Wash your hands often (or use hand sanitizer that contains at least 60% alcohol)," "Cover coughs and sneezes," "Clean and disinfect frequently touched surfaces daily," and "Monitor your health daily." Factor two included "Avoid close contact (stay at least 6 feet from other people)," "Cover your mouth and nose with a mask when around others," and "Get vaccinated for COVID-19 when the vaccine becomes available to me." However, parallel analysis suggested a one-factor solution explaining 37% of the variance ( $\chi^2=357.1$ ,  $p<.0001$ ).

Conclusions: It is possible that some US residents approached clusters of COVID-19 preventive behaviors as differentially important. Intentions to wear masks, socially distance, and get vaccinated clustered together but were separate from other CDC recommendations, though covering coughs and sneezes was weakly loaded on both factors. It is unclear whether this resulted from media emphasis on the behaviors in factor two, perception of lesser efficacy for behaviors in factor one (especially regarding airborne transmission), or some other reason.

### **MAKING SURE STUDENTS ARE AT THE CENTER": CASE STUDY OF A NATIVE AMERICAN-SERVING NON-TRIBAL INSTITUTION'S COLLEGIATE LEADERSHIP DURING COVID-19**

Tapati Dutta & Jon Agle

Purpose: Little research has examined decision-making processes and experiences of college leadership teams as they navigate the COVID-19 pandemic. This qualitative pilot study at a Native American-serving Non-Tribal Institution (NASNTI) in Colorado addressed that deficit by analyzing leadership's responses and experiences during the first year of the pandemic.

Methods: Elite interviews were conducted between April and June 2021 with the president, provost, dean of student

engagement, human resources director, and chief of police. Interviewees were purposively selected due to their positions of authority. Each one-hour interview used a semi-structured guide for standardization and was conducted either virtually or in-person while following COVID-19 protocols. The lead author's interviewing expertise and insider position as faculty facilitated trustworthy and transparent conversations. The general inductive method was used to identify categories and codes within the transcripts. The second author reviewed the coded text to verify conceptual plausibility of findings.

Results: Leadership enthusiastically participated, anticipating the findings' pragmatic applicability. Conceptual categories included (1) COVID-induced real-time simultaneous planning and implementation in the face of exacerbated financial pressures, disproportionate psychosocial impact on students, and budding technological capabilities to reshape active-learning; (2) leadership's flexibility and logistical support, even at personal risk, for decentralized, top-down prevention communication and implementation; and (3) leveraging of unique academia-healthcare-tribal partnerships for improved availability and acceptability of COVID control measures. Though there was variability in interviewee emphasis, there was a general sentiment that leadership executed nimble, student-centric COVID-19 response strategies while being transparently vulnerable in communications to the college community via townhalls, emails, and social media.

Conclusions: Smaller learning institutions (e.g. NASNTI) may be able to navigate pandemic-like crises by emphasizing transparency and planning while working alongside the community. A systematic national-study or Delphi to produce generalized guidance, while capturing diverse best-practices in leadership styles, would likely be valuable for current and future crises.



2022 Annual Conference  
Poster and Presentation List



**HBR**  
Health Behavior Research  
Official Journal of AAHB

## **URBAN-RURAL DISPARITIES IN CHILDHOOD OBESOGENIC ENVIRONMENTS IN THE UNITED STATES: APPLICATION OF DIFFERING RURAL DEFINITIONS**

Marilyn E. Wende, M. Renee Umstattd Meyer, & Andrew T. Kaczynski

**Purpose:** A major challenge of studying rural communities lies in the multiple ways “rural” is conceptualized, with distinct rural definitions often being used interchangeably and many approaches collapsing a complex continuum into a dichotomy (i.e., metropolitan vs. non-metropolitan). The purpose of this study is to examine urban-rural differences in food and physical activity (PA) environment resource availability, by applying several, commonly used rural definitions. In addition, we examine differences in resource availability between urban-rural categories that are typically aggregated.

**Methods:** Six food environment variables (access to grocery/superstores, farmers markets, fast food, full-service restaurants, convenience stores, and breastfeeding-friendly facilities) and four PA environment variables (access to exercise opportunities and schools, walkability, and violent crimes) were included in the childhood obesogenic environment index (COEI), as is described elsewhere (Kaczynski et al., 2020;doi:10.1186/s12966-020-00984-x).

Total COEI, PA environment, and food environment index scores were generated by calculating the average percentile for related variables. Urban Influence Codes (UIC; metropolitan, micropolitan, rural), Rural Urban Continuum Codes (RUCC; metropolitan, non-metropolitan), and U.S. Census Bureau percent rural (majority urban, intermediate, majority urban) categories were used. One-way ANOVA was used to detect urban-rural differences.

**Results:** Greatest urban-rural disparities in COEI were seen using RUCC ( $F=310.1, p<.0001$ ), but significant differences were also found using percent rural ( $F=242.8, p<.0001$ ) and UIC

( $F=175.9, p<.0001$ ). For food environments, greatest disparities were seen using percent rural ( $F=49.5, p<.0001$ ), and significant differences were also found for UIC categories ( $F=7.3, p=.0007$ ) but not RUCC. For PA environments, greatest disparities were seen for percent rural ( $F=1041.2, p<.0001$ ), and significant differences were identified for RUCC ( $F=617.9, p<.0001$ ) and UIC ( $F=407.0, p<.0001$ ). Comparing variables within the rural category, differences were seen for COEI ( $F=2.3, p=.0309$ ) and PA environments ( $F=7.5, p<.0001$ ), but not food environment.

**Conclusions:** Findings inform future research on urban and rural environments by outlining major differences between rural classifications in identifying disparities in access to health-promoting resources.

## **CHANGES IN BEHAVIORAL HEALTH OUTCOMES FOR marginally HOUSED YOUTH IN DAYTON, OH**

Kevin M. Kissell, Ray Gaddis, Leon Hardin, Tena McNeil, & Jo Ann Ford

**Background:** Runaway and homeless transitional-aged youth in Dayton, Ohio are an underserved population. These youth have a high prevalence of substance use disorders (SUD) with 70% having a history of drug use and 60% having a diagnosed mental illness. At present, most of these youth are not screened or assessed for SUD. The Day-TREE project was created to address this crucial need for services and to address service gaps for this population.

**Methods:** The project has partnered with Daybreak, a shelter for runaway and homeless youth, to provide SUD and mental health screening and treatment, tobacco cessation, SUD education, HIV/hepatitis risk reduction and testing, case management, and other recovery support. Participants were screened for SUD and mental health disorders; those with service needs were enrolled in the program and connected to formal treatment. Outcome measures, including substance use and mental health



2022 Annual Conference  
Poster and Presentation List



symptoms, were obtained from self-reported data at baseline and six-month follow-up.

**Results:** Of those screened, more than 90% reported having a history of tobacco, alcohol, and/or marijuana use, and roughly 25% reported having used amphetamines, sedatives, hallucinogens, and/or opioids at some point in their lives. For those engaging in treatment services, paired-samples t-tests indicated statistically significant reductions in alcohol and illegal drug use and fewer days experiencing depression, anxiety, and trouble concentrating from baseline to six-month follow-up.

**Conclusions:** The Day-TREE project is positively affecting the lives of its participants through the provision of ancillary services and referrals to formal treatment. Transitional youth at high risk for SUD and mental health disorders are being screened and referred to a variety of services and are demonstrating reductions in their substance use and improvements in mental health.

### **EFFECTS OF THE PANDEMIC ON CASE MANAGEMENT SERVICES FOR MARGINALLY HOUSED YOUNG ADULT SUBSTANCE ABUSERS**

Ray Gaddis, Jo Ann Ford, Nicole R. Kinzeler, Tena McNeil, Kevin M. Kissell

**Background:** Montgomery County has the highest rate of drug abuse in Ohio. The county is challenged by poverty and untreated substance abuse which impacts our young adults contributing to addiction, neglect, abuse, and mental health problems. Young adults aged 18-24 have a high prevalence of substance use and mental illness, and those with multiple risk factors are at greater risk of victimization, with those living on the streets at the highest risk. The Day-TREE project was developed to address risk factors through substance abuse and mental health screening, referral to treatment, prevention education, and case management with a goal of reduced substance use and improved quality of life.

**Methods:** Participants were screened for substance use disorders and enrolled in

educational interventions and support groups. They also received intensive case management which focused on reducing risk factors through harm reduction strategies. Contact between case managers and participants was maintained via in-person meetings, phone/text, and social media. Outcome measures were obtained from self-reported data at baseline and 6-month follow-up.

**Results:** Overall, enrolled participants showed reductions in alcohol and drug use as well as mental health symptoms baseline to follow-up. Before the pandemic, 80% of case management contacts were successful; during the pandemic, this decreased to 48.3%. Pre-pandemic, the majority of contacts occurred face-to-face; however, a shift to phone/text and social media contact methods was required as a result of the pandemic. The most common topics of discussion, both pre-pandemic and during, were substance abuse education, employment, transportation, and relationships. Despite a reduction in successful contacts, the participants continued to show improvements.

**Conclusions:** The Day-TREE program provides effective harm reduction services to participants through a variety of services including intensive case management. Addressing substance use and providing consistent contact with case managers resulted in reduced risk factors and improved basic life needs.

### **CROSS-LAGGED PANEL ANALYSIS ON SEXTING AND CYBER DATING ABUSE AMONG YOUTH**

Shristi Bhochohibhoya, Yu Lu, Joris Van Ouytsel, & Jeff R. Temple

**Purpose:** Several descriptive and cross-sectional studies have studied the prevalence and correlates of sexting and cyber dating abuse (i.e., digital forms of dating violence) (CDA) among adolescents; however, the notable lack of longitudinal studies limits our ability to determine temporality. To address this gap in the



2022 Annual Conference  
Poster and Presentation List



literature, we examined the longitudinal link between sexting and CDA.

**Methods:** We utilized data from Dating it Safe, an ongoing longitudinal study begun in 2010 that collects annual data from 1,042 ethnically diverse adolescents originally enrolled in 7 Texas public high schools. We used three waves of data (T4, T5, and T6) in which 776, 698, and 758 participants were retained. The mean age of the participants was 18 years (SD=0.79) at T4 where 32.1% self-identified as Hispanic, followed by 29.9% White and 25.2% African American. Two separate cross-lagged panel analyses were employed in STATA16 to examine how sexting is associated with CDA victimization and perpetration, respectively.

**Results:** Controlling for participants' age, race, and gender, we identified significant positive autoregressive effects for all three variables at each time point. Between sexting and CDA victimization, significant cross-lagged effects were found only in later waves -- between T5 sexting and T6 CDA victimization ( $\beta = 0.16$ ,  $p < 0.01$ ) and T5 CDA victimization and T6 sexting ( $\beta = 0.06$ ,  $p < 0.01$ ). For sexting and CDA perpetration, T4 sexting was significantly associated with subsequent T5 CDA perpetration ( $\beta = 0.07$ ,  $p < 0.05$ ) and T5 sexting with T6 CDA perpetration ( $\beta = 0.07$ ,  $p < 0.05$ ). The effect of T5 CDA perpetration was also seen on subsequent T6 sexting behavior ( $\beta = 0.13$ ,  $p < 0.05$ ).

**Conclusions:** Results shows that youth with a history of sexting are at heightened risk of being a victim and perpetrator of CDA. Further, both CDA perpetration and victimization contributed to subsequent experiences with sexting. Prevention and intervention efforts targeting youth should address both online risk behaviors.

### **ECOLOGICAL GRIEF IN THE FERNALD COMMUNITY COHORT: A PILOT STUDY**

Rachael D. Nolan & S. Pinney

Ecological grief is a psychological response to environmental loss caused by both natural and manmade events (e.g., contamination).

Increasingly, responses to environmental loss have shown that ecological grief is associated with higher levels of reported cancer diagnoses, post-traumatic stress disorder, depression, anxiety, chronic illness, and premature death. More importantly, loss of or harm to natural environments has been shown to elicit a similar response as the death of or injury to a loved, invoking feelings such as sadness, distress, despair, anger, fear, helplessness, and hopelessness; particularly for persons whose life, work, and culture depend on endangered natural environments and species for their survival. This pilot study used data collected from the Fernald Community Cohort (FCC) to assess the level of ecological grief in persons impacted by environmental loss due to uranium contamination at the Fernald site. Other variables included proximity to the uranium plant, individual uranium concentration level, and ever having a cancer diagnosis. Results showed an adequate fit of the data to the hypothesized model (CMIN=0.49;  $p = 0.49$ ). The program variable of uranium concentration accounted for the greatest portion of the variance. Most participants ( $n = 3,731$ ) reported severe (20.2%) to moderate (35.1%) ecological grief, followed by 42.6% who reported low ecological grief. The sample predominantly (57.6%) consisted of men of an average age of 66.5 years old, with most (65.7%) having completed post-secondary education. The average proximity to the uranium plant was 3.04 miles and most (81.8%) participants reported as never having a cancer diagnosis. These preliminary findings add to the growing body of evidence that ecological grief is an important public health issue. Further study on the impact of ecological grief among FCC participants is warranted and may be used to inform intervention development to mitigate the psychological impact of environmental loss at contamination sites.



2022 Annual Conference  
Poster and Presentation List



## **AWARENESS AND UTILIZATION OF PREVENTATIVE 'TOP' AND 'BOTTOM' CANCER SCREENINGS AMONG TRANS MALE/MASCULINE PERSONS AND THOSE ASSIGNED FEMALE AT BIRTH (AFAB): A MIXED-METHODS STUDY**

Rachael D. Nolan & Christopher Johnson

**Purpose:** The purpose of this mixed-methods study was to examine the awareness and utilization of annual cancer screenings as secondary prevention measures for top (breast) and bottom (cervical, uterine, ovary) cancers, as well as cancer risk for both cancer types among persons who identify as trans male/masculine and who were assigned female at birth (AFAB).

**Methods:** A semi-structured interview guide was used to conduct a single 1-hour, audio-recorded interview via telephone with each participant. The interviews were used to examine participants' level of awareness and utilization of annual health screenings and to assess self-perceived risk for both cancer types. An adapted version of the valid and reliable Cancer Awareness Measure (CAM) was used to assess perceived warning signs, symptoms, reasons for not being screened, and factors related to both top and bottom cancer development.

**Results:** Participants (n=6) who completed the CAM survey demonstrated adequate ability to identify warning signs and symptoms of cancer risk. Most common reasons provided for not being screened were lack of inclusivity and worry about the diagnosis. Factors believed to most influence cancer development were nicotine use, smoking, STDs, and alcohol misuse. Most participants (n=5) reported being on hormonal therapy (HRT) for at least 1-year. Qualitative analysis (n=2) illuminated issues with health literacy and cancer screening behavior, lack of self-risk awareness, a need for specific standardized screening recommendations and evidence-based guidelines on the unique aspects of transitioning among trans male/masculine/AFAB persons.

**Conclusions:** Participants, as a whole, were able to identify cancer risk but not able to discern self-risk awareness, which suggests some discontinuity between self-perceived and population-specific cancer risk. To this point, future research on the health and cancer risks associated with prolonged use of HRT is warranted, as are more inclusive and explicit cancer screening recommendations and best-practices specific to transitioning for trans male/masculine/AFAB persons.

## **HEALTH OUTCOMES AND HEALTHCARE UTILIZATION OF NATIVE HAWAIIANS AND OTHER PACIFIC ISLANDERS LIVING WITH HIV IN HAWAI'I DURING THE BEGINNING OF THE COVID-19 PANDEMIC**

Misty Pacheo

**Purpose:** The purpose of this study was to assess the factors that may exist regarding viral suppression and satisfaction with care among Native Hawaiians and Other Pacific Islanders (NHOPI) living with HIV/AIDS during the beginning stages of the Covid-19 pandemic in rural Hawaii.

**Methods:** AIDS Service Organizations throughout Hawaii were asked to help recruit NHOPI clients (18 years of age and older). Utilizing the behavioral model for vulnerable populations (BMVP), semi-structured interviews (N= 16) were conducted. Data analysis was done utilizing the reflexive thematic method.

**Results:** Factors from all domains of the BMVP were represented within the four themes identified: 1) AIDS Service Organizations play a major role during times of crisis; 2) Mental health takes priority in overall health; 3) The tables are turned when it comes to disease infection; and 4) Telehealth is crucial and should be here to stay.

**Conclusions:** It is evident from the qualitative findings that to achieve satisfaction with care and viral suppression, attention to all three domains of the BMVP are necessary (predisposing, need, and enabling). Having





2022 Annual Conference  
Poster and Presentation List



HIV/AIDS makes an individual more vulnerable during times of an emergency, like the Covid-19 pandemic. A plan needs to be in place to make sure they get what they need to remain virally suppressed; with telehealth and mental health support being prioritized.

### **ASSESSING THE RELATIONSHIP BETWEEN STIGMA AND THE MOTIVATIONS FOR MISUSING AND DIVERTING PRESCRIPTION STIMULANT MEDICATION**

Kayla E. Simon & Robert E. Davis

**Purpose:** The purpose of this study is to assess the motivations for misusing and diverting prescription stimulant medications among college students and the relationship between stigma and these behaviors.

**Background:** Prescription stimulant usage has been on the rise in recent decades. Specifically, prescription stimulants have become notorious for their alleged positive effect on academic performance. Whether or not they enhance cognitive function is still being investigated.

**Methods:** College students (N=358) at a public university completed an online survey assessing student demographics, prescription stimulant usage, as well as attitudes and opinions associated with prescription stimulant use. Students were recruited through the campus news bulletin as well as through recruitment emails sent out by instructors of general elective courses. We used existing valid and reliable measures to assess depression, anxiety, suicidality, and other substance use. Social stigma was assessed by asking participants about anticipated, perceived, and internalized perceptions of prescription stimulant misusers and diverters.

**Results:** Our data indicates that 31.8% of participants reported misuse of prescription stimulant medication. 42.1% of participants reported that they acquired prescription stimulants from a friend, followed by 27.2% holding their own prescription, and 8.8% receiving it from a relative. Of those who held

a prescription for stimulant medication (n=109), 53.2% diverted their medication. Most frequently reported reasons for diverting medication include wanting to help someone who needed or wanted it (46.6%), pressure from someone who wanted or needed it (34.5%), followed by wanting to make money (6.9%).

**Conclusion:** Given what we know about the prevalence of prescription stimulant misuse on college campuses, it is vital that we develop intervention programs to educate students on the health and legal consequences of misusing and diverting prescription stimulant medications.

### **LOW-DOSE CT ELIGIBILITY SCREENING AND REFERRAL PRACTICES IN ORGANIZATIONS SERVING PEOPLE WITH SUBSTANCE USE DISORDERS**

Maggie Britton, Tzuan A. Chen, Isabel Martinez Leal, Anastasia Rogova, Bryce Kyburz, Teresa Williams, Mayuri Patel, Randa El-Zein, Eric H. Bernicker, & Lorraine R. Reitzel

**Purpose:** For people at elevated risk for lung cancer (e.g., former/current smokers), low-dose computed tomography (LDCT) reduces lung cancer mortality. People with non-nicotine substance use disorders (SUDs) have elevated rates of smoking (~40%-70%) compared with the general population (~14%), highlighting them as a priority population for consideration of LDCT. Although research has shown LDCT is underutilized in general, there is little literature to inform whether organizations that serve individuals with SUDs integrate LDCT into care. In the current study, we examine the LDCT eligibility screening and referral practices among these organizations.

**Methods:** We conducted a statewide needs assessment survey in 2021 to discern how tobacco use was being addressed at Texas organizations that provide treatment or services to individuals with SUDs. One hundred forty-eight employees from substance use treatment centers (SUTCs;



2022 Annual Conference  
Poster and Presentation List



n=57), Federally Qualified Health Centers (FQHC; n=14), local mental health authorities (LMHAs; n=69), community centers (n=2), and private practices (n=6) completed the survey. Respondents were asked to report on their organization's LDCT eligibility screening and referral practices.

Results: Over half (n=82, 55.41%) of respondents indicated that their organization did not assess eligibility for, or refer individuals to, LDCT. Approximately one-third (n=54, 36.49%) of respondents indicated that they did not know their organization's procedures for LDCT. Very few respondents (n=12, 8.11%) indicated that their organization provided eligibility screening for LDCT. Of the organizations screening for LDCT, 5 were FQHCs, 4 SUTCs, and 3 LMHAs. Only 5 respondents indicated their organization also provided referrals for LDCT (n=5, 3.38%); of which 2 were SUTCs, 2 LMHAs, and 1 FQHC.

Conclusions: LDCT screening and referral are uncommon at diverse organizations that serve people with SUDs. Future work should assess barriers to LDCT practices (e.g., lack of knowledge) and address them to bolster capacity to conduct LDCT screening and referral for this priority population.

### **PERCEIVED SOCIAL SUPPORT ATTENUATES THE ASSOCIATION BETWEEN STRESS AND HEALTH-RELATED QUALITY OF LIFE AMONG ADULTS EXPERIENCING HOMELESSNESS**

Midhat Z. Jafry, Jayda Martinez, Tzuan A. Chen, Michael S. Businelle, Darla E. Kendzor, & Lorraine R. Reitzel

Purpose: Health-related quality of life (HRQoL) is a multidimensional assessment of one's physical and mental health. Homelessness is associated with stressors that can reduce HRQoL. Social support is the availability of individuals, or resources provided by individuals, to cope with stress. Interpersonal social support may be important in buffering the negative implications of stress on HRQoL. The

purpose of this study was to examine this association in a marginalized group known for high rates of physical and mental health comorbidities: adults experiencing homelessness.

Methods: Participants (N=581; 63.7% men; M age =43.6+12.2) were recruited from homeless-serving agencies in Oklahoma City. Social support was measured with the 12-item Interpersonal Support Evaluation List. HRQoL was measured using self-rated health, the number of poor mental and poor physical health days over the last 30 days, respectively, as well as the number of limited activity days as the result of poor mental and/or physical health. Perceived stress was assessed using the 4-item Perceived Stress Scale. The potential moderation effect was examined by assessing the interaction term of social support and stress in linear regression analyses controlling for sex, age, months homeless, race, education, health insurance status, serious mental illness diagnosis, and recruitment site.

Results: There were significant interaction effects of social support and stress, whereby social support significantly mitigated the association of stress with days of poor physical health, days of poor mental health, and days of limited activity (all p's ≤ .05).

Conclusions: Results add to a growing literature on the potentially protective benefits of social support on HRQoL, extend them to a large sample of adults experiencing homelessness, and demonstrate the significance of this moderating effect of social support above the influence of several sociodemographic variables. Future work should determine if interventions can buffer the effects of stress on HRQoL among this marginalized population.



2022 Annual Conference  
Poster and Presentation List



### **‘TRACKING TOGETHER’— SIMULTANEOUS USE OF HUMAN AND DOG ACTIVITY TRACKERS: ANALYSIS OF ACTIVITY TRACKER DATA FROM A RANDOMIZED CONTROLLED TRIAL**

Wasantha Jayawardene, James McDonnell, Jeanne Johnston, Lesa Huber, Stephanie Dickinson, Xiwei Chen, Laurel Curran, & Elizabeth Richards

**Objectives:** Dog-walkers are more likely to achieve moderate-intensity physical activity (PA). While human activity trackers have been shown to increase PA intensity, dog activity trackers may increase owner's awareness of their dog's physical activity. Simultaneous use of these trackers may increase the likelihood of sustained use and dog-engaged physical activities. This study examines the effects of simultaneous use of activity trackers by humans and their dogs on PA of humans.

**METHODS:** This analysis used activity tracker data from dog owners of age 25-65 (N=50) from a study that involved 4 groups that underwent an observational randomized controlled trial with a 2x2 factorial design. Each group consisted of dog-human duos, in which both human and dog, human only, dog only, or none were wearing an activity tracker for eight weeks. The current analysis compared the light and sedentary physical activity minutes of dog owners in the group that used both human and dog activity trackers to dog owners in the group that used only human activity trackers. Chi-square compared minutes by group, day of the study (1 through 56), and their interaction.

**RESULTS:** Over the 8-week study period, light physical activity significantly differed between the two groups ( $p=0.048$ ; chi-square=3.896;  $df=1$ ). Dog owners in the group that used both human and dog activity trackers compared to dog owners in the group that used only human activity trackers completed more light physical activity. For sedentary minutes, there was no significant difference between groups. There were only significant differences by day ( $p=0.036$ ; chi-square=75.274;  $df=55$ ), where sedentary

minutes decreased over time. The interactions were not significant.

**CONCLUSIONS:** Simultaneous use of activity trackers by dog-human duos was associated with increased light physical activity of humans over eight weeks. Future studies should explore interventions that use paired activity trackers for improving human physical activity.

### **MENTAL HEALTH STATUS OF UNDERGRADUATE COLLEGE STUDENTS DURING THE COVID-19 PANDEMIC**

Wasantha Jayawardene & Elizabeth Richards

**Purpose:** The purpose of this study was to explore the self-rated mental health and substance use among Midwestern undergraduate college students during the COVID-19 pandemic.

**Methods:** An online survey was sent to a random sample of 20,000 Midwestern university undergraduate students assessing self-rated health, access to emotional support, experiencing loss (no; one loss; more than one loss), affect, and substance use using the past 30 days (tobacco, alcohol, and drugs not prescribed). Descriptive statistics summarized study variables. T-tests, chi-square, and ANOVA examined differences in mental health and substance use by both gender and loss.

**Results:** This survey has a 7.9% completion rate ( $n=1,585$ ). A majority of students self-rated their health as good or higher (85.9%). When needed, 48.5% of participants reported they often or always get social and emotional help. Whereas 15% reported rarely or never receiving the help they need. Students also reported experiencing one (27.1%) or two or more losses (9.2%) over the past year. On average, participants reported using tobacco (mean=5.1; standard deviation [SD]=9.9), alcohol (mean=4.3; SD=5.4), and drugs (mean=2.8; SD=6.8) days over the past 30 days. Compared to females, males reported significantly higher number of days of using alcohol (5.3 vs 3.3;



2022 Annual Conference  
Poster and Presentation List



$t=7.38$ ;  $p<0.0001$ ) and tobacco (5.9 vs 3.9;  $t=2.89$ ;  $p=0.004$ ). Compared to Experiencing a loss was associated with increased use of all substances with the greatest increases found with experiencing two or more losses compared to none (smoking=1.0 days; drinking=4.6 days; drug use= 2.4 days;  $p<0.05$ ).

Conclusions: In this sample of undergraduate students, experiencing loss was related to substance use. Given the cross-sectional nature of the data, it is unclear if experiencing a loss led to substance use. Future analysis of this data will examine how affect, receipt of support, influence substance use.

### **CHARACTERIZING SKIN CANCER NARRATIVES ON INSTAGRAM: INFLUENCERS, DERMATOLOGISTS, AND MISSED OPPORTUNITIES**

Bosma Gooma, Rebecca Fagen Houghton, Nicole Crocker, & Eric R. Walsh-Buhi

Purpose: The current study aims to describe skin cancer-related content on Instagram, including the origin (i.e., source characteristics) and attributes of these social media posts (i.e., content characteristics). The study also seeks to reveal content themes in terms of skin cancer risks, treatment, and prevention.

Methods: Crowdtangle, a tool owned and operated by Facebook, was used to retrieve content from publicly available accounts on Instagram for the 30 days preceding May 14, 2021. Out of 1,000 posts reviewed,  $N=591$  (59.1%) met the inclusion criteria and were manually/human coded and analyzed. Two raters coded the posts independently. The median Cohen's Kappa was .78, reflecting substantial agreement between raters on identifying codebook constructs.

Results: Profiles representing organizations were slightly more common than individual accounts:  $n=321$  vs 256 (54% vs 43%). The type of media included in the posts varied, with posts containing photos occurring more frequently ( $n=315$ , 53%), compared to posts containing infographics ( $n=233$ , 39%), or

videos ( $n=85$ , 14%). Melanoma was the most mentioned type of skin cancer ( $n=252$ , 43%). Prevention methods were discussed in Instagram posts more often than risk factors ( $n=404$ , 68%) vs ( $n=271$ , 46%). The "sun" was coded as the top-named risk factor for skin cancer ( $n=227$  posts, 88.7%), followed by artificial tanning (e.g., indoor tanning;  $n=48$ , 18.8%), and genetics ( $n=15$ , 5.9%). While sunscreen was the most commonly identified prevention method (among posts discussing skin cancer prevention methods), getting a checkup from a physician, wearing protective clothes, and self-examinations were included in 33%, 25%, and 13% of posts. Interestingly, other and quite important prevention methods were infrequently mentioned in reviewed posts, representing missed opportunities. For instance, one of the more critical prevention methods, avoiding ultraviolet (UV) radiation, was included in only 10% (staying away from the sun) and 5% (not using tanning beds) of posts. Only 80 out of 592 posts (14%) provided a citation from a medical source.

Conclusions: This study's findings highlight the potential role of Instagram as a platform for improving awareness of skin cancer prevention and risks. We believe social media is a promising venue for researchers and dermatologists to dedicate their efforts and presence in widely reaching the public to educate about skin cancer and empower prevention. Such innovative efforts are sorely needed, given the rise in skin cancer cases in the U.S. and worldwide.

### **TRAJECTORIES OF DEPRESSIVE SYMPTOMS AND COVID-SPECIFIC WORRIES IN COLLEGE STUDENTS WITH FINANCIAL NEED**

Angela Chow, Shuhan Yuan, Vincent Isom, & Hsien-Chang Lin

Purpose: COVID-19 has become a major disruption to colleges and universities. The purpose of this study was to assess the longitudinal changes in depressive symptoms and worries in college students with financial need.



2022 Annual Conference  
Poster and Presentation List



**Methods:** Survey were collected from 313 undergraduate students in a need-based scholarship program from a Midwestern university at three time-points (September 2020, January 2021, and May 2021). Depressive symptoms were measured by the Center for Epidemiologic Studies Depression Scale (CES-D, e.g., “I felt sad”). COVID-specific worries were measured by 9 items assessing the intensity of concern related to the pandemic (e.g., “Worry about others not wearing a mask”). Bivariate latent growth curve modelling was employed to estimate the trajectories of both depressive symptoms and COVID-specific worries simultaneously.

**Results:** Fit statistics of the bivariate latent growth curve model indicated adequate fit, chi-square(8) = 17.1,  $p < .05$ , CFI = 0.93, RMSEA = 0.06. The mean at baseline (i.e., intercept) for depressive symptoms is 20.78 (possible range = 0 to 60) and that for COVID-related worries is 3.01 (possible range = 1 to 5). Overtime, depressive symptoms increased (slope = 0.23,  $p < 0.001$ ) but COVID-specific worries decreased (slope = -0.04,  $p < 0.001$ ). The intercepts of the two trajectories were correlated (correlation = 0.66,  $p < 0.001$ ) but their slopes were not significantly correlated. **Conclusions:** In line with the timing of vaccine availability, COVID-specific worries decreased from 2020 fall to 2021 summer. However, depressive symptoms continued to increase over time. Also, it should be noted that depressive symptoms at all waves were consistently higher than the CES-D cut-off (cut-off score = 16). Research efforts to identify and address issues underpinning this increasing depression symptom trend in students with financial needs are warranted.

### **TEACHERS’ SCHOOL GARDEN PERCEPTIONS AND USE RELATED TO ADMINISTRATOR SUPPORT**

Anna Greer & Kristin Rainville

**Background:** Outdoor educational experiences, such as school garden programming, have been associated with

mental health, physical health, and educational benefits for children; however, school gardens are often under-utilized by teachers in schools.

**Purpose and Methods:** Using a brief, online questionnaire, we examined if public school elementary teachers’ (n=143) perceptions of principal support for school garden programming was related to their: 1) perceptions about the value of school gardens for education (School Garden Value,  $\alpha = .952$ ), 2) perceptions about the value of outdoor educational experiences (Outdoor Education Value,  $\alpha = .856$ ), 3) perceived confidence in their ability to use school gardens for educational purposes (School Garden Confidence,  $\alpha = .945$ ), and 4) use of school gardens in the prior six months. **Results:** Teachers who perceived their principal as supportive of garden-based learning had higher scores for Outdoor Education Value ( $p = .019$ ), School Garden Value ( $p = .002$ ), and School Garden Confidence ( $p = .001$ ). School Garden Value ( $p < .001$ ) and School Garden Confidence ( $p < .001$ ) scores were also higher among teachers reporting school garden use.

**Conclusion:** The findings highlight the importance of administrator buy-in and support for school garden use in schools.

### **ASSOCIATION OF CANCER INFORMATION SEEKING BEHAVIOR WITH CIGARETTE SMOKING AND E-CIGARETTE USE AMONG U.S. ADULTS. IS EDUCATION LEVEL A MATTER?**

Beomyoung Cho & Sukwon Lee

**Purpose:** This study aims to examine the association of cancer information seeking behavior with cigarette smoking and e-cigarette use by education level among U.S. adults.

**Methods:** A pooled data of the Health Information National Trends Survey 5, Cycles 1-4 (2017-2020) was used. Individuals who have looked for cancer information from any source were considered cancer information seekers. Individuals who have smoked at least 100



2022 Annual Conference  
Poster and Presentation List



cigarettes in their lifetime and reported currently smoke cigarettes every day or some days were considered current cigarette smokers. Individuals who ever used e-cigarette at least one time and reported currently use e-cigarette every day or some days were considered current e-cigarette users. We conducted weighted multiple logistic regression analysis to examine the association of cancer information seeking behavior with the current cigarette smoking and e-cigarette use, adjusting for sex, race/ethnicity, age, obese status, depressive symptoms, cancer diagnosis history, metropolitan status, and survey year. Regression models were stratified by education level. Individuals in 18-25 years old were excluded as they have not likely completed their education.

**Results:** A final analytic sample included 12,430 adults. Cancer information seekers had lower odds of cigarette smoking than non-seekers, but this was significant in only college or higher education group (Adjusted odds ratio [AOR] = 0.77, 95% confidence interval [CI] = 0.60-0.98). In contrast, cancer information seekers had higher odds of e-cigarette use than non-seekers, but this was significant in only less than college education group (AOR=2.12, 95% CI = 1.20-3.76).

**Conclusions:** Cancer information seeking behavior might reduce cigarette smoking, but this was not observed in less educated individuals. Despite the unproven impact of e-cigarette use on cancer, cancer information seeking behavior might positively influence e-cigarette use in less educated individuals. A proper dissemination of proven health information regarding cigarette smoking and e-cigarette use is recommended for less educated individuals.

### **SYSTEMATIC REVIEW OF ELECTRONIC BEHAVIORAL OBESITY PREVENTION INTERVENTIONS TARGETING MEN**

Adam P. Knowlden, A. Wilkerson, & K. Dunlap

**Purpose.** Although more than 71% of men in the United States are overweight or obesity,

a recent review found men comprised only 27% of enrollment in 244 behavioral weight loss randomized controlled trials. Men are less likely than women to participate in face-to-face weight loss programs and instead prefer incremental, self-guided. Therefore, electronic interventions have potential to reach overweight/obese men. The purpose of this study was to systematically review the efficacy of electronically-delivered behavioral interventions targeting overweight and obese men.

**Methods.** Inclusion criteria for the review were: interventions that used controlled trial designs, targeted overweight/obese men, and incorporated at least one electronic modality. Literature searches were delimited to peer-reviewed articles, published between January 2000 and October 2021, in the English language, and indexed in MEDLINE, CENTRAL, and/or Web of Science electronic databases. Interventions satisfying inclusion criteria were critiqued for methodological quality.

**Results.** Eleven studies met the inclusion criteria. Mean quality assessment score of the interventions was 7.5 out of 10. Five studies applied intention-to-treat analysis; of these, three showed significant findings on at least one primary variable. Of those using only per-protocol analysis (n=3), two showed significant findings on at least one primary variable. All but one intervention applied a randomized controlled trial design. Most interventions were based on behavioral theory (n=7), but only three measured constructs from the applied theories. Recruitment occurred at universities (n=1), work sites (n=4), communities (n=6). Duration of the interventions was 10 to 52 weeks with attrition rates ranging from 14% to 51%. Five interventions incorporated at least one face-to-face component, with only three being exclusively delivered electronically. None of the interventions attempted to modify sedentary behavior or sleep duration. Nearly all (n=8) applied process evaluation.

**Conclusions.** Electronic interventions for treating overweight/obesity in men show



2022 Annual Conference  
Poster and Presentation List



promise. Additional research is required to evaluate their full potential.

### **BEHAVIORAL RISK FACTOR PREDICTORS OF SHORT SLEEP DURATION IN MEN: A SOCIO-ECOLOGICAL MODEL APPROACH**

Adam P. Knowlden

**Purpose.** Over 70% of men in the United States are overweight or obese. While multiple biological, behavioral, and social factors are hypothesized predictors of obesity, less is known about the role short sleep plays in perpetuating weight gain in men. The social-ecological model is a robust, systems framework that seeks to model upstream and downstream environmental and behavioral factors and may assist in addressing these issues. The purpose of this study was to model social-ecological-based predictors of short sleep in men.

**Methods.** A cross-sectional sample of men were recruited to participate in this study. Participants were grouped into two sleep categories: normal sleepers (7-9 hours) and short sleepers (4-6 hours) and two body mass index (BMI) weight categories: normal (BMI=18.5 to 24.9) and overweight/obese (BMI=25+). Previously validated questionnaires were completed with each questionnaire representing one level of the five primary levels encapsulated by the model: Policy level: Barriers to Care Questionnaire; Community level: Modified Community Noise and Sleep Disturbance Survey; Organizational level: Modified Job Satisfaction Survey; Interpersonal level: Healthy Literacy Questionnaire; Pittsburg Sleep Quality Index, Epworth Sleepiness Scale; Intrapersonal level: Self-efficacy for Sleep Scale, Dysfunctional Beliefs/Attitudes about Sleep Scale.

**Results.** Of the sample (n=478), 60.2% identified as white, 37.6% identified as African American, and 2.2% identified as Asian. Most were short sleepers (63.4%) and fell into the overweight/obesity category (72.3%). The modeled layers of the ecological model found the organizational

( $\beta=.194$ ), interpersonal ( $\beta=.265$ ), and intrapersonal ( $\beta=.303$ ) levels were significant predictors of sleep ( $p<.05$ ), while the policy ( $\beta=.133$ ), interpersonal ( $\beta=.251$ ), and intrapersonal ( $\beta=.406$ ) levels were significant predictors of body mass index ( $p<.01$ ).

**Conclusions.** The social-ecological model predicts short sleep in men. When mediated by BMI, the social-ecological model was more predictive of short sleep, though the increase in effect size was small.

### **MODELING SHORT SLEEP AND INSOMNIA AS INDEPENDENT PREDICTORS OF DIABETES IN A NATIONALLY REPRESENTATIVE SAMPLE**

Adam P. Knowlden & Michael Grandner

**Purpose.** Epidemiologically, short sleep's (<6 hours) association with negative cardiometabolic health outcomes continues to mount; yet, the complex relationship between sleep and health is still not well-understood. Historically, short sleep and insomnia have been analyzed as a singular construct; however, clinically, they are unique sleep disorders. The purpose of this study was to determine if short sleep and insomnia were independent constructs; and to evaluate whether short sleep and insomnia predicted diabetes.

**Methods.** Analyses were based on the 2015-2016 National Health and Nutrition Examination Survey (NHANES). NHANES applies multi-stage probability sampling to acquire a representative sample of non-institutionalized U.S. adults. Data related to short (<6), normal (7-8), and long (9+) sleep duration, insomnia (present: mild, moderate, severe), and diabetes (present: history of diabetes/fasting blood sugar of 130+) were extracted for analysis and modeled using logistic regression. Age, sex, and obesity (body mass index, 30.0+) were entered as covariates into the models.

**Results.** Of the sample, 0.08% were normal sleepers with insomnia; 0.21% were short sleepers with insomnia; and, 0.59% had insomnia with short sleep. Short sleep



2022 Annual Conference  
Poster and Presentation List



**HBR**  
Health Behavior Research  
Official Journal of AAHB

(OR=1.40 [95% CI=1.15, 1.70];  $p=.001$ ), insomnia (OR=1.45 [95% CI=1.17, 1.81];  $p=.001$ ), short sleepers with (OR=2.01 [95% CI=1.54, 2.63];  $p<.001$ ) and without (OR=1.48 [95% CI=1.20, 1.82];  $p<.001$ ) insomnia, as well as normal sleepers with insomnia (OR=1.68 [95% CI=1.15, 2.43];  $p=.007$ ) each independently predicted diabetes.

**Conclusions.** Findings from this study suggested short sleep and insomnia are independent constructs as well as independent significant predictors of diabetes. The final models found short sleep and insomnia neither mediated nor moderated one another, implying these two sleep outcomes are not additive in nature, but are instead separate health problems. The distinction between short sleep and insomnia as predictors of diabetes may have important epidemiological and clinical implications.

### **ACCEPTABILITY, FEASIBILITY, AND APPROPRIATENESS OF PRENATAL CHLAMYDIA SCREENING GUIDELINES**

Stacey B. Griner, Kaeli C. Johnson, Ashlyn Kinard, Meaghan Nelsen, Nolan Kline, & Erika L. Thompson

**Background:** Professional organizations have evidence-based guidelines recommending chlamydia screening during pregnancy to prevent adverse pregnancy and neonatal outcomes. Guideline adoption and implementation into clinical care can be influenced by perceived guideline characteristics such as acceptability and clarity. Little is known prenatal providers' perceptions of these guidelines; therefore, we assessed the acceptability, feasibility, and appropriacy of prenatal chlamydia screening guidelines.

**Methods:** We assessed provider (MD/DO;  $n=198$ ) adoption of three prenatal chlamydia screening guidelines (American College of Obstetricians and Gynecologists (ACOG); U.S. Preventive Services Task Force; CDC). We assessed guideline feasibility through the Feasibility of Intervention Measure (FIM),

acceptability using the Acceptability of Intervention Measure (AIM), and appropriateness using the Intervention Appropriateness Measure (IAM). Scales were four items each with Likert-style responses (strongly disagree-strongly agree; 1-5). We compared these scores by guideline source using a multiple logistic regression model. The model adjusted for guideline characteristics including clarity (1-10), relative advantage, complexity, observability, and trialability.

**Findings:** Most prenatal providers (70%) selected the ACOG guideline for adoption and there were no significant differences in AIM (mean=4.1; SD=.81), FIM (mean=4.2; SD=.75), and IAM (mean=4.4; SD=.67) by guideline source. The ACOG guideline was significantly clearer (mean=9.0) compared to USPSTF/CDC guidelines (mean=8.4;  $p=0.000$ ). In the adjusted model, lower AIM (aOR:0.24, 95% CI 0.08-0.68) and lower guideline clarity (aOR:0.66, 95% CI 0.51-0.86), resulted in lower odds of selecting the ACOG guideline compared to other guidelines.

**Implications:** Overall, providers viewed prenatal chlamydia screening guidelines as feasible, acceptable, and appropriate for adoption into prenatal care. However, specific characteristics, such as acceptability and clarity differed by guideline source. Given this, understanding the guideline development process among organizations authoring guidelines may be beneficial to improve rates of adoption and implementation. Future studies may benefit from exploring guideline development, dissemination, and adoption utilizing implementation science approaches to improve STI screening during pregnancy.





2022 Annual Conference  
Poster and Presentation List



### **NOVEL APPROACH FOR ADDRESSING HPV VACCINE MISINFORMATION: ACCEPTABILITY OF SOCIAL MEDIA POP-UPS**

Erika L. Thompson, Annalynn M. Galvin, Ashvita Garg, Jonathan D. Moore, & Dana M. Litt

**Objective:** Misinformation and disinformation have contributed to skepticism and hesitancy for vaccines. Social media companies have explored novel strategies to address misinformation online for users. For example, Facebook proposed that prior to proceeding to any link about vaccination, a pop-up will prompt the user to visit a reputable website on vaccine information. Given the dismal uptake of Human Papillomavirus (HPV) vaccination in the United States and controversy surrounding this particular vaccine, we explored the acceptability of a pop-up Facebook message for HPV vaccine information.

**Methods:** A national sample of U.S. adults (n=579) were surveyed from an online panel in 2019. The outcome was likelihood of clicking on a pop-up about HPV vaccination on social media – a mockup of this pop-up was provided. We examined correlates (i.e., demographics, attitudes, exposure to HPV vaccination on social media, perceived credibility, polarization of social media content, sharing information online) of likelihood of clicking using binary logistic regression in SAS 9.4.

**Results:** Overall, 50% of participants said they would click on the pop-up if presented. Most participants rated the pop-up messages as acceptable, useful, and factual. People were more likely to click on the pop-up if they believed HPV vaccination information online was credible (OR=1.77, 95%CI 1.32-2.38), had positive attitudes about social media pop-ups (OR=1.21, 95%CI 1.14-1.28), perceived seeing positive content on social media (OR=1.89, 95%CI 1.14-3.15), and previously shared HPV vaccine information online (OR=2.50, 95%CI 1.12-5.60).

**Conclusions:** In an effort to address misinformation on HPV vaccination on social media, adults find pop-ups on social media to be acceptable. However, groups who already have favorable attitudes on vaccines may be the most likely to proceed with using a pop-up. Efforts are needed to explore how to improve acceptability, intention, and behavior to ultimately impact HPV vaccination behavior.

### **USING A TEXT AND CHAT HOTLINE TO PROVIDE MALTREATMENT-RELATED SUPPORT**

Laura Schwab Reese, Michelle Fingerman, & Laurel Jacobs

**Purpose:** The purpose of this study was to develop and evaluate a practice model for providing text- and chat-based support related to child maltreatment.

**Methods:** We conducted a qualitative content analysis of 314 conversations from a text- and chat-hotline selected through stratified random sampling. After the first round of coding was complete, we compared the characteristics of the initial sample to all conversations. Then, we purposefully sampled additional conversations from underrepresented groups, including perpetrators, young people, and maltreated children. These results were used to inform a practice model for providing written maltreatment-related support.

**Results:** We identified six groups who seek support, as defined by their relationship to the maltreated child: family members, peers/friends, maltreated children (self), distressed children (self), other known adults, and persons unknown to the child. Many people used the hotline as a source of information for referral to CPS. Children often sought resources for coping with maltreatment or supporting a friend who was being maltreated. Overall, the conversations progressed through five stages: introduction/clarification of hotline role, exploring the issue, problem-solving, working towards a resolution, and conclusion. Across these stages, crisis



2022 Annual Conference  
Poster and Presentation List



**HBR**  
Health Behavior Research  
Official Journal of AAHB

counselors used empathy/active listening to build rapport. In general, rapport development, especially validation, was more critical for conversations with young people, as they often had more difficulty sharing their experiences and trusting the crisis counselor to provide support than adults did. The resulting practice model emphasized balancing information and support while adapting the approach to the developmental and situational needs of the help-seeker.

Conclusions: Text- and chat-based hotlines are one way to reach young people and others who need child maltreatment-related support. In a recent survey of text- and chat-based users, 90% of chat-based and 50% of text-based hotline users reported that they would not call a phone hotline, suggesting that this service fills a critical gap.

### **“THE CHANCES ARE ZERO”: CONTRACEPTION USE AND PERCEIVED SUSCEPTIBILITY TO PREGNANCY AMONG WOMEN EXPERIENCING HOMELESSNESS**

Annalynn M. Galvin, Ashvita Garg, Stacey B. Griner, Aneliese K. Diener, Idara Akpan, & Erika L. Thompson

Purpose: Women experiencing homelessness are at higher risk of unintended pregnancy than women stably housed. While contraception may reduce unintended pregnancy rates, women experiencing homelessness also have low rates of effective contraception use. In addition to access and affordability, how women perceive their susceptibility to pregnancy may contribute to health behavior, including contraceptive use. This study aimed to explore how women experiencing homelessness perceive their susceptibility to pregnancy with and without contraception from a qualitative, emic perspective.

Methods: Semi-structured interviews (n=19) were conducted from December 2019 - October 2020 among pregnancy-capable (i.e., not sterilized) women, 18-45 years of

age, experiencing homelessness, and English-speaking. Interview questions included perceived susceptibility to pregnancy on and off contraception, attitudes toward pregnancy, and pregnancy intention. Interviews were audio-transcribed and coded to consensus using a seven-step coding process. Themes were identified via thematic and framework analysis, stratifying participants by pregnancy desire in the next year: yes (n=4), no (n=9), don't know (n=6). Results: All but two women (n=17) reported inconsistent or no contraceptive use. Interestingly, some women found their risk of pregnancy was equal with and without contraception based on perceptions of specific contraception efficacy (e.g., condoms versus pills); fertility and fecundity concerns; and high abstinence self-efficacy themes. Stratified analysis revealed that women who desired pregnancy in the next year or were uncertain of whether they wanted to get pregnant in the next year reported similar perceived susceptibility with and without birth control, compared to women not desiring pregnancy in the next year.

Conclusions: Findings highlight potential reasons why some women experiencing homelessness may perceive similar pregnancy susceptibility with both contraception use and non-use. Given the need to have higher susceptibility to pregnancy without contraceptive use for consistent contraception uptake, findings may explain lack of contraceptive behaviors and contraception preferences related to pregnancy desire.

### **THE EFFECT OF BLACK CHURCH-GOING MEN'S PREFERRED SOURCE OF CANCER INFORMATION ON PROSTATE- SPECIFIC ANTIGEN (PSA) TESTING BEHAVIORS.**

Brian J. Carter, Tzuan A. Chen, Dalnim Cho, Lorna H. McNeil, Shahnjayla K. Connors, Lorraine R. Reitzel

Purpose: Black men have a 76% higher prostate cancer incidence rate than White



2022 Annual Conference  
Poster and Presentation List



men and a prostate cancer mortality rate 2.2 times that of White men. Early detection by prostate-specific antigen (PSA) testing may improve survival outcomes. Here, we examine where black men prefer to obtain cancer information and whether the source of such information is associated with PSA screening behaviors.

**Methods:** Participants comprised a convenience sample of 298 Black men aged >45 (Mage= 55.69+8.29) recruited from 3 churches in Houston, Texas. Self-reported data included preferred source of information on cancer [doctor or health care provider (collectively, "Providers"), cancer organization, social network, internet, or other media (e.g., books, magazines)] and having received a PSA test within the last 24 months. A logistic regression model controlling for recruitment site, age, education, marital status, insurance status, household income, employment status, perceived social support, most recent source of information on cancer, satisfaction with patient-provider communication, personal history of cancer, family history of cancer, worries about cancer risk, and perceptions of cancer risk, examined associations between preferred source of cancer information and PSA test behavior.

**Results:** Overall, 60.40% of participants indicated their preferred source of information on cancer was a Provider, 9.06% a cancer organization, 2.35% their social network, 16.11% the internet, and 12.08% other media. About 38% of participants received a PSA test in the last 24 months. Results indicated that men who received information from a cancer organization or from their social network had lower odds of having a PSA test than those who received information from a Provider (AOR: 0.133, CI95%: 0.029-0.602; AOR: 0.08, CI95%: 0.007-0.938).

**Conclusion:** These results reveal opportunities to encourage black church-going men to obtain cancer information from Providers and to tailor the dissemination of such information by cancer organizations to better prompt PSA testing.

## PERCEPTIONS OF MASK WEARING, COVID-19 TESTING AND VACCINE UPTAKE AMONG COLLEGE STUDENTS DURING THE PANDEMIC

Ranjita Misra, Brenna O. Kirk, & Keith J. Zullig

**OBJECTIVE:** To investigate college students' face mask perceptions (FMPs) and face mask wearing behavior (FMWB) during the COVID-19 pandemic.

**METHODS:** Participants from a large public Mid-Atlantic university completed an online survey in April 2021 (N=628).

**RESULTS:** The sample modal age was 17-22 years (66.3%); 62% were female; 78% reported very good or excellent health status; 78.1% were vaccinated and 87.4% tested or would get a COVID-19 test. FMPs included 10 items intended to prevent the spread of COVID-19; higher scores represented more negative FMPs. Principal component analysis with varimax rotation indicated three FMPs factors explaining 64.3% of the variance: positive perceptions, negative perceptions and difficulty wearing masks. Cronbach's alpha was 0.88, 0.79 and 0.58, respectively. Multiple regression analysis of positive FMPs was associated with female gender, very good or excellent health status, older students, vaccine uptake and COVID-19 testing (adjusted R<sup>2</sup> = 27.9%; F <0.001). FMWB included 14 items with higher scores indicating lower support for FMWB. Cronbach's alpha was 0.90. Younger students, those who were unvaccinated and untested for COVID-19 were significantly more likely to support no FMWB. Male students and those with very good/excellent health status were more likely to support no FMWB than females and students with poor/fair/good health status, respectively. Interestingly, students who attend classes' in-person were also more likely to support no FMWB vs those not attending in-person. The model was significant with 27.4% of variance predicted by the variables (Adjusted R<sup>2</sup> = 27.4%; F <0.001).

**CONCLUSIONS:** Mask usage and vaccination offer the best forms of prevention



2022 Annual Conference  
Poster and Presentation List



for COVID-19. Findings of disparities in perceptions of mask wearing by gender, age and health status provide opportunities for college and universities to tailor public health education and communications on the importance of wearing masks to prevent exposure, vaccine uptake and testing during the pandemic.

### **A PROFILE OF COLLEGE STUDENTS WHO REPORT WEARING FACE MASKS DURING COVID-19 VIOLATES THEIR CIVIL LIBERTIES**

Keith J. Zullig & Madelin Gardner

**PURPOSE:** Mask wearing is a proven COVID-19 mitigation strategy with those who believe face mask use violates their constitutional rights constituting a challenging subgroup to evidence-based public health practice. Thus, this study explored differences in demographics, face mask wearing behavior, and vaccination perceptions among students who report face masks violate their civil liberties compared to those who do not.

**METHODS:** Participants from a large public Mid-Atlantic university completed an online survey in April 2021 (N=619).

**RESULTS:** Students (n=135, 21.8%) who reported wearing face masks violates their civil liberties were significantly ( $p<.05$ ) more likely identify as male, report very good or excellent health, attend in person classes, and significantly less likely to report being vaccinated when compared to those who do not. These students were also significantly ( $p<.0001$ ) more likely to endorse not wearing masks because masks make it difficult to breathe, provide a false sense of security, and because they value their independence. In addition, these students were significantly ( $p<.05$ ) more likely to endorse not being vaccinated because they are at low perceived risk for infection, of unknown side effects, and that vaccines were rushed. Adjusted logistic regression analysis suggested that students who reported face masks violate their civil liberties were 5.17 times (95% CI: 3.17-8.45) more likely to

report being unvaccinated. However, the students who reported face masks violate their civil liberties and vaccine status were only modestly positively correlated ( $r=.36$ ,  $p<.0001$ ).

**CONCLUSIONS:** Preliminary results suggest college students who reported face masks violate their civil liberties in this sample were more likely to be male, in good perceived health, attend in person classes, and unvaccinated. However, these individuals are not necessarily the same individuals who are unvaccinated, suggesting different public health messaging may be required to increase both face mask use and vaccinate uptake.

### **DELTA-8 THC RETAIL SALES IN FORT WORTH, TEXAS**

Matthew E. Rossheim, Cassidy LoParco, Drew Walker, Melvin Livingston, Sofia Olsson, Kayla McDonald, Andrew Yockey, Justin Lunningham, Amanda Kong, & Doug Henry

**Objectives:** To describe patterns of retail sales of Delta-8 THC products when retailers assumed sales were legal but were unregulated by the state.

**Methods:** There were 1,961 stores in Fort Worth, TX with retail alcohol, tobacco, and/or consumable hemp (CBD) licenses. Telephone data were collected from stores across Fort Worth, prior to the October 15, 2021 announcement that Delta-8 THC sales were illegal in Texas. Among these 1,961 locations called, 1,223 (62%) were contacted. Using 9-digit zip codes, area deprivation index (ADI) scores for each store were merged with these telephone data.

**Results:** Among the 1,961 locations called, 62% were reached. Of 1,223 retail stores contacted, 11% reported selling Delta-8 THC products. Among these 133 stores, 92% had a retail tobacco license. Most retailers sold products to smoke/vape (96%), and 76% sold edibles. Edibles were less expensive than products for smoking/vaping (mean = \$15.39 vs. \$23.97,  $t = 4.1$ ,  $p < 0.001$ ). Compared to stores that did not sell Delta-8



2022 Annual Conference  
Poster and Presentation List



THC, stores that did tended to be in areas with greater socioeconomic deprivation ( $t = 2.3, p = 0.02$ ). Most reported 21 years as the minimum purchase age; however, 4% reported 18 years or no minimum age.

Discussion: As of November 2021, Delta-8 THC sales are legal in Texas, due to a temporary injunction. This study provides the first retail assessment of Delta-8 THC product characteristics in an unregulated market. Delta-8 THC had widespread availability, and products often included inexpensive edibles. Further, Delta-8 THC retailers were disproportionately located in neighborhoods with greater socioeconomic deprivation, and there were discrepancies in the purported minimum age for purchase. These findings can help guide regulatory decision making and related harm reduction efforts, with a focus on the potential impact on young people and populations with lower socioeconomic resources.

### **TRENDS IN PREVALENCE OF SHORT SLEEP DURATION AND TROUBLE SLEEPING AMONG US ADULTS, 2005-2018**

Shanshan Wang, Matthew Rossheim, & Rajesh Ranjan Nandy

Background: Understanding current trends in prevalence of short sleep duration and trouble sleeping is critical to informing public health policy and planning for management of sleep problems. The objective of the current study was to determine trends in prevalence of short sleep duration and trouble sleeping among US adults from 2005 to 2018, and assess how sleep trends vary by sex and race/ethnicity.

Methods: Seven cycles of the National Health and Nutrition Examination Survey (NHANES) data between 2005-2006 and 2017-2018 were analyzed. Trouble sleeping and sleep duration were self-reported. Short sleep duration was defined as sleep duration  $\leq 6$  hours. Age-standardized prevalence of trouble sleeping and short sleep duration were estimated among the overall US adult population, and by sex and race/ethnicity.

Results: From the 2005-2006 cycle through the 2013-2014 cycle, the age-adjusted prevalence of short sleep duration remained similar in the overall population ( $p$  for trend  $> 0.05$ ). Prevalence of short sleep duration appears lower in 2015-2018 than in 2005-2014 due to different measurement methods applied. Non-Hispanic Black people had the highest prevalence of short sleep duration among all the race/ethnicity groups in all seven cycles. From 2005-2006 to 2017-2018, there were increasing trends in age-adjusted prevalence of trouble sleeping in the overall population, among both men and women, and all race/ethnicity groups ( $p$  for trend  $< 0.05$ ). Compared to men, women had a higher prevalence of trouble sleeping. Among all the race/ethnicity groups, non-Hispanic White people had the highest prevalence of trouble sleeping.

Conclusions: Based on NHANES data, from 2005 to 2018, Non-Hispanic Black people had the highest prevalence of short sleep duration. The prevalence of trouble sleeping increased significantly between 2005 and 2018, and non-Hispanic White people had the highest prevalence.

### **WHOLE EXOME SEQUENCING: PREGNANT LATINAS' PERSPECTIVES ON DISCLOSURE OF PREVENTABLE AND MEDICALLY ACTIONABLE ADULT-ONSET GENETIC FINDINGS TO THEIR CHILDREN**

Emily Chang, Eleise Brooks, Luke Dotson, Melodie Tedross, Justin Kramer, Haocen Wang, Denise Martinez, Robin Page, Nora Montalvo-Liendo, & Lei-Shih Chen

Purpose: Whole exome sequencing (WES) is a comprehensive genetic test which can detect genes related to preventable and medically actionable adult-onset conditions such as the BRCA1/2 gene for breast and ovarian cancer. Nevertheless, disclosure of WES results to minors raises various ethical issues, including negative psychological impact, violation on minor's future autonomy, and interference of familial relationships. This study explores the views of pregnant



2022 Annual Conference  
Poster and Presentation List



Latinas – an understudied minority group in genomics research – on the disclosure of WES results regarding preventable adult-onset conditions in their children.

Methods: Thirty-two pregnant Latinas in Texas underwent focus groups (N=13) and semi-structured interviews (N=19). NVivo was used to perform data analysis, and inductive coding methodologies were employed.

Results: Most pregnant Latina women had less than a high school education (72%) and were covered by Medicaid or Children's Health Insurance Program (88%). Nearly all interviewees (97%) reported that they would disclose WES results to their children. Reasons included ensuring the child could adequately care for themselves in the future (46%), a moral obligation to the child (38%), and mentally preparing the child (31%). Most chose to disclose results when the child could understand the information or during adulthood (77%).

Conclusions: Our study took an initial look into pregnant Latina women's perspectives on disclosing WES results regarding preventable and medically actionable adult-onset conditions to their children. Additional quantitative surveys with a larger sample size are needed in the future.

### **A NATIONAL ASSESSMENT OF ON-PREMISE DRINKING ESTABLISHMENTS: DRINK PRICES, DRINK SPECIALS AND TOBACCO POLICIES**

Cassidy R. LoParco, Drew Walker, Matthew E. Rossheim, Melvin Livingston, Pamela Trangenstein, Bitu Khoshhal, Kwynn Gonzalez-Pons, & Dennis Thombs

Background: Bar and nightclub practices, such as offering cheap drinks, pricing promotions (e.g., 2-for-1), and permitting vaping, can increase the amount that college students consume and the risks to themselves and others. Despite the implications, few studies have assessed the presence of low-cost alcohol and vape-friendly environments around college students. The current study surveilled drink

prices and specials, and examined associated characteristics of on-premise drinking establishments near large universities.

Methods: In 2018, telephone calls about prices, practices, and policies were made to 404 randomly selected bars and nightclubs within 2 miles of the largest residential universities in each state. Multivariable linear and logistic regression models examined associations between drinking establishment characteristics, drink prices, and specials. The Alcohol Policy Information System provided data on state-level alcohol policies. Results: The average price for a beer and a shot of vodka were \$3.62 and \$4.77, respectively. Most establishments (65%) had happy hour specials, 6% had 2-for-1 drink specials, 91% sold food, and 9% sold cigarettes on-premise. Allowing vaping indoors ( $b=-0.54$ ) and selling cigarettes on-premise ( $b=-0.79$ ) were associated with significantly lower vodka prices, whereas allowing cigarette smoking inside ( $b=-0.46$ ) was associated with significantly lower beer prices. Lower beer prices ( $OR=1.35$ ), selling food ( $OR=2.92$ ), and no state law banning happy hour specials ( $OR=6.67$ ) were significantly associated with higher odds of having a happy hour special. Allowing vaping indoors was significantly associated with higher odds of having a 2-for-1 drink special ( $OR=6.38$ ).

Conclusions: The current study is one of the first to identify associations between business practices/policies of on-premise drinking establishments and drink prices. These findings provide some insight regarding how alcohol prices may be discounted to promote sales of other products. Given the high frequency of drink specials and strong association between price and consumption, more research is needed regarding alcohol prices/specials at on-premise settings.



2022 Annual Conference  
Poster and Presentation List



## ASSOCIATIONS BETWEEN RETAIL SALES OF DELTA-8 THC AND FOUR LOKO IN FORT WORTH, TEXAS

Cassidy R. LoParco, Kayla McDonald, Matthew E. Rossheim, Pamela Trangenstein, Drew Walker, Melvin Livingston, Andrew Yockey, & Dennis Thombs

**Objectives:** Four Loko is a cheap and high-alcohol content product. Across the U.S., Four Loko retailers concentrate in impoverished areas; however, it is unclear whether this geographic patterning exists at a micro level, such as within a city. Delta-8 THC is an unregulated intoxicant that was legalized by the Farm Bill in 2018. It is unknown if retailers that sell risky products like Four Loko may be more likely to sell Delta-8 THC, creating niche stores that sell unregulated or intoxicating substances.

**Methods:** This study sampled 168 off-premise beer retailers in Fort Worth, Texas. Stores were contacted in September-October 2021 and asked whether they sold Delta-8 THC. Four Loko availability was obtained from the manufacturer's website. Area deprivation index (ADI) scores (range 1–10), a marker of socioeconomic disadvantage, were linked to each store's zip code. Multivariable logistic regression tested associations between having a retail tobacco license, ADI scores, Delta-8 THC sales, and Four Loko sales.

**Results:** 55% of stores sold Four Loko and 17% sold Delta-8 THC. Higher ADI scores ( $OR=1.15, 95\%CI=1.03, 1.28$ ) and selling Delta-8 THC products ( $OR=8.50, 95\%CI=2.32, 31.17$ ) were associated with increased odds of selling Four Loko. Having a tobacco license was also associated with increased odds of selling Four Loko products, although not statistically significant ( $OR=3.41, 95\%CI=0.99, 11.76$ ).

**Discussion:** Stores that sold Delta-8 THC were 8 times more likely to sell Four Loko, suggesting these stores specialized in unregulated or high-risk products. Given associations between Four Loko sales and

ADI scores, residents of socioeconomically deprived neighborhoods may have higher exposures to these dangerous products. Future research should assess the geographic distribution of Four Loko and Delta-8 THC sales and the etiology of health disparities and crimes near these establishments to support the development and implementation of public nuisance laws or policies that restrict the sale of unregulated/high-risk substances.

## CHARACTERISTICS OF DRINKING EPISODES ASSOCIATED WITH SIMULTANEOUS MARIJUANA USE AMONG UNDERAGE DRINKERS

Cassidy R. LoParco & Matthew E. Rossheim

**Background:** Drinking context is associated with quantity of alcohol consumed, particularly among underage drinkers. These contextual factors may also be associated with simultaneous use of other drugs while drinking, which is associated with increased experience of negative consequences compared to only drinking. This study examined associations between contextual factors of an individual's most recent drinking episode (i.e., how alcohol was accessed, where alcohol was consumed, the number of people they drank with) and whether they simultaneously used marijuana.

**Methods:** National Survey of Drug Use and Health data from 2010-2019 were used. The sample consisted of past-month drinkers under 21 years old ( $n=40,128$  unweighted;  $N=7,707,382$  weighted for nationally representative estimates). Multivariable logistic regression models were used.

**Results:** Compared to obtaining alcohol from family, individuals had higher odds of simultaneously using marijuana if the alcohol was taken from a home ( $OR=1.52, 95\%CI=1.24, 1.86$ ), somebody gave it to them for free ( $OR=2.29, 95\%CI=2.03, 2.57$ ), someone else bought it for them ( $OR=2.81, 95\%CI=2.45, 3.23$ ), or they purchased it themselves ( $OR=3.13, 95\%CI=2.66, 3.67$ ). Compared to drinking alone, drinking with more than one other person was associated



2022 Annual Conference  
Poster and Presentation List



**HBR**  
Health Behavior Research  
Official Journal of AAHB

with higher odds of simultaneous marijuana use (OR=1.34, 95%CI=1.10,1.62). Compared to drinking at home, drinking in someone else's home (OR=1.11, 95%CI=1.02,1.21), a car (OR=1.35, 95%CI=1.04,1.76), or more than one location (OR=1.29,95%CI=1.09,1.52) were significantly associated with higher odds of simultaneous marijuana use; drinking at a bar was associated with lower odds of marijuana use (OR=0.51, 95%CI=0.40,0.63). Conclusions: Simultaneous alcohol and marijuana use is associated with experiencing negative consequences, especially among young people. Given the associations between alcohol access, drinking locations, and simultaneous marijuana use, considerations should be given to strengthen alcohol prevention and control laws such as age verification for purchase, open container/DUI checkpoints, minor in possession, or social host liability. These strengthened policies may help reduce risky environments and increase detection and prevention of marijuana use among underage young people.

### **IMPACT OF HURRICANE MARIA ON PHYSICAL ACTIVITY, SMOKING AND ALCOHOL CONSUMPTION AMONG PUERTO RICANS**

Danyi Li, Ruopeng An, & Yuanyuan Yang

**Purpose:** Hurricane Maria, a deadly Category 5 hurricane, devastated Puerto Rico in September 2017. Hurricane Maria and its aftermath could profoundly influence people's health and risk behaviors, but relevant research remained scarce. This study examined the impact of Hurricane Maria on physical activity, smoking, and alcohol use among Puerto Rican adults.

**Methods:** Individual-level data were retrieved from the Behavioral Risk Factor Surveillance System 2015-2019 surveys. Greedy nearest neighbor propensity score matching with a caliper of 0.25 logit standard deviation were used to create a group comparable to Puerto Rican residents (N = 19,745). T-tests and chi-square tests were performed on pre-and-

post matching samples. The outcome models included difference-in-differences estimators containing two pieces of information: Before-and-after hurricane Maria and living in Puerto Rico or other states. Parallel trends of prevalences of any physical activity, current smokers, any alcohol consumption, and heavy alcohol consumption were visualized using non-parametric locally weighted scatterplot smoothing (LOWESS).

**Results:** The samples were well balanced after matching, with 99.1% Hispanics in both groups. Hurricane Maria was found to be associated with a 12.4 % lower odds of reporting any physical activity 95% CI (0.80 – 0.95) and with a 17.3 % higher odds of reporting any alcohol consumption 95% CI (1.07 – 1.29). The effects of Hurricane Maria on smoking and heavy drinking were not statistically significant.

**Conclusion:** Hurricane Maria was negatively associated with Puerto Rican residents' physical activity level but positively associated with alcohol use. Future studies should investigate the trajectories of natural disasters' sustained impact on health behaviors and underlying mechanisms. Long-term effects should also be examined to inform health behavior interventions for disaster survivors.

### **SOCIAL MEDIA-ASSISTED INTERVENTIONS ON HUMAN PAPILLOMAVIRUS AND VACCINATION-RELATED KNOWLEDGE, INTENTION, AND BEHAVIOR: A SCOPING REVIEW**

Danyi Li, Linyun Fu, Yuanyuan Yang, & Ruopeng An

**Purpose:** The purpose of this review is to identify, evaluate and summarize interventions delivered on or facilitated by social media with outcomes of Human Papillomavirus Vaccine (HPV)-related knowledge, awareness, attitude, vaccination intention, and uptake.

**Methods:** Systematically search and review the literature on Cochrane Library, PubMed, Web of Science, EMBASE, Scopus, and





2022 Annual Conference  
Poster and Presentation List



CINAHL. Standardized forms were used to abstract the basic characteristics, settings, guiding theories, and key findings of the interventions.

**Results:** Twenty-four studies met the eligibility criteria. Sixteen were educational interventions delivered via social media platforms, and the other eight investigated the effect of different social media message contents and phrasing on improving HPV-related outcomes. The studies were published between 2015 and 2021, most (75%) in the US. The most frequently used social media platforms were Facebook, and the most commonly adopted theory was the health belief model. More studies only targeted one stakeholder group: female adolescents and young adults. Evidence in males, minority race groups, socially disadvantaged populations, and underdeveloped countries is lacking. Existing interventions have shown preliminary but promising effects in improving HPV awareness and knowledge. Still, such improvements have not always been translated to improved behavioral intentions and vaccination rates. The contents and phrasing of social media messages and pre-existing individual characteristics of social media users moderated intervention effectiveness. Different combinations of messages sent by health organizations vs. individuals, scientific facts vs. personal stories, positively framed vs. negatively framed exert various influences on participants. Results are mixed regarding what kinds of messages on social media are more effective in improving HPV. **Conclusion:** Social media could be a valuable tool for engaging participants and delivering HPV interventions. Future studies should eliminate selection bias, include multilevel stakeholders, apply stronger theory bases, and investigate the potential of reducing health disparities by using social media.

## HPV VACCINE-RELATED GOOGLE SEARCHES IN THE UNITED STATES FROM 2010-2021: A GOOGLE TREND ANALYSIS

Akshaya Bhagavathula & Philip Massey

**Purpose:** Google searches have become a valuable tool to understand online health information-seeking behavior in the U.S. This study aimed to investigate the general public online google searches on the HPV vaccine from 2010 to August 31, 2021.

**Methods:** Google Trends (GT) was used to explore online searches on the HPV vaccine in each state, and year-over-year changes in the searches and queries were explored using relative search volumes (RSV). Linear regression analysis was performed to investigate the association between HPV vaccine searches and HPV vaccine coverage.

**Results:** The mean RSV of HPV vaccine searches was  $48.9 \pm 3.6$  in 2010 and  $47.8 \pm 3.1$  in 2021. Each year, from July to September, HPV vaccine searches were significantly higher (mean RSV:  $55.0 \pm 19.8$ ). Year-over-year, HPV vaccine searches increased in West Virginia (5.5%), Alaska (4.8%), and Delaware (3.8%), while New Hampshire (-4.0%), South Dakota (-2.7%), Arkansas (-2.3%), and Iowa (-2.3%) decrease in HPV vaccine searches. "Vaccine for HPV," "HPV side effects," and "HPV vaccine side effects" are the top HPV vaccine-related queries. There was a significant positive correlation between HPV vaccine searches and HPV vaccine coverage ( $r = 0.380$ ,  $P = 0.006$ ).

**Conclusion:** Online searches related to the HPV vaccine increased over time, and most of their searches were related to vaccine safety and Gardasil for men. Targeted interventions and tailored messages during the July-September in states with fewer HPV vaccine searches are recommended.



2022 Annual Conference  
Poster and Presentation List



**HBR**  
Health Behavior Research  
Official Journal of AAHB

## **PREVALENCE AND CORRELATES OF DEPRESSION SYMPTOMS AND DISORDERS AMONG ADOLESCENTS AND YOUNG ADULTS IN CHINA FROM 2010 TO 2018**

Danyi Li, Shiyong Wu, & Yiqi Zhu

**Purpose:** The purpose of this study was to examine the prevalence of depression among adolescents and young adults in China from 2010 to 2018 and describe the risk and protective factors associated with depression and its changes over time.

**Methods:** The analytic sample contains 843 participants aged 16-24 years in 2010 and followed through 2012, 2014, 2016, and 2018 in the China Family Panel Studies, a nationally representative data set. Descriptive statistics of depression scores, individual and family-level characteristics were presented. Five linear regressions on each survey wave and one multi-level mixed-effects model on the five-year longitudinal sample were conducted to explore the correlations to depression scores.

**Results:** The annual prevalence of depressive symptoms ranged from 25.8%, when the average age was 24.8 years, to 30.3%, when the average was 22.8 years. The annual depressive disorders prevalences ranged from 4.8% when the average was 20.9 years to 7.4% when the average age was 28.8 years. All the five-year models showed that females had a worse depression outcome than males; single, divorced, or separated had a worse depression outcome than married or cohabitated; self-rated health status was positively associated with the depression outcome. Age, education level, employment status, living in rural or urban areas, Hukou type, and family assets were significantly associated with lower depression scores after the year 2012 when participants aged 22 years on average. Family size was only found to be significantly associated with depression when participants aged 28.8 years.

**Conclusions:** This study found the prevalences of depressive symptoms and

disorders among Chinese youth and young adults are relatively high. In addition, we found that with growing and stepping into adulthood, the depression outcomes became worse in the study cohort. Relevant social policies and structural social changes should facilitate the smoother transformation of adolescents into adults in China.

## **THE INFLUENCE OF EDUCATIONAL ATTAINMENT ON FACTORS THAT INFLUENCE PREGNANT SMOKERS' INTENTIONS TO SWITCH TO E-CIGARETTES**

Page D. Dobbs, Paul Branscum, Lydia Buckley, Eric Schisler, & Grace Stoops

**Purpose:** The Reasoned Action Approach (RAA) is the most current iteration of the Theory of Planned Behavior. The RAA posits that intentions immediately precede behavior, and intentions are influenced by one's attitudes, norms, and perceived control. While the RAA has been used to understand women's intentions to switch to e-cigarettes during pregnancy, no research has examined the impact background variables (e.g., education) have on the model. Therefore, the purpose of this study was to examine the theoretical application of the RAA when controlling for educational attainment.

**Methods:** Currently active smoking pregnant women (n=267; 18-40 years) completed a national, online, cross-sectional survey about switching from cigarettes to e-cigarettes. Chi square analyses examined differences between demographic variables and past 30-day use of e-cigarettes. Next, structural equation modeling explored a higher order regression model for intentions to switch to e-cigarettes among those who had completed a college degree (i.e., associate's, bachelor's, or higher degree) and those who had not (i.e., completed high school diploma or less).

**Results:** Instrumental attitudes ( $p < .001$ ), experiential attitudes ( $p < .01$ ), and descriptive norms ( $p < .001$ ) were significantly associated with intentions to switch to e-



2022 Annual Conference  
Poster and Presentation List



cigarettes during pregnancy among those who had completed at least an associate's degree. In turn, instrumental attitudes ( $p < .05$ ), experiential attitudes ( $p < .05$ ), descriptive norms ( $p < .001$ ), and autonomy ( $p < .05$ ) were significantly associated with intentions to switch among those who had completed a high school diploma or less.

Conclusions: Autonomy was uniquely associated with intentions to switch to e-cigarettes among pregnant active smokers who had not completed any college. Thus, pregnant women with lower educational attainment may underestimate nicotine addiction and believe they are in control of their ability to switch to e-cigarettes during pregnancy. Better understanding of behavioral intentions can help practitioners develop more meaningful cessation programs for pregnant women who smoke.

### **E-CIGARETTE FLAVOR AND DEVICE PREFERENCES AMONG A SAMPLE OF PREGNANT WOMEN: A LATENT CLASS ANALYSIS**

Page D. Dobbs, Yu Lu, Abbie Luzius, Rebecca McCann, & Emily Richardson

Purpose: Up to 7% of pregnant women in the US report using e-cigarettes at some point during pregnancy. Health concerns of fetal exposure to nicotine during gestation includes low birth weight. Although research has explored pregnant women's perceptions of harm about e-cigarette use, little research has explored e-cigarette flavor and device preferences among this population.

Methods: A sample of pregnant women ( $n=267$ ) between 18-40 years of age who smoked at least one cigarette in the past 30 days were recruited to complete an online, cross-sectional survey between November and December 2019. Participants who had used e-cigarettes in the last 30 days ( $n=122$ ) answered questions about the use of specific flavors and e-cigarette devices they used during pregnancy. Using a latent class analysis (LCA), we identified groups of pregnant women who preferred different flavors (i.e., tobacco, mint, spice, candy,

alcohol, combined), e-cigarette devices (i.e., pod-mod, JUUL, tank, and disposable), who used THC in their vaping device, and who had modified or tampered with e-cigarette pods.

Results: The LCA identified four classes of e-cigarette users among the sample of pregnant women: users of JUUL tobacco and mint flavors (46.99%), users of all flavors and all pod-mod devices (including JUUL) who modified their pods and used THC (31.41%), users of all flavors and devices (12.56%), and users who included THC in their device and preferred tobacco and mint flavors in tank devices (9.04%).

Conclusions: The use of THC was commonly reported among the sample, as well as the use of JUUL, a device that delivers high levels of nicotine to the user via a salt-based solution. Understanding preferences and use patterns of e-cigarettes by grouping pregnant women who use e-cigarettes into classes can help practitioners develop educational campaigns about nicotine cessation programs that fully understand how these women are using these novel products.

### **BARRIERS AND DIABETES CARE QUALITY IN U.S. PUBLIC SCHOOLS**

Ruopeng An, Danyi Li, Marjorie Cole, Katherine Park, Mengmeng Ji, Aaron Lyon, & Neil H. White

Objectives: This study examined the influence of multi-level barriers to school diabetes care quality.

Methods: An online survey was administered to nurses in Missouri K-12 schools ( $N=245$ ). Fifty-seven potential barriers in five domains (at individual, school, community, social/cultural, and political/economic levels) were assessed. Thirty-eight criteria for care quality were developed based on NIDDK's school diabetes care guidelines. Structural equation modeling was performed to examine the effect of barriers on school diabetes care quality.

Results: School nurses' heavy workloads, teachers/parents' lack of training/knowledge on evidence-based practices, lack of funding



2022 Annual Conference  
Poster and Presentation List



**HBR**  
Health Behavior Research  
Official Journal of AAHB

from government and districts, and schools serving disadvantaged or rural populations were among the key barriers to school diabetes care. Deficiencies in care quality were identified in areas including knowledge/training, communication, school policies, resources and environment, physical activity engagement among students with diabetes, school nurses' diabetes management practices, and trained diabetes practitioners' responsibilities. School diabetes care barriers, overall, were inversely associated with care quality—one-standard-deviation increase in the barriers was associated with a 0.163 (95% confidence interval=0.002-0.324) standard-deviation decrease in care quality.

Conclusions: Multi-level policy interventions were called to address these barriers in order to improve care quality and ensure the healthy growth of students with diabetes.

### **THE LONGITUDINAL ASSOCIATIONS OF NEGATIVE SPILLOVER WITH CHRONIC CONDITIONS AND THE MEDIATING ROLE OF PSYCHOLOGICAL WELL-BEING**

Erum Z. Whyne, Jihun Woo, & Mary A. Steinhardt

**Purpose:** Stress from one life domain (work) can negatively interfere or lead to stress in another domain (family), causing spillover. Negative work-family spillover (WFS) and family-work spillover (FWS) are associated with worse health outcomes; however, few studies have examined the longitudinal impact of spillover and potential mechanisms linking WFS and FWS to health outcomes. This study examined the longitudinal associations of WFS and chronic conditions, and FWS and chronic conditions (17-19 years later), as well as the mediating role of psychological well-being (8-11 years later). **Methods:** A subset of participants (N=2350) from the Midlife in the United States (MIDUS) study completed 3 waves of data collection over the course of 19 years. Structural equation modeling was used to test the direct association between WFS with chronic

conditions (Model 1), the direct association between FWS and chronic conditions (Model 2) and the indirect associations via psychological well-being. Demographics and baseline chronic conditions were controlled for on both models.

**Results:** For Model 1, WFS was positively associated with chronic conditions directly ( $b = .096$ ,  $p < .01$ ) and indirectly through psychological well-being ( $b = .083$ ,  $p < .001$ ). WFS was negatively associated with psychological well-being ( $b = -.230$ ,  $p < .001$ ) and psychological well-being was negatively associated with chronic conditions ( $b = -.359$ ,  $p < .001$ ). For Model 2, FWS was positively associated with chronic conditions directly ( $b = .066$ ,  $p < .05$ ) and indirectly through psychological well-being ( $b = .098$ ,  $p < .001$ ). FWS was negatively associated with psychological well-being ( $b = -.267$ ,  $p < .001$ ). and psychological well-being was negatively associated with chronic conditions ( $b = -.368$ ,  $p < .001$ ).

**Conclusions:** Negative WFS and FWS are longitudinally associated with a greater number of chronic conditions (17-19 years later), and psychological well-being partially mediates both associations. This study suggests WFS and FWS are significant predictors of chronic conditions; enhancing psychological well-being may help alleviate some of the harmful effects of negative spillover on health outcomes.

### **WHY DO THOSE AT MINIMAL RISK OF DISEASE COMPLY WITH PUBLIC HEALTH MEASURES DURING THE COVID-19 PANDEMIC?**

Gemma Postill, Cindy Adams, & Caroline Ritter

**Introduction:** Motivating compliance in young adults, who often have large social networks and at the lowest risk of adverse outcome from COVID-19 infection, is critical to reducing disease transmission. Our objective was to investigate why young adults living in a low-risk setting followed public health guidelines.



2022 Annual Conference  
Poster and Presentation List



**Methods:** A qualitative research approach was chosen to gain an in-depth understanding of participants' beliefs, feelings, and experiences. Semi-structured interviews were conducted in April 2021 with 30 adults (in their 20s) living in Prince Edward Island (PEI), the province with the lowest COVID-19 case rate in Canada. Thematic analysis was used to create a codebook based on the theoretical domains framework, which was then inductively modified to reflect the participants' beliefs; qualitative mapping was used to understand the connection between codes and generate themes.

**Results:** The analysis identified several themes, common to all participants, that explained why (not) participants complied to public health guidelines. These themes were applicable to the five public health measures studied (mask wearing, social distancing, quarantining, travel restriction, and vaccination), demonstrating commonalities in low-risk individuals' rationales for compliance. However, there were important contrasts between different public health measure with respect to whether the theme was a barrier or facilitator of compliance. For example, regarding the theme "foreign territory"; the novelty of mask wearing made complying difficult and unappealing, whereas the novelty of circuit breakers promoted compliance.

**Conclusions:** This study illustrates that the distinct motivators and barriers for each public health measure should be considered to ensure the compliance of low-risk young adults. This knowledge is critical given that with COVID-19 vaccinations available, an increasing percent of the population becomes "low-risk"; likewise, these findings can inform future public health emergencies, which are becoming more frequent due to globalization and climate change.

## **CORONAVIRUS-19 VACCINE BEHAVIORAL INTENTION AMONG YOUNG ADULTS IN THE UNITED STATES**

Heather K. Hardin, Khannah Wetmore, & Anna E. Bender

**Background:** Young adults have the lowest levels of coronavirus-19 vaccination behavior among all demographics; however, little evidence exists concerning predictors of young adults' coronavirus-19 vaccine behavioral intention.

**Purpose:** The purpose of this study was to examine associations with coronavirus-19 vaccine behavioral intention among young adults aged 18-25 years in the United States. **Methods:** A cross-sectional descriptive study guided by the Health Belief Model was conducted in July 2020 concerning a future coronavirus-19 vaccine. Two hundred and fifty young adults' aged 18-25 years responded to the survey link shared via online platforms (Reddit, Twitter, Facebook, email). Correlations examined associations with coronavirus-19 vaccine behavioral intention. Hierarchical multiple regression evaluated predictors of coronavirus-19 vaccine behavioral intention.

**Results:** Half of participants identified as male and the participants were primarily white, non-Hispanic, single, and had at least some college. Greater coronavirus-19 vaccine behavioral intention was associated with lower loneliness, lower depressive symptoms, greater trust of healthcare provider, lower vaccine hesitancy, and lower sleep disturbance. The regression model predicted 40% of the variance in coronavirus-19 vaccine behavioral intention [ $F(11, 118) = 8.01, p < .01$ ], which was predicted by greater trust of healthcare provider, lower vaccine hesitancy, and lower depressive symptoms.

**Conclusion:** Predictors of coronavirus-19 vaccine behavioral intention were all modifiable variables. When healthcare providers counsel young adults about coronavirus-19 vaccination, they should also assess young adults for depressive symptoms, sleep disturbance, and



2022 Annual Conference  
Poster and Presentation List



loneliness. Including social, sleep, and depressive symptom management components in health behavior change interventions has the potential to influence coronavirus-19 vaccine behavioral intention among young adults living in the United States.

### **RETHINK VAPE PROVIDER TRAINING TO INCREASE TEEN RISK COUNSELING AT PEDIATRIC PRACTICES**

Kelli J. England, Ann L. Edwards, Anisha S. Vanka, Natasha K. Sriraman, Rebecca J. Slimak, Paul T. Harrell, & Amy C. Paulson

**Purpose:** E-cigarettes or vapes are the most common form of tobacco use among adolescents, with 3.6 million US teens reporting use in 2020. The goal of this project was to incorporate vape screening and prevention education into teen patient visits at pediatric practices, to help providers feel comfortable with the topic of vaping, and to evaluate this process for continuous quality improvement.

**Methods:** A provider training and resource module was developed and implemented with partnering providers (N=33) in spring 2021, including provider-tailored education, talking points, billing codes, and parent/teen resources. Providers completed an anonymous pre/post survey regarding their knowledge, comfort level, barriers, and practices related to vaping education with their patients. Key-informant interviews were conducted to identify barriers and seek solutions to facilitate smooth incorporation of risk counseling into daily practice. Monthly meetings were held with providers to achieve continuous quality improvement in the practices. Frequency of vaping information provided in the depart summary were monitored.

**Results:** Training materials increased physician knowledge and confidence and led to more success in risk screening and counseling. Mean physician confidence in counseling teens on the risks of vaping increased from 3.33 at baseline to 4.88 (on a 5-point scale) following intervention, with

88% of physicians feeling strongly confident post-intervention in their ability to provide risk counseling to teens. Physicians indicating they often or always provide vape prevention information during a visit increased from 9% at baseline to 50% following the intervention. Average resources provided in depart summaries increased from 1/month at baseline to 94/month following intervention. Time constraints continued to be the greatest barrier to preventive counseling.

**Conclusions:** Provider-tailored training and resources increased physician knowledge of and confidence in the topic of vaping, as well as the frequency of screening and preventive guidance provided to teens and their families during patient visits.

### **ARE SOME STUDENTS MORE VULNERABLE TO THE NEGATIVE EFFECTS OF SOCIAL MEDIA USE? THE ROLE OF EARLY ADVERSE CHILDHOOD EXPERIENCES AND SOCIAL MEDIA USE ON COLLEGE STUDENTS' MENTAL HEALTH DURING THE COVID-19 PANDEMIC**

Lyudmyla Golets, Christopher J. Rogers, Velia Nunez, Jazmine Victoria, Claudia Toledo-Corral, & Jonathan Watts

**Purpose:** College students are the among the heaviest users of social media however, the relationship between social media use and mental health among young adults is unclear. Given that adverse childhood experiences (ACE) are consistent predictors of negative mental health outcomes including depression and anxiety, we explore the relationship between social media use and depression and anxiety and whether students with a history of ACE were more vulnerable to the negative effects of social media use than their peers with no ACE during the COVID college campus shut down.

**Methods:** Electronic surveys were sent to randomly selected students (N=1,313) at one of the most ethnically and socioeconomically diverse urban public universities in CA. Linear regression models



2022 Annual Conference  
Poster and Presentation List



assessed the direct effects of social media use on depression [using Center for Epidemiological Studies Depression scale (CES-D)] and anxiety [using Generalized Anxiety Disorder scale (GAD-7)] and whether these associations varied across ACE exposure.

Results: On average, respondents with high social media use had significantly higher depressive affect [ $B=0.061, (95\%CI=0.04, 0.08)$ ] and anxiety [ $B=0.047, (95\%CI=0.03, 0.07)$ ]. In regard to ACE, as social media use increases, students with co-occurring ACE have especially aggravated symptoms of depression and anxiety compared to students with no ACE. Among students with low social media use, symptoms of depression and anxiety are similar across ACE exposure; however, among heavy users of social media, the severity (number of symptoms) of depression [ $18.21 (95\%CI=15.38, 21.04)$  vs.  $9.92 (95\%CI=8.45, 11.39)$ ] and anxiety [ $15.44 (95\%CI=12.940, 17.942)$  vs.  $9.16 (95\%CI=7.85, 10.46)$ ] is significantly higher for those with co-occurring ACE.

Conclusions: Students with high levels of social media use (relative to their peers) and co-occurring ACE have the poorest mental health outcomes in this sample. Interventions that focus on improving student mental health should consider the interplay between ACE and social media use.

#### **PERSPECTIVES OF SCHOOL STAFF ON THE HEALTH OF STUDENTS DURING THE COVID-19 PANDEMIC: A THEMATIC ANALYSIS OF INTERVIEWS FROM THE 2020-2021 SCHOOL YEAR**

Mackenzie Stuenkel, Sarah Griffin, Holly Grady, & Kerry Sease

The COVID-19 pandemic has had significant impact on the health and well-being of children. In the school setting, students are subject to the similar increases in stress, while also being exposed to constant change in their routines and academic expectations. To identify the impact of school practice, policy, and interaction adaptations on middle

schoolers' health and well-being at the end of the 2020-2021 school year, we conducted interviews with 12 staff members from 4 middle schools, including school nurses, administrators, and teachers. The purpose of the interviews was to understand the overall impact of the COVID-19 pandemic on the perceived health and well-being of staff and students from the staffs' perspective and on the delivery and dissemination of health programming and services. Interview data was transcribed and analyzed using an inductive and deductive summary thematic approach informed by the School Based Health Center programming model. Three themes were constructed from the data. Themes included 1) an increase in prevalence and severity of mental health conditions, 2) reliance on school-based health services and support for health management, and 3) an overall increase of daily stress on both staff and students. All themes spoke to the impact of changes on the mental health of staff and students. While teachers and administrators reported less student disruptions during class due to COVID-19 related classroom policies and decreased class sizes, they also indicated higher levels of connectedness between struggling students and staff because of the new shared experience. These interviews demonstrated themes of concern for students mental and physical health, but also increased burnout from school staff who struggle to maintain a supportive environment for students while also managing their own stress and fear.

#### **RISE IN MIDDLE SCHOOLERS' MENTAL HEALTH PREVALENCE AND UTILIZATION OF SERVICES IN SCHOOL-BASED HEALTH CENTERS DURING THE COVID-19 PANDEMIC: DATA FROM THE 2020-2021 SCHOOL YEAR**

Mackenzie Stuenkel, Sarah Griffin, Kerry Howard, Holly Grady, & Kerry Sease

School-based health centers offer health services to students within the school that they are based. The school-based health



2022 Annual Conference  
Poster and Presentation List



centers in the present study provides care for students including treatment and management of acute illness/injury, chronic conditions, preventative care, and mental and behavioral health conditions. An ongoing evaluation of these school-based health centers in five middle schools has tracked utilization patterns of students over three school years. The purpose of this analysis was to examine prevalence of visits related to mental health during the 2020-2021 school year, which represents students' return to school during the COVID-19 pandemic. A regression analysis of visits during the 2020-2021 school year compared to previous years showed significantly higher odds of a visit being for mental health during the 2020-2021 school year (OR=2.44, 95%CI [1.93, 3.09],  $p<.0001$ ). Of the 392 visits to the centers over the 2020-2021 school year, 163 were related to a mental health encounters, including screenings for mental health conditions (46%) and ongoing treatment and management of existing conditions (54%). The proportion of mental health visits to total visits during the 2020-2021 school year demonstrates an increase from the combined previous two years ( $n=163$ , 42% compared to  $n=346$ , 23%). Of the visits related to ongoing management, the most frequent conditions were attributed to anxiety and depression. Utilization patterns also demonstrated increased frequency of repeated visits by students with diagnosed mental health conditions, with 67% of students having visited the centers more than once. These findings echo the national trends for increasing prevalence of mental health conditions due to the COVID-19 pandemic and demonstrate these patterns and needs within middle school students.

## **PEDIATRIC ASTHMA MANAGEMENT: PERSPECTIVES FROM PARENTS/GUARDIANS, HEALTHCARE PROVIDERS, AND COMMUNITY SUPPORT PROVIDERS**

Laura J. Rolke, Sarah F. Griffin, & Kerry K Sease

Pediatric asthma management involves regular clinical follow-up, medication adherence with a well-formed plan, avoidance of environmental triggers, and continual patient and parent/guardian education. The purpose of this study is to compare the experiences of parents/guardians with both clinical and community support service providers' experiences and perspectives of healthcare visits, family uptake of clinical recommendations, and the impact of outside agencies on asthma self-management behaviors. Twelve parents/guardians of Black/African American Medicaid-insured children with a moderate persistent asthma diagnosis, five clinical providers in a medical home setting, and six community support service providers were interviewed virtually about pediatric asthma management in Fall 2020 and Spring 2021. Interviews ranged from 15 to 59 minutes and were transcribed verbatim. The transcripts were analyzed deductively and inductively by a three-person coding team with an overall percent agreement of 88%. Themes from the analysis include 1) Parents/Guardians and clinical providers vary in their views of asthma management responsibility, 2) Systems level healthcare factors impact asthma management behaviors and asthma education, 3) Community support service agencies are needed to reduce barriers and reinforce asthma education, and 4) Support and connection with clinical providers is a necessary component to asthma care. Most parents did not identify COVID-19 as a major factor with their child's asthma management, but clinical providers and community support service providers discussed how COVID-19 disrupted normal processes for healthcare visits. This study documents some of the





2022 Annual Conference  
Poster and Presentation List



modifiable and non-modifiable dynamics that influence the development and continuation of pediatric asthma management behaviors through a socioecological lens.

### **SOCIAL AND STRUCTURAL DETERMINANTS OF ACCESS TO MEDICAL CARE AMONG MEDICARE BENEFICIARIES**

Samuel D. Towne, Boon Ng, Adam Reres, Dawn Oetjen, Reid Oetjen, & Su-I Hou

**Introduction.** Identifying factors associated with accessing medical care among potentially vulnerable populations of largely older adults is timely, especially as this population is expected to grow substantially over time.

**Methods.** Surveys were collected among a nationally representative sample of community-dwelling Medicare beneficiaries residing in the continental US in 2017. Survey-weighted multivariable logistic regression analyses modeled the dichotomous outcome of one's satisfaction (unsatisfied versus satisfied) with 'the ease and convenience of getting to a doctor or other health professional' (clinician). Multivariable analyses included several theory-informed social and structural determinants of health inequities. Odds ratios and corresponding 95% Confidence Intervals (CI) are presented for adjusted analyses.

**Results.** Factors associated with reporting being unsatisfied with the ease of getting to one's clinician included: Hispanic ethnicity versus non-Hispanic White (OR=1.70, 95%CI=1.13-2.54); having a higher education (higher than high school versus no high school degree: OR=1.98 95%CI=1.32-2.98); age (aged <65 versus 75 and older: OR=1.48, 95%CI=1.001-2.19); usual time taken to get to doctor's office (more than 30 minutes versus less than or equal to 30 minutes: OR=2.41, 95%CI=1.76-3.30); and interaction of rurality (rural versus urban) and having social limitations (yes versus no) due to health (interaction term,  $p=.0430$ ) where we find several differences, including, a

higher likelihood of being unsatisfied with the ease of getting to one's clinician among: metropolitan/urban residents with social limitations versus metropolitan/urban residents without social limitations (OR=5.40, 95%CI=3.70-7.88); rural residents with social limitations versus rural residents without social limitations (OR=2.94, 95%CI=1.78-4.85); and cross-rurality comparisons with rural residents with social limitations more likely than metropolitan/urban residents with social limitations (OR= 1.77, 95%CI=1.18-2.65).

**Conclusion.** This study sheds light on the relationship between social and structural determinants of health inequities and ease of accessing medical care among Medicare beneficiaries and variation among key factors thereby holding insight for local, state, and federal stakeholders.

### **INVESTIGATING COHORT EFFECTS AND THE ASSOCIATION BETWEEN MARITAL RELATIONSHIP QUALITY AND PHYSICAL ACTIVITY**

Shannon C. Montgomery, Kasey E. Longley, & Joseph G. Grzywacz

**Purpose:** Physical activity (PA) declines progressively across adulthood. Whilst the majority (80%) of Americans marry, evidence surrounding how marriage may affect PA is underdeveloped. Life course theory suggests that marital interactions are subject to social and economic influences across time. This study aims to understand whether social mechanisms underlying marriage are associated with PA and if the roles of marital support and strain are changing across time. The two-handle design spanning two different cohorts approximately 20 years apart allowed for insight into how period effects may indirectly impact the relationship between marriage and PA.

**Methods:** Data from two cohorts of the Midlife in the United States (MIDUS) study were analyzed: MIDUS 1 (M1, 1995) and MIDUS Refresher (MR, 2007). Multinomial logistic regression analyses tested associations of spousal support and spousal strain with PA,



2022 Annual Conference  
Poster and Presentation List



controlling for demographics. Additionally, the models tested for a difference by sex, and for mood as a mediator.

Results: In the earlier cohort (M1), spousal support was associated with regular PA, whereas spousal strain was associated with both regular and some PA. In the later cohort (MR), only spousal support (not strain) was associated with some (but not regular) PA. Mood was a complete mediator of spousal support for regular PA, and a partial suppressor of spousal strain in M1, but irrelevant in MR. The findings did not differ significantly by sex in either cohort.

Conclusions: In the earlier cohort, support and strain were associated with PA and mood was implicated in those associations. However, the pattern of associations was notably different in the later cohort. Changing family dynamics and diverging economic climates may contribute to observed differences between marital quality and PA across time. This suggests the need for an integrated life course epidemiological approach to explain patterns of health-related outcomes within a changing world.

### **DOES RACE/ETHNICITY AND ACCULTURATION MATTER TO SCHOOL MEAL PARTICIPATION?**

Lori A. Spruance & Tien Vo

Purpose: School meals provide an opportunity for adolescents to receive a healthy meal, race/ethnicity and acculturation may play a role participation. The purpose of this study was to assess the relationship between acculturation, race/ethnicity, and participation in school meals.

Methods: A national convenience sample of adolescents ages 11 to 14 was recruited to participate in a survey. Acculturation was defined through several measures: time spend in the US, generation American, and three subscales from the Multidimensional Acculturation Scale. Relationships between participation in school meals, race/ethnicity, acculturation, and other salient variables were analyzed.

Results: The sample included 616 adolescents (33.2% White, 21.7% Black, 16.4% Hispanic/Latinx, 13.7% multiple races). More than a quarter (26.2%) of participants indicated that they eat school lunch daily and 17.4% indicated they eat school breakfast daily. In a multivariable model, race/ethnicity, preference for school meals, taste, convenience, cost, and parent influence were all significantly related to daily participation in school lunch. Race/ethnicity, time lived outside of the US, healthiness of school meals, preference of school meals, taste, and cost were significantly related to daily school breakfast participation. Compared to Whites, all other races were less likely to participate in school lunch and breakfast.

Conclusions: School meals may cater to White culture and less appealing to students from different race/ethnicities. Child nutrition professionals could work with students from minoritized populations to understand their lack of participation, particularly because these students likely have poorer diets compared to their White counterparts. Additional factors should be considered for increasing participation, thus potentially the dietary profile of students, including cost, taste, and perceived healthiness.