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December 2021

## The American Academy of Health Behavior 2021 Annual Scientific Meeting: "Transforming the Narrative to Meet Emerging Health Behavior Challenges"

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## The American Academy of Health Behavior 2021 Annual Scientific Meeting: "Transforming the Narrative to Meet Emerging Health Behavior Challenges"

### Abstract

The American Academy of Health Behavior (AAHB) hosted its 21th Annual Scientific Meeting online in March 2021. The meeting's theme was "Transforming the Narrative to Meet Emerging Health Behavior Challenges". This publication describes the meeting theme and includes the refereed abstracts presented at the 2021 Annual Scientific Meeting.

### Keywords

AAHB

**March 19, 2021 3:00PM EST**

***Aging***

**Poster 20-05**

**Assessing Feelings of Social Isolation Among Community-dwelling Older Adults**

Smith, Matthew; Lachenmayr, Sue; Eagle, Leigh Ann

Purpose: Social isolation among older adults is a complex public health issue, which is associated with an estimated \$6.7 billion in annual Medicare spending. A lack of social connections has been linked to premature mortality, suicide, and cognitive decline among aging populations. There is a critical demand to develop assessments that identify social isolation risk among older adults and link them to needed resources and services. This study examined associations between the Upstream Social Isolation Risk Screener (U-SIRS) constructs and self-reported feelings of being isolated from others. Methods: The U-SIRS was developed to assess social isolation risk among older adults within clinical and community settings. Comprised of 29 items, the U-SIRS assesses physical, emotional, and social support aspects of social isolation. Using an Internet-delivered survey, data were collected from a national sample of 4,101 adults age 60 years and older. Participants completed the U-SIRS and additional items on sociodemographics and other health risks. A binary logistic regression model with backwards stepwise deletion was performed to identify factors associated with self-reported feelings of being isolated from others. Results: Approximately 35% ( $n=1,442$ ) of participants reported feeling isolated from others. The average age of participants was 69.9 ( $\pm 5.2$ ) years old, and the majority were female

(58.3%), Caucasian (73.3%), retired (75.6%), and married (52.7%). Participants who had more chronic conditions ( $OR=1.04$ ,  $p=0.021$ ) and higher education levels ( $OR=1.18$ ,  $p=0.007$ ) were more likely to feel isolated. Participants reporting higher levels of risk in terms of life satisfaction ( $OR=1.43$ ,  $p<0.001$ ), perceived belonging ( $OR=2.26$ ,  $p<0.001$ ), and depressive symptomology ( $OR=1.99$ ,  $p<0.001$ ) were more likely to feel isolated. Conclusion: Findings suggest the need to embed easy-to-use screening assessment tools into the workflow of clinicians and community providers to identify risk factors and initiate a pathway for older adults to access resources and increase connectivity.

**Poster 20-09**

**Characterizing Advance Care Planning Among Older Adults Living with HIV as Stages of Change**

Nguyen, Annie; Nelson, L.; Bailey, J.

Purpose: Over half of people living with HIV infection in the United States are older adults ages 50 and over. Older adults living with HIV (OALWH) are at increased risk for health threats, pointing to the importance of engaging in advance care planning (ACP). However, ACP rates remain low. Methods: Our study characterizes ACP among OALWH by applying the transtheoretical model to conceptualize ACP as a health behavior in terms of the stages of change. ACP was assessed via cross-sectional surveys and measured using the ACP Engagement Survey. Preliminary data collected from 87 respondents in Los Angeles, CA are reported here. Results: Race/ethnicity: 41.7% Hispanic/Latino, 29.8% Black; 84.7% male; 63.5% gay or lesbian; 50.5% completed high school or less; mean age of 59.4 ( $SD=7.0$ ); mean of 22.7 years ( $SD=8.1$ ) since HIV diagnosis.

The change stages for signing an advance directive were: pre-contemplation (never thought of it/not ready to do it; 55.8%), contemplation (doing in next 6 months; 12.8%), preparation (doing in next 30 days; 8.1%), and action/maintenance (already did it; 23.3%). The breakdown for designating a healthcare proxy were: pre-contemplation (58.6%), contemplation (10.3%), preparation (3.4%), and action/maintenance (27.6%). Compared to participants in higher level stages for completing an advance directive and designating a healthcare proxy, those in the pre-contemplation stage were more likely to have detectable viral loads ( $p$ 's<0.001) and lower purpose in life scores ( $p$ 's<0.05). Conclusions: Over half of respondents were in the pre-contemplation stage for two important ACP behaviors representing opportunities for intervention around ACP education and awareness. Detectable viral loads typically indicates poorer health and poorer medication adherence. Along with the finding that respondents have a lower sense of purpose in life, this may indicate a group that is struggling to manage their physical, mental, and healthcare needs. These are opportunities for intervention.

### **Poster 20-16**

#### **Differential Risk Factors for Falls Among Community-dwelling Older Adults by Cognitive Status**

Yoshikawa, Aya; Smith, Matthew; Ory, Marcia

Purpose: Dementia is an increasing concern among community-dwelling older adults, which can cause an increased risk of falling. Existing literature suggests those with dementia and those taking pain medication have higher rates of falls. However, less is known about the influences of pain

medication on falls among people with dementia (PWD), who often have an elevated risk of chronic pain. This study aims to evaluate fall risks associated with pain medication use by cognitive status. Methods: Data from a nationally representative sample of Medicare beneficiaries, the 2011 National Health and Aging Trends Study, were analyzed for this cross-sectional study. Two groups were created by cognitive status: (1) no cognitive impairment; and (2) dementia, which included possible and probable dementia. Survey-weighted logistic regression was performed to assess the odds of a recent fall based on pain medication use. Analyses controlled for sociodemographic characteristics, fall-related worry, balance and vision problems, and comorbidities. Results: About 76% of the 7,275 community-dwelling participants had no cognitive impairment. Among those with no dementia, falls were associated with pain medication use (OR=1.64, 95% CI 1.21, 2.24), in addition to higher fall-related worry (OR=1.42, 95% CI 1.08, 1.89) and balance problems (OR=1.61, 95% CI 1.46, 1.77). Contrarily, male gender (OR=0.65, 95% CI 0.48, 0.89), higher fall-related worry (OR=1.83, 95% CI 1.30, 2.60), balance problems (OR=1.65, 95% CI 1.46, 1.86), and non-Hispanic white compared with non-Hispanic black status (OR=0.65, 95% CI 0.42, 0.99) were associated with falls among PWD. Conclusions: Findings suggest differential risk factors for falls by cognitive status. They support the need for education about pain management especially among those with no cognitive impairment. The provision of education about fall prevention for PWD, caregivers, and clinicians may help reduce the risk of falls. Future research should further examine other modifiable risk factors for falls among community-dwelling older adults.

**Poster 20-20****Factors Associated with Past Year Emergency Room Visits Among African American and Hispanic Men with Chronic Conditions**

Sherman, Ledric; Goidel, R. Kirby; Merianos, Ashley; Mahabee-Gittens, E. Melinda; Smith, Matthew

**Purpose:** Males traditionally underutilize preventive healthcare services and routine medical visits available by primary care providers. Health resource utilization is especially limited among racial/ethnic minority men, who often prolong or delay preventive healthcare visits or use emergency rooms (ER) as primary care. **Methods:** This study identified factors associated with ER utilization within the past year among African American and Hispanic men age 40 years and older with one or more chronic conditions. Data were analyzed from a national sample of 1,904 racial/ethnic minority males using an internet-delivered questionnaire. A binary logistic regression model was fitted to assess factors associated with past year ER visits. **Results:** On average, participants were age 56.51 ( $\pm 10.03$ ) years and self-reported 4.01 ( $\pm 2.98$ ) chronic conditions from a list of 19 conditions. Approximately 57% were African American, 40.9% were Hispanic, and 44.4% reported visiting an ER in the past year. Males who were African American (OR=1.28,  $p=0.019$ ) as well as those who had more chronic conditions (OR=1.06,  $p<0.001$ ), more severe sleep problems (OR=1.04,  $p=0.038$ ), and higher levels of frustrations with their healthcare (OR=1.12,  $p<0.001$ ) were significantly more likely to visit the ER in the past year. Relative to non-smokers, men who smoked cigarettes (OR=1.52,  $p=0.003$ ), were dual tobacco users (i.e., smoked cigarettes and used one other nicotine product; OR=1.44,  $p=0.046$ ),

or were polytobacco users (i.e., smoked cigarettes and used at least two other nicotine products; OR=3.21,  $p<0.001$ ) were significantly more likely to visit an ER in the past year. **Conclusions:** Findings suggest reasons for ER visits are influenced by complex disease profiles, diminished sleep quality, negative healthcare perceptions, and smoking behaviors. Efforts are needed to assess ways to facilitate preventive healthcare utilization among racial/ethnic minority men to potentially offset preventable ER visits while reducing frustrations associated with healthcare interactions. Efforts focusing on smoking cessation and disease-self management education may help decrease ER utilization.

**Poster 21-04****Advance Care Planning Engagement and Self-efficacy Among Older Adults Living with HIV**

Nguyen, Annie, L.; Park, Bo, Y.

**Purpose:** Advance care planning (ACP) is the process of articulating values and preferences for end-of-life care. Throughout the COVID-19 pandemic, healthcare providers have highlighted the importance of ACP and called for its “massive upscaling.” ACP is highly recommended for all older adults and for people with underlying medical conditions. Older people living with HIV (PLWH) fall into both categories. **Methods:** We examined ACP engagement and ACP self-efficacy among older PLWH (ages 50+) by collecting data from 155 respondents in Southern California via cross-sectional surveys. We used logistic regressions to examine the relationship of purpose in life and other factors with ACP engagement and self-efficacy. **Results:** Respondents were ethnically diverse with 24.7% identifying as Latinx and 17.7% as black. The majority were male (90.5%), sexual minorities

(86.7%), and the mean age was 60.9 years old. Odds of having high levels of ACP engagement were greater with AIDS diagnosis (OR=2.40,  $p=.03$ ) and older age (OR=1.06,  $p=.05$ ), and lower among racial/ethnic minorities (OR=.27,  $p=.003$ ). Odds of having high levels of ACP self-efficacy were greater with high purpose in life scores (vs. low; OR=2.84,  $p=.02$ ) and AIDS diagnosis (OR=2.36,  $p=.03$ ). In stratified analyses, among individuals with an AIDS diagnosis ( $n=74$ ), high purpose in life scores were associated with greater ACP engagement (OR=3.68,  $p=.05$ ) but not self-efficacy (OR=3.17,  $p=.07$ ). Among individuals without an AIDS diagnosis ( $n=79$ ), high purpose in life scores were associated with high levels of self-efficacy (OR=4.22,  $p=.02$ ) but not ACP engagement (OR=2.46,  $p=.12$ ). Conclusions: There is room for improvement in engaging younger older adults and racial/ethnic minorities in ACP. Self-efficacy is a key component in theories of health behavior change. Findings suggest a sense of purpose in life may promote ACP self-efficacy, especially in individuals who never received an AIDS diagnosis.

#### **Poster 21-06**

#### **Associations of Food Insecurity and Social Isolation Risk Among Community-dwelling Older Adults in the United States**

Smith, Matthew, Lee; Barrett, Matthew, E.; Eagle, Leigh Ann; Lachenmayr, Sue

Purpose: Food insecurity is a complex public health issue that affects approximately 8% of all older adult households in the United States. Partially driven by poverty and limited interaction with others, food insecurity is believed to cause and/or exacerbate social

isolation and feelings of social disconnectedness. This study examined associations of two measures related to food insecurity with self-reported social isolation risk among community-dwelling adults age 60 years and older. Methods: The Upstream Social Isolation Risk Screener (U-SIRS) is comprised of 13 items (Cronbach's alpha=0.80) and was developed to assess social isolation risk among older adults within clinical and community settings. Using an Internet-delivered survey, data were collected from a national sample of 4,082 adults age 60 years and older. Participants completed the U-SIRS and additional items on sociodemographics and other health risks. Theta scores for the U-SIRS, which were generated using item response theory, serve as the dependent variable. An ordinary least squares regression model was fitted to examine associations of food insecurity with social isolation risk. The model controlled for age, sex, and whether the individual lived with a spouse or partner. Results: Participants' average age was 69.6 ( $\pm 5.2$ ) years old. The majority of participants were female (58.5%) and lived with a partner/spouse (56.9%). Over 20% of participants reported being worried or stressed about having enough money to buy nutritious meals, and almost 31% of participants reported eating alone all or most of the time. Higher U-SIRS theta scores were reported among older adults who were worried/stressed about affording nutritious meals ( $B=0.12$ ,  $p<0.001$ ) and ate alone more frequently ( $B=0.25$ ,  $p<0.001$ ). Conclusion: Findings suggest older adults with food insecurity may have greater risk for social isolation. This highlights the need for robust and practical assessments that identify risk and link older adults to eligible resources and services.

**Poster 21-43****The Relationship Between Three Sources of Social Support and Physical Activity Level Among Middle and Old Age Adults**

Yuan, Shuhan; Elam, Kit; Johnston, Jeanne; Chow, Angela

**Purpose:** Nearly one out of four middle and old age adults reports no leisure-time physical activity (LTPA) during the past month, according to a nationally representative survey. Past research highlights family social support (SS) in promoting physical activity among this age group but has overlooked the impact of other sources of SS (e.g., friends and partners). Social networks and social support theory (Heaney & Israel, 2008) emphasizes that different social relationships can uniquely support healthy behavior. Therefore, this study examined the unique relationship between (1) family members' SS (excluding spouse/partner), (2) friends' SS, and (3) partners' SS and moderate and vigorous LTPA. **Method:** This study included married participants age 45 or older from the third wave of the Midlife in the United States data set. Individuals

reported on the social support they received from family members, friends, and partners, respectively, as well as the frequency of moderate and vigorous LTPA in which they engaged. Hierarchical linear regression was performed to explore the relationship between the three sources of SS and moderate LTPA, and separately, vigorous LTPA. Models controlled for age, gender, race, and physical/mental health conditions. **Results:** All three sources of SS are strongly associated with moderate LTPA level. Support from friends ( $\beta=0.31, p<0.001$ ) and spouse/partner ( $\beta=0.15, p<0.01$ ) were positively associated with moderate LTPA level, whereas the support from other family members was negatively related to moderate LTPA level ( $\beta=-0.39, p<0.001$ ). Conversely, only support from friends ( $\beta=0.25, p<0.01$ ) was associated with vigorous LTPA level. **Conclusion:** Friend SS was associated with both moderate and vigorous LTPA, but family and partner SS were only related to moderate LTPA. Friend SS appears to promote multiple levels of PA among middle and older age adults. Future programs to promote physical activity in this population should incorporate SS from friends to have the greatest impact.

**March 19, 2021 3:00PM EST**

***Alcohol***

**Poster 20-06**

**Associations Between Time Spent on Social Networking Sites and Normative Misperceptions Related to Posting Alcohol-related Content**

Litt, Dana; Lewis, Melissa

Purpose: Adolescent and young adults' alcohol-related social networking site (SNS) behavior is an emerging health behavior challenge. Research indicates that both overestimating risk behavior and posting alcohol content on SNS are associated with greater alcohol use. The purpose of this study is to determine whether individuals who spend more time on SNS are more likely to overestimate how often peers post about alcohol on SNS (i.e., perceptions of others' behavior; descriptive norms) and how much peers approve of posting about alcohol (i.e., perceptions of others' attitudes; injunctive norms) on SNS. Methods: A sample of 15-20 year olds ( $n=306$ , 47% male) completed a baseline survey as part of a larger study. Participants reported over a typical week how many SNS alcohol posts they make, how many SNS alcohol posts they think their peers make, how many SNS alcohol posts they approve of making, how many posts they think their peers approve of making, and how many days per week they check their Facebook, Instagram, and Snapchat accounts. Results: On average, participants believed others posted significantly more alcohol posts per week than they actually do ( $t=10.2$ ,  $p<.01$ ) and that other people approved of posting significantly more posts than they actually do ( $t=2.34$ ,  $p<.05$ ). These discrepancies were associated with more frequent checking of Instagram (descriptive:

$b=.14$ ,  $t=1.99$ ; injunctive:  $b=.18$ ,  $t=2.59$ ) and Facebook (descriptive:  $b=.17$ ,  $t=2.56$ ; injunctive:  $b=0.17$ ,  $t=2.50$ ), but not Snapchat ( $b=.02$ ,  $t=0.24$ ; injunctive:  $b=0.12$ ,  $t=1.79$ ). Conclusions: These findings highlight the importance of gaining a better understanding of why and for whom SNS impact alcohol-related cognitions and behaviors in order to better tackle this emerging and important health challenge.

**Poster 20-14**

**Development and Validation of an Alcohol-Related Academic Consequences Measure**

Ward, Rose Marie; Speed, Shannon; Guo, Ying; Laska, Emily

Purpose: Students admit that their drinking habits interfere with their academic performance. Approximately 1 in 4 college students report academic consequences, including missing class, underperforming on exams or papers, and receiving overall lower grades, as a result of alcohol consumption. The purpose of the current study was to develop a valid measure of alcohol-related academic consequences. Methods: Undergraduates students ( $n=396$ ) were recruited for a multiple health behavior study. Participants were predominantly Caucasian and middle class; the average age of participants was 20.38 ( $SD=2.61$ ). Results: The researchers wrote items for the scale based on focus groups, a review of the literature, and a review of general alcohol-related consequence measures. Six academic areas were hypothesized to be impacted: effects in and outside the classroom, relationships with people in class and professors, emotions, and academic career. The researchers used an iterative measurement development process. The exploratory factor analysis yielded a four-factor structure—classroom effects, academic



shortcuts, missed class, and classroom attention (explaining 60.25% of the variance). The subscales had excellent internal consistency ( $>.80$ ) and positively correlated with quantity and frequency measures of alcohol consumption ( $r>.12$ ). In addition, all of the subscales positively related to alcohol consequence measures ( $r$ 's .21-.69). However, only the classroom effects scale inversely related to GPA, with students reporting higher levels of classroom consequences having lower GPAs. Conclusions: The classroom effects subscale assesses consequences such as being unprepared for class. The academic shortcuts subscale addresses cheating and plagiarizing. The missed class subscale measures skipping or coming late to class. The classroom attention subscale assesses when students don't pay attention or get distracted by social media during class. The Alcohol-Related Academic Consequence scale provides a measure of the various ways that alcohol consumption impacts college students' academic experience. Intervention efforts might use these consequences to help decrease problematic alcohol consumption levels.

### **Poster 20-21**

#### **False-negative Alcohol Use Disorder Identification Test (AUDIT) Results in a Rural Primary Care Setting**

McDaniel, Justin; Albright, David; Holmes, Lauren; Lawson, Michael; McIntosh, Shanna; Godfrey, Kelli

Purpose: The purpose of this study was to estimate the prevalence of false-negative Alcohol Use Disorders Identification Test (AUDIT) screening results among patients in a screening, brief intervention, and referral to

treatment (SBIRT) program in rural Alabama, and to determine factors associated with false-negative AUDIT results. Methods: From September 2018 to June 2019, patients ( $n=4,023$ ) were screened for alcohol abuse via the AUDIT– a 10-item questionnaire – in a medical facility lobby prior to a regularly scheduled appointment. Socio-behavioral variables were also collected at this time. Overall AUDIT scores above 6 for females and 7 for males were considered “positive,” and resulted in a recommendation for brief intervention – the lowest service level in the SBIRT program. We also identified individuals who consumed alcohol at levels above the United States recommended limit for safe consumption using the first three questions of the AUDIT. We defined unsafe alcohol consumption as  $\geq 5$  drinks in a single day and/or  $>14$  drinks in a week for males and  $>7$  drinks in a week for females. We also estimated the relationship between socio-behavioral factors and false-negative screening results in a multivariable logistic regression model. Results: Overall, 103 patients (2.56%) screened positive for risky alcohol consumption based on overall AUDIT scores and 676 patients (16.80%) exhibited alcohol consumption patterns above recommended limits. Furthermore, of the 3,920 patients who screened negative on the AUDIT, 576 (14.69%) exhibited alcohol consumption patterns above recommended limits (i.e., false-negative). Our logistic regression model revealed that tobacco use was the strongest predictor of a false-negative AUDIT results (OR=2.14, 95% CI=2.06, 2.22). Other significant predictors included being female, nonwhite, of younger age, and a veteran. Conclusions: Intervention recommendations based on AUDIT results should be informed by overall AUDIT scores and daily/weekly alcohol consumption patterns.

**Poster 20-22****High-risk Social Circles: Associations Between Personal Alcohol Use and History of Sexual Assault and Peer Drinking Behavior**

Patterson, Megan S.; Prochnow, Tyler; Russell, Alex M.; Barry, Adam E.

**Purpose:** Hazardous drinking and sexual violence among college students remain public health concerns. Alcohol use, by perpetrator and/or victim, is implicated in a majority of sexual assaults among college students, and is often influenced by consumption within personal social networks (i.e., egocentric networks). The purpose of this study was to use egocentric network analysis to assess factors, including sexual assault victimization, related to having heavy drinkers in one's egocentric network. **Methods:** 697 students (77.2% female; 68.9% white) completed online surveys measuring demographics (age, sex, grade, Greek-life status), alcohol consumption (AUDIT scores), and sexual assault after turning 18. Respondents were asked to indicate five people they feel closest to in their life, and report drinking behaviors for each person. Linear regression assessed whether demographic variables, sexual assault victimization since 18, and drinking behaviors were associated with having a higher percentage of network ties who typically drink 5+ drinks in one sitting. **Results:** Approximately one in five respondents (17.8%;  $n=124$ ) reported experiencing sexual assault since turning 18, while 12.8% ( $n=89$ ) registered risky drinking scores on AUDIT, and 36.6% had at least one person who typically drinks at least five drinks when they consume alcohol. Regression analysis ( $R^2=.171$ ,  $p<.001$ ) suggested being involved in Greek-life (i.e., fraternity or sorority;  $\beta=.194$ ,  $p=.008$ ), experiencing sexual assault since turning 18

( $\beta=.176$ ,  $p=.038$ ), and higher AUDIT scores ( $\beta=.361$ ,  $p<.001$ ) were related to having a higher percentage of people within one's egocentric network who typically consume 5+ drinks in one sitting. **Discussion:** Personal drinking behaviors and experiencing sexual assault after 18 were associated with being connected to heavy drinkers in this sample. Because alcohol use often predicates sexual violence on college campuses, higher-risk social circles could increase survivors' risk of re-victimization. Future research using network perspectives could help untangle complexity of college student sexual assault and drinking.

**Poster 21-16****Eye-tracking Research to Examine Alcohol Product Packaging Appeal Among Young People**

Rosshem, Matthew; Peterson, Matthew; Livingston, Doug; Dunlap, Phenesse; Tran, Katherine; Emechebe, Ogechi; McDonald, Kayla; Jernigan, David; Trangenstein, Pamela; Thombs, Dennis

**Purpose:** Supersized alcopops are a class of beverages containing sugar-sweetened flavors and up to 5.5 standard alcoholic drinks in a single-serve can. These products pose a threat to young consumers, especially girls and women, because they are likely to reach dangerously high intoxication levels from consuming a single supersized alcopop. The products' brightly colored and ornately designed packaging may make them particularly appealing to young people, especially females. The current study is the first to examine whether supersized alcopop cans have a distinct visual appeal among young people. **Methods:** 11 children (13-17 years old) and 72 college students (21-26 years old) were recruited during 2019-2020. Participants were asked to view 19 photos of

convenience store display cases containing both supersized alcopop and beer products. While viewing each image, participants were instructed to click on the beverage that looked the “coolest” (i.e., most appealing) to them. Eye-tracking hardware and software measured the amount of time participants visually fixated on supersized alcopop and beer products. Participants completed a brief survey to record their demographic characteristics. Results: Compared to boys and young men, girls and young women had 4.6 times the odds of selecting a supersized

alcopop as the product they found most appealing. Neither sex nor age group were statistically significantly associated with amount of time fixating on a supersized alcopop, nor whether the participants’ initial fixation was on a supersized alcopop. Conclusions: Girls and young women had a strong preference for supersized alcopops over beer, relative to boys and young men. More research is needed examining how alcohol product packaging influences brand preference and dangerous consumption of alcohol.

**March 19, 2021 3:00PM EST**

***COVID-19 – Group 1***

**Poster 21-13**

**Disproportionate Impacts of COVID-19 on Underrepresented Minority University Students: A Mixed-methods Survey to Assess Needs and Hear Student Voices**

Hartzell, Sarah, Y.T.; Hagen, Molly, M.; Devereux, Paul, G.

Purpose: Over 100 countries have ordered widespread or national school closures to reduce transmission amidst the COVID-19 pandemic. Inequalities in higher education heavily impacted underrepresented minority (URM) students prior to the pandemic, and without strategic action the swift change to remote online learning may exacerbate these disparities. Research Questions: Are URM students more likely to experience pandemic-induced impacts on students' academic, social/family, and financial lives? How do students perceive university actions taken in response to the pandemic: What are the sources of student concerns? Methods: We used data from an online cross-sectional survey of randomly selected college students collected from May 4th-15th, 2020 (N=182). Based on student race, we quantitatively assessed COVID-19's impacts on transition to online learning, proximity to individuals with/at risk of COVID-19, and changes in family obligations and employment. We used open-ended questions to qualitatively characterize sources of dissatisfaction with the university's response to COVID-19 from unsatisfied students ( $n=40$ ). Results: Quantitative Arm: 22.0% ( $n=40/182$ ) of students who responded to our survey identified as Hispanic, African American, and/or Native American (hereafter "URM students"). The percentage of URM students

who reported not having functional home workspaces was higher than the mean percentage among other students (40.0% compared to 20.8 +/- 11.0%), URM students reported less access to electronic devices (20.0% compared to 9.0+/-4.5%), and less Internet access (32.5% compared to 18.6+/-9.4%). Almost all URM students knew someone at high risk for contracting COVID-19 and 40% reported living in the same household as someone considered high risk. Qualitative Arm: 23% of students were unsatisfied with the university's response to COVID-19. Three themes emerged: (1) perception of university communication; (2) monetary decisions; and (3) impacts to learning. Conclusions: The findings highlight areas for administrators and educators to focus on to develop data-informed responses to strategically promote equity during this public health crisis.

**Poster 21-24**

**Health Literacy and COVID-19 Information Avoidance Among College Students**

Chen, Xuewei; Li, Ming; Kreps, Gary, L.

***AAHB Research Scholars Mentoring Program***

Purpose: The purpose of this study was to assess the relationship between health literacy and COVID-19 information avoidance among undergraduate and graduate students enrolled in a central U.S. university. Methods: Five hundred and sixty-one participants completed our online survey with valid responses. Data collection was conducted from April to June 2020. We used the Newest Vital Sign, a test with six questions that have a single correct answer, to assess participants' health literacy. COVID-19 information avoidance was measured using three statements on a 5-point Likert scale from strongly disagree to

strongly agree: “I would rather not know about COVID-19.” “I would prefer to avoid learning about COVID-19.” “I can think of situations in which I would rather not know about COVID-19”. The information avoidance scale exhibited high internal consistency ( $\alpha=0.82$ ). We performed multiple linear regressions to examine whether information avoidance differed by health literacy. Results: Our sample contained 65% undergraduate and 35% graduate students (age mean=24.99, SD=7.47). There were 458 females (64%) and 203 males (36%). The majority of the participants were white (67%). Other racial ethnicities included Asian (9%), Hispanic/Latinos (8%), African American (7%), and Native American (6%). Those with lower health literacy scores were more likely to avoid information related to COVID-19 ( $b=-0.10$ ,  $p=.005$ ). After keeping sex, age, education/academic classification (undergraduate or graduate), race/ethnicity, and perceived health status consistent, lower health literacy was still associated with more information avoidance ( $b=-0.12$ ,  $p=.003$ ). We also found that older age was associated with less information avoidance ( $b=-0.01$ ,  $p=.021$ ). Conclusions: The double burden of low health literacy and high information avoidance might cause lack of knowledge about COVID-19. For example, these students might not know about the preventive behaviors people can use to protect themselves from contagion from the virus. They might also have difficulty estimating contagion risk.

### **Poster 21-31**

#### **Patterns in COVID-19 Myth Debunking on Instagram**

Dobbins, Davina; Frost, Jasmine; Wetherell, Meaghan

Purpose: Previous research into debunking has highlighted key characteristics for

success, with special focus on the importance of presenting sticky facts first and avoiding reinforcing the familiarity of the myth. Social media is increasingly utilized for health behavior and health promotion campaigns, but studies on effective communication here are less common. The purpose of this poster is to identify trends in Instagram debunking styles, and communicate lessons learned in an ongoing case-study Instagram page run by the first and second authors, @Covid\_Mythbusters. Methods: We analyzed presentation trends in 11 debunking accounts with top posts for the hashtags #covidmyths, #covidfacts, #covidfactcheck, #covidhoax2020 and #covidhoaxexposed, and 8 accounts which had names similar to @Covid\_Mythbusters. Of all 19, two accounts were hoax-pushing accounts, and five primarily featured unrelated content. Results: Almost all accounts used an infographic approach featuring text over a colored background. Those with the biggest followings also included photos of the account owner. Nine out of the 12 debunking accounts analyzed used a “myth first” approach. Only one debunking account was using hoax-affiliated hashtags, but hoax-related hashtags had triple the posts of fact-related hashtags. We found several hoax accounts that used the fact-related hashtags. The @Covid\_Mythbusters page saw the greatest reach, shares, and saves on their non-promoted posts that were more relevant to personal care (e.g., “maskne” and caution fatigue). Hashtag use varied so engagement was likely content-related. Conclusions: There are not nearly enough debunking accounts on Instagram – and most of those that are present are not using debunking best practices. Clear improvements would be to 1) present the facts first/in the headline 2) humanize content by using a spokesperson, and 3) utilize hoax-related hashtags to reach the audience that needs your content.

**Poster 21-33****Pregnant in the 2020 Pandemic: When Providing Health Information, the Messenger Matters for Changing Behaviors**

Whipps, Mackenzie, D.M.; Phipps, Jennifer, E.; Simmons, Leigh Ann

Purpose: Studies have shown that accurate, timely, coordinated health messaging is crucial to changing behaviors during public health crises; emerging research suggests that the 2020 pandemic is no different. Individuals – especially those who are high risk, like pregnant people – need and desire clear and consistent messaging on how to avoid contracting and spreading COVID-19 in their communities. Methods: We surveyed pregnant people in California ( $n=433$ ) during June and July to explore how COVID-19 mitigation behaviors may change depending on the source of COVID-19 health information. To do so, we developed a novel “COVID-19 Mitigation Scale”; the six items (hand washing, mask wearing, having household members wear masks, social distancing, sanitizing high-touch surfaces, and sanitizing packages) load well onto a single factor scale with adequate internal consistency ( $\alpha=0.71$ ). Results: Though the overall sample scale average was high – indicating that most pregnant Californians engaged in most of the strategies most of the time – older participants, Hispanic participants, and those living in more urban contexts reported engaging in these strategies most frequently. We also found that the messenger of COVID-19 information mattered: those who reported primarily receiving their information from public health agencies (e.g., the Center for Disease Control and Prevention) scored higher on the COVID-19 Mitigation Scale compared to those who did not engage with these sources ( $\beta=0.24$ ,  $p<0.001$ ). They were also more

likely to report understanding the actions they should be taking to reduce their risk of contracting and spreading COVID-19 ( $\beta=0.20$ ,  $p=0.021$ ). Conclusions: These findings suggest that one particular type of health messenger – public health agencies – has been especially effective in shifting actual behaviors to reduce the spread of COVID-19 infections among pregnant people in California. This has important implications for protecting this vulnerable, yet understudied, population in a crowded and unreliable health-media landscape.

**Poster L21-05****Firearms-related Injuries and Health Disparities During the COVID-19 Pandemic**

Robbins, Christopher, B.; Meagher, Ashley, D.

Purpose: Most states responded early to the threat of COVID-19 with public health measures designed to limit the spread of the disease. Guidance included masking, frequent hand washing, social distancing, and stay at home orders. The purpose of this study was to determine if there was an increased prevalence of firearms injuries and interpersonal violence during the COVID-19 pandemic. Methods: A retrospective review was conducted using interim data collected from a large level I trauma center servicing a large mid-western urban area. The data includes all trauma encounters during the first nine months of the COVID-19 pandemic (March through November) compared with similar data from four peri-pandemic years (2016-2019). The primary outcome of interest was gunshot wounds (GSWs), with independent variables to include time period, age, gender, and race. Results: There were 17,084 emergency department (ED) visits that were included in the analysis. Firearms-related injuries during the pandemic period were higher than previous time periods

( $X^2=13.55$ ,  $p<.001$ ) and 26% higher than 2019. Assaults were not significantly different during this time compared to previous years ( $p=.103$ ), but the pandemic period did see an increase in all forms of interpersonal violence. Multivariable logistic regression indicated a higher risk for GSWs for black versus white (AOR=6.51,  $p<.001$ , CI 5.68, 7.45), and males versus females (AOR=3.28,  $p<.001$ , CI 2.74, 3.92), and a

protective effect for older versus younger age (AOR=.958,  $p<.001$ , CI .954, .962). Conclusions: With social isolation policies and an unprecedented surge in firearm sales, some metropolitan areas indicated spikes in gun violence. The results indicating an increase in gun violence during the COVID-19 pandemic from this urban trauma center are consistent with reports from other jurisdictions.

**March 19, 2021 3:00PM EST**

***Health Disparities***

**Poster 20-08**

**Changes in Behavior and Environment as Contributors to Changes in BMI in At-risk Minority and Low-income Youth**

Borawski, Elaine A.; Moore, Shirley M.; Jones, Sarah D.; Gardenhire, Rachel A.

Purpose: We examined predictors of BMI change over a 3-year period (captured as a slope) among pre-adolescent, predominantly minority, and low-income children with excessive weight (BMI at 85th percentile or higher) at baseline, with a particular interest in family history, behavior and behavior change, and changes in physical environments for this already at-risk group as they moved from childhood into adolescence. Method: Our sample included 360 urban dwelling children, ages 11-12; 77% AA, 16% Hispanic; 71% families receiving SNAP. Families were seen 4 times over 3 years; 92% retention rate. Baseline only variables included age, gender, index parent BMI, # of overweight grandparents, parents' concern of child's weight, SNAP/WIC, and the number of unhealthy food retail outlets within .5 miles of home and school. As with BMI change, changes in behavior (diet, physical activity, sleep, stress) and the home food environment were captured through individual regression slopes calculated and entered in a linear regression model in blocks. Frequency of change in residences and schools was also included. Results: With the exception of family history of excess weight, none of the baseline measures were found to be significantly associated with BMI change. Rather, changes in behavior and environments largely drove the changes in

BMI. Decreases in BMI were linked to having fewer overweight grandparents ( $p<.01$ ), increases in fitness (number of PACER laps completed;  $p=.000$ ), decreases in sedentary activity (measured by actigraphy;  $p<.02$ ), decreases in amount of sleep on weekends ( $p<.02$ ), and not changing schools ( $p=.001$ ). Number of changes in residence was not linked to BMI change, nor was diet (via 24 hr recalls) or mod/vig PA. The model explained 16% of the variance in BMI slope ( $p=.002$ ). Conclusions: Not surprisingly, multiple factors independently influence BMI in high-risk populations, providing further evidence that reducing childhood obesity must include multi-faceted and most likely multi-generational interventions.

**Poster 20-29**

**The Combination of Immigrant Status and Race/Ethnicity Helps Explain Disparities Related to Online Medical Record Access and Use**

Chen, Xuewei; Schofield, Elizabeth; Hay, Jennifer; Waters, Erika; Kiviniemi, Marc; Orom, Heather

Purpose: Despite the potential health benefits associated with online medical records, the rate of use may not be equivalent across demographic groups, which may compound health disparities. The purpose of this study was to examine whether online medical record (patient portal) access and use among immigrant groups differed across race/ethnicity. Methods: We used data from the nationally representative Health Information National Trends Survey (HINTS 5 Cycle 1) collected between January and May 2017 (N = 3,285). We examined associations between immigrant status and the following three binary outcomes with logistic regression: (1) being offered access to an online medical record by their health care providers/



insurers, (2) being encouraged to use one by their health care providers, and (3) having used one within the past 12 months. We also investigated whether the association between immigrant status and these three outcomes depended on people's race/ethnicity by interacting the two. We applied survey weights and kept sociodemographic variables and Internet/insurance/healthcare access as covariates. Results: About 51% of the sample were offered access to an online medical record, 39% were encouraged to use one, and 29% had used one within one year. There were no main effects for immigrant status or race/ethnicity. The association between immigrant status and being offered access to an online medical record depended on Asian race/ethnicity (interaction effect  $p=.027$ ). US-born Asians had the highest adjusted rate of being offered access to an online medical record (67%); however, foreign-born Asians had the lowest adjusted rate (38%). Other interaction effects were non-significant. Conclusions: There were differences in self-reported being offered access to an online medical record as a function of immigrant status for Asians. Therefore, encouraging health care providers/insurers to offer access to an online medical record among foreign-born Asians could be an effective strategy to increase these patients' online medical record use.

### **Poster 21-11**

#### **Differences in Immigration-related Stress Among US-born Adolescent-Undocumented Immigrant Parent Dyads and Its Relationship to Parental Anxiety**

Velasco-Huerta, Fernanda; Obasi, Ezemenari, M.; Grzywacz, Joseph; Granger, Douglas; Hernandez, Daphne, C.

Purpose: Immigration-related stress, which includes fear of deportation, has increased

among the Latino community. US-born children of the undocumented are under constant awareness of the threat of having one or both parents deported. Thus, it is unclear as to whether undocumented parents or US-born children experience higher levels of immigration-related stress. Further, it is important to examine how higher levels of immigration-related stress are related to parental anxiety, as parental anxiety can have spillover effects into the family environment. The purpose of the study is two-fold: (1) To delineate variability in immigration stressors among US-born Latino adolescent-undocumented immigrant parent dyads, and (2) To examine the potential anxiety vulnerabilities among undocumented immigrant parents in relation to immigration-related stress. Methods: Self-identifying Latino immigrant parents and their US-born youth (12-16 years) participated as part of a larger feasibility study examining salivary cortisol among US-born adolescent-immigrant parent dyads in Houston, TX (September 2019 - January 2020). Parents and adolescents reported on immigration-related stress from the Hispanic Stress Inventory Version 2 (Parents, 9 items) and Adolescent Version (7 items). Parents also reported on anxiety symptoms (7 items, General Anxiety Disorder Screener). A paired t-test was conducted to compare parent and adolescent measures of immigration stress, and a Pearson correlation between immigration stress and anxiety. Results: Nineteen undocumented immigrant parents and their US-born adolescents participated [Parent: Mean age=41.94 (SD=1.14), 95% female, 63% married, 53% high school diploma or more, 52% unemployed; Adolescent: Mean age=13.68 (SD=0.40), 63% male]. Undocumented parents reported higher levels of immigration stress [ $t(24)=6.22$ ,  $p<.001$ ] compared to their US-born adolescents. Parental experiences with immigration stress were strongly correlated

with parental anxiety ( $r=.53$ ,  $p<.05$ ).  
Conclusions: Parental documentation status appears to be a factor in immigration-related stress. The strong correlation between parental immigration-related stress and anxiety is concerning as it has the potential to spill over into the family environment.

### **Poster 21-19**

#### **Feasibility of Collecting Salivary Cortisol Samples from Mixed-status Latino Families**

Mejia, Karen; Obasi, Ezemenari, M.; Grzywacz, Joseph; Granger, Douglas; Hernandez, Daphne, C.

Purpose: Parents and children jointly influence each other's physiological responses. Also, parent's and child's cortisol production (i.e., cortisol synchrony) may offer insight into family-level stressors that may contribute to health disparities. However, researchers are less likely to collect salivary cortisol samples from mixed-status Latino families (US-born adolescent who resides with an undocumented immigrant parent) due to legal concerns and concerns regarding low study participation. Aims: 1) To assess the feasibility of collecting salivary cortisol from mixed-status and documented status Latino families (i.e., US-born adolescent living with a documented immigrant parent); 2) To compare adolescent-parent synchrony profiles of dyads within mixed-status families and within documented families; 3) To compare the synchrony profiles between adolescents and between parents by parental documentation status. Methods: Self-identifying Latino immigrant parents and their US-born youth (12-16 years) participated in a feasibility study in Houston, TX (September 2019-January 2020). Parents self-reported their documentation status. Parents and adolescents provided four saliva samples on

the same day. Samples were assayed for cortisol using validated kits and established methods. Analyses included paired t-test (aim 2) and two-group mean comparison tests (aim 3). Results: Twenty-five immigrant parent-US-born adolescent dyads participated [19 undocumented parents; 5 documented parents]. Cortisol levels of undocumented parents did not differ at any of the four time points when compared to their US-born adolescents [ $t_1(18)=1.54$ ,  $p=.14$ ;  $t_2(18)=-1.32$ ,  $p=.20$ ;  $t_3(18)=-0.43$ ,  $p=.67$ ;  $t_4(18)=-1.65$ ,  $p=.12$ ]. Cortisol levels of documented parents did not differ at any of the four time points when compared to their US-born adolescents [ $t_1(5)=2.48$ ,  $p=.06$ ;  $t_2(5)=0.81$ ,  $p=.46$ ;  $t_3(5)=-0.04$ ,  $p=.97$ ;  $t_4(5)=-1.53$ ,  $p=.19$ ]. Cortisol synchrony comparisons that occurred between adolescents and between parents by parental documentation status did not differ. Conclusions: It is feasible to collect salivary cortisol samples from undocumented Latino immigrants and their US-born adolescents. Cortisol synchrony profiles within dyads, between adolescents, and between parents were similar.

### **Poster 21-52**

#### **Whole Exome Sequencing for Newborns: Pregnant Latinas' Viewpoints**

Bruckner, Chase, M.; Wang, Haocen; Page, Robin, L.; Lopez, Daniela; Arkatkar, Samruddhi; Young, Christine; Martinez, Denise; Robbins-Furman, Patricia; Montalvo-Liendo, Nora; Chen, Lei-Shih

Purpose: Whole exome sequencing (WES) is a DNA sequencing technology that provides a wide range of genetic information. There is, currently, a debate about the incorporation of WES into standard newborn screening in the United States, and the views of racial/ethnic minority groups about WES are still unknown. To fill this gap, this study

aimed to explore pregnant Latinas' perspectives about pursuing WES for their newborn babies. Methods: We conducted semi-structured interviews with 32 Latinas who were 13-39 weeks pregnant in the southern United States. Participants were provided health education about WES before being interviewed. Data were analyzed using an emergent coding approach with the assistance of NVivo 8 software. Results: The majority of pregnant Latinas in our sample were Catholic (72%), had a high school education or less (72%), and were either uninsured or had Medicaid/Children's Health Insurance Program health coverage (94%). None of the participants had heard about WES before this study. Most participants (72%) believed there were benefits for their babies to undergoing WES, including that WES would allow them to know their babies' health status in advance so that they could

be mentally, physically, and financially prepared for a baby with genetic abnormalities. Some interviewees (28%) shared their concerns regarding WES, including cost and the negative emotional impacts of "bad" test results. Despite these concerns, all but one of the participants (97%) were willing to pursue WES for their baby if the cost was covered by health insurance. Additionally, all participants agreed that WES should be offered to all newborn babies. Conclusions: Our findings suggest that despite some concerns, the majority of pregnant Latinas had positive attitudes toward pursuing WES for their babies. Health policy makers should consider Latinas' viewpoints when making recommendations concerning whether, and how to adopt WES into routine newborn screening.

**March 19, 2021 3:30PM EST**

**COVID-19 – Group 2**

**Poster 21-01**

**#StayAtHomeSafety Campaign to Prevent Home-related Injuries Due to COVID-19**

Mehan, Tracy; Smoske, Shea

Purpose: Prevent Child Injury launched the #StayAtHomeSafety campaign on March 25th, 2020 in response to the COVID-19 pandemic with the goal of increasing awareness of child injuries that occur in and around the home, as families were spending more time at home due to directives to shelter in place and socially distance. Approach: The campaign included a Twitter chat and a frequently updated page on the Prevent Child Injury website that served as a hub for home safety and COVID-19 information. Before the event, we called upon individuals and organizations (American Academy of Pediatrics, *Parents Magazine*, Safe Kids Worldwide, and more) to participate in spreading awareness of the campaign and taking part in the Twitter chat. Results: The #StayAtHomeSafety Twitter chat resulted in 336 contributors, 999 tweets with a reach of more than 6.2 million, and more than 18.3 million timeline deliveries. The COVID-19 webpage on the Prevent Child Injury website has over 2,000 pageviews. Conclusions: In less than a week, nearly 20 organizations and 8 poison centers signed on to become partners of the campaign by promoting the materials to their networks, creating their own #StayAtHomeSafety materials, and participating in the Twitter chat. The hashtag continues to be used with 500+ new contributors, writing 1,000+ tweets reaching 2 million more people and 4.2 million more timeline deliveries.

Contributions to Injury Prevention Science/ Significance: With schools, businesses, and public places closing in late March 2020, children spent more time in the home under circumstances that included altered routines, gaps in supervision, and parental stress. These conditions put children at increased risk for injury in the home. #StayAtHomeSafety focused on protecting children from preventable injuries and helped parents and caregivers understand why preventing injury is especially important in the midst of a national emergency.

**Poster 21-08**

**Conducting Research Six Feet Apart: Transforming Qualitative Research to Meet the Emerging Research Needs During a Pandemic**

Eigege, Chinyere, Y.; Daundasekara, Sajeevika, S.; Olmeda, Kiara; Walton, Quenette, L.; Hernandez, Daphne, C.

Purpose: The COVID-19 pandemic and associated urban county-wide lockdowns forced researchers to transform their on-going qualitative research. Prior to the county-wide lockdown, focus groups were conducted in-person on a college campus. During the county-wide lockdown, focus groups were conducted using a teleconferencing platform. Yet, the feasibility of transforming how qualitative research was conducted from in-person interviewing to teleconferencing interviewing among a low resourced population was unknown. Utilizing data from a research study with community college students, we compared recruitment efforts and participant attendance records that occurred before a county-wide lockdown (January-February 2020) to those that occurred during a county-wide lockdown (March-April 2020). Methods: Recruitment efforts for each focus group conducted measured the number of times potential

participants were contacted by phone call and text to the total number of potential participants contacted. Participant attendance records included the proportion of participants that showed up/did not show up, along with the number of focus groups and average number of participants per focus group. To estimate whether there were differences in the recruitment efforts and attendance records before and during the county-wide lockdown, independent sample t-tests were conducted. Results: Participants before and during the lockdown did not differ on their age ( $X_{age}=40$ ,  $SD=13$ ), sex (78% female), race/ethnicity (62% black, 28% Hispanic), marital status (92% single), employment status (83% unemployed), or school enrollment (50%). The proportion of times participants were contacted ( $t(14)=0.021$ ;  $p=0.984$ ), and the rate that participants showed up ( $t(14)=-0.500$ ;  $p=0.625$ ), and did not show up ( $t(14)=0.561$ ;  $p=0.584$ ) did not differ between the two time points. While twice as many focus groups were conducted during the shutdown compared to before the shutdown, the average number of participants did not differ ( $t(14)=0.891$ ;  $p=0.388$ ). Conclusions: Teleconferencing software is a feasible approach to sustaining a research study conducted in an urban setting during a pandemic.

### **Poster 21-26**

#### **Impact of COVID-19 on the Alabama State Partnership Initiative (ASPI) to Address Obesity Disparities**

Knol, Linda; Paschal, Angelia M.; Chatham, Lita; Jones, Teresa; Clark, Debra; Preston, Rebekah

**Purpose:** Several studies suggest adults gained weight and altered their eating and physical activity (PA) during COVID-19 quarantine. Obese and minoritized populations are at greater risk for developing

severe cases of COVID-19. The purpose of this study is to report evaluation findings of a weight loss intervention for rural adults and the subsequent impact of COVID-19. **Methods:** Scale Back Alabama (SBA) is a free 12-week weight loss program. Using a team approach, it focuses on improving health-promoting behaviors (eating patterns and PA). It includes weekly thematic educational messages, cooking demonstrations, grocery store tours, and weigh-ins. Process evaluation data were collected from participants and site coordinators. Outcome evaluation data were from participant weigh-ins and phone interviews. The interview guide included BRFSS fruit/vegetable (f/v) intake, PA, and sugar-sweetened beverage (SSB) intake items. Baseline and follow-up data were compared using paired t-tests with an a priori  $\alpha \leq 0.05$ . Results:

#### **Process Evaluation:**

- **Recruitment Capability** - Of 173 SBA participants, 80 volunteered for the evaluation (mostly African American and female). No significant differences were found in characteristics between baseline and follow-up.
- **Acceptability** - The program was rated favorably. Yet, COVID-19 negatively impacted health behaviors, morale, and interactions.
- **Implementation** - Educational messages were maintained, but COVID-19 led to an abrupt halt in in-person activities.

**Outcome Evaluation:** Body weight and SSB intake significantly changed. Obesity dropped from 73.8% to 64.3%. F/V intake and PA changes were not significant. **Conclusions:** Baseline behaviors were either maintained or improved. COVID-related challenges were noted. The study differed from others in that baseline outcome data were collected prior to the quarantine and it focused on individuals in a weight loss program. **Implications:** Considering COVID-19, novel implementation strategies and

alternative methods of community health interventions are needed. Findings suggest innovative use of technology, home-based strategies, and programs that include social connection and support.

### **Poster 21-50**

#### **What Factors Predict COVID-19 Vaccine Intention in College Students?**

Hackman, Christine L.; Ross, McKenna; Lawston, Ashlynn; Lowsky, Luna; Chean-Udell, Greer

Purpose: COVID-19 causes a wide range of symptoms, from a mild cough to multiorgan system dysfunction (CDC, 2020). With cases in the United States soaring into the millions, increasing knowledge of preventive measures and mitigating further spread is essential. College students may contribute to the spread of this disease because many may experience only mild symptoms, and may be in the position to spread the virus to other, higher-risk populations. A COVID-19 vaccine is a feasible and important tool to reduce the spread of COVID-19. We currently do not have an adequate understanding of college student perceptions and likelihood of getting a COVID-19 vaccine once it is available. Our purpose was to examine factors that predict likelihood of vaccination against COVID-19 in college students. Methods: Undergraduate students were recruited through general education courses at a public western U.S. university to complete an online survey measuring their perceptions, experiences, and behaviors regarding the COVID-19 pandemic. A multinomial logistic regression was used to evaluate the predictive ability of gender, combined race and income variable, perceived susceptibility, perceived severity, and self-efficacy to understand the factors that influence likelihood of vaccination against COVID-19 once one becomes

available. Results: Participants ( $n=241$ ) were between ages 18 and 24, with a majority of participants identifying as female (74.7%). The multinomial logistic regression indicated that self-efficacy ( $B=-0.226$ ,  $SE=0.094$ ,  $p=0.017$ ) and perceived susceptibility ( $B=-0.737$ ,  $SE=0.349$ ,  $p=0.035$ ) were significant predictors for likelihood to obtain a COVID-19 vaccine, while perceived severity, gender, and combined race and income were not significant predictors. Conclusions: The results indicate that most students would be likely to get a COVID-19 vaccine. Health education interventions focusing on college students should address perceived susceptibility and self-efficacy regarding vaccination when one becomes readily available.

### **Poster L21-06**

#### **Recruitment Methods for Focus Group Discussions on Covid-19 and Seasonal Influenza Vaccination Intention among Pima County Adults**

Neddermeyer, Ava; Cantin, Cori; Jordan, Domo; Ruiz, Sara; Raghuraman, Veena; Marczak, Jacob; Kinkade, Mary; Krauss, Beatrice; Perez-Velez, Carlos; Madhivanan, Purnima

Purpose: Given recent progress towards a safe and effective COVID-19 vaccine, and recommendations for flu shots to protect against seasonal flu in the context of the SARS-CoV-2 epidemic, a University of Arizona/Pima County Health Department collaboration has undertaken the design of a community survey to understand factors leading to seasonal influenza and COVID-19 vaccine attitudes and behaviors. Participants were recruited to participate in focus group discussions (FGDs) using evidence-based recruitment methods. Methods: The team recruited 56 adult participants in Pima County for FGDs about attitudes regarding

COVID-19/seasonal influenza vaccination from August to November 2020. Personal and community networks were used to reach participants via phone, email, social media, and print media (posters). A monetary reward of 25 dollars was offered as compensation for participation. Recruitment method analysis was conducted using the survey, email, and phone records. Results: It was found that minority populations were most difficult to recruit. The highest response we received was from white females, and the lowest responses we received were from African American and Spanish-speaking males. Those who regularly vaccinated and were probably more likely to participate in a focus group discussion in comparison to those who did not vaccinate regularly.

Reaching out by phone call to personal contacts and those who had already agreed to participate was most effective for gaining participation. Conclusion: Findings suggest that recruiting personal contacts via email and phone is the most effective followed by emailing community organizations. A modified recruitment plan will be used for the next stage in the research. Future analysis of recruitment efforts in this study will include aiming towards tracking the success of recruitment methods through UTM (Urchin Tracking Module) codes. Ultimately the findings from this research will be used to ensure effective and safe promotion of vaccination against Covid-19/seasonal influenza in Pima County.

**March 19, 2021 3:30PM EST**

***E-Cigarettes***

**Poster 20-11**

**Combustible and Electronic Cigarette Use and Insufficient Sleep among U.S. High School Students**

Merianos, Ashley; Jandarov, Roman; Choi, Kelvin; Fiser, Kayleigh; Mahabee-Gittens, E.

Purpose: Current tobacco product use and insufficient sleep are prevalent problems facing U.S. adolescents. Limited research has assessed the association between current use of e-cigarettes and cigarettes and sleep health. The objective was to investigate the relationship between use of e-cigarettes only, cigarettes only, and dual use of both products, and insufficient sleep among U.S. high school students. Methods: We conducted a secondary data analysis of the 2017 Youth Risk Behavior Survey including 11,296 U.S. high school students. We used the following categories to classify students based on their current use: 1) no use; 2) e-cigarette use only; 3) cigarette use only; and 4) dual use of e-cigarettes and cigarettes. We built a logistic regression model that adjusted for demographics (sex, grade level, and race/ethnicity) and potential confounders (television watching, computer use, mental health problem(s), and alcohol use). Results: Overall, 73.4% of students reported insufficient sleep of <8 hours/day on average, with high rates of insufficient sleep reported among those who used e-cigarettes only (78.8%), cigarettes only (72.6%), and who engaged in dual use (86.7%). Adjusted results indicated students who were current e-cigarette only users were 1.60 times more likely (95%CI=1.05-2.46) to report insufficient sleep compared to students who did not currently use e-cigarettes and/or cigarettes. Students who currently used

cigarettes only were significantly less likely to report insufficient sleep (adjusted odds ratio=0.51, 95%CI=0.30-0.86), while adjusting for demographics and the confounders. No differences were found between current dual product use and insufficient sleep. Conclusions: We report that current use of e-cigarettes increased the odds of insufficient sleep, but current use of cigarettes decreased the odds. Prevention efforts are critically needed to simultaneously reduce the overall rise in current tobacco use trends due to the surge in e-cigarette use and increase sleep health among this vulnerable population.

**Poster 20-18**

**Effect of T21 Policies on E-Cigarette Use Among Military Personnel**

McDaniel, Justin; Patrick, S.

Purpose: Some states have raised the minimum legal age for sale of tobacco products from 18 to 21 ("T21" policies), although some of these states, such as California, have military personnel exemptions. The purpose of this study was to determine whether the relationship between living in a T21 state and e-cigarette use was moderated by military service status among individuals aged 18 to 20 years. Methods: Data for this study were obtained from the 2016-2018 Behavioral Risk Factor Surveillance System (BRFSS) and from state-level legal documents pertaining to T21 policies. Because we excluded respondents who, at the time of the survey, were living in a state that had local but not state-level T21 policies, our final analytic sample of individuals aged 18 to 20 years was 11,926, of which 801 reported military service. Current use of e-cigarettes (no=0, yes=1) served as the dependent variable. Using a multi-level survey-weighted generalized linear mixed model (GLMM), we evaluated



the moderating effect of military service on the relationship between T21 state of residence and e-cigarette use with an interaction term. In this model, we also controlled for sex, race, age, annual income, mental distress, binge drinking, and combustible cigarette use. State of residence was included as a random effect. Results: E-cigarette use was lower among military personnel in T21 states (6.45%) than military personnel in non-T21 states (16.10%, Cohen's  $h=0.31$ ); however, these differences were trivial among civilians (non-T21 state=13.99% vs. T21 state=13.93%, Cohen's  $h<0.01$ ). Results of the GLMM showed that the adjusted interaction term for moderation was significantly different from zero ( $aOR=0.24$ , 95%  $CI=0.13-0.44$ ). Conclusions: Abolishing military exemptions to state-level T21 policies may be associated with lower e-cigarette use rates among military personnel.

### **Poster 20-23**

#### **Longitudinal Association Between Progression of E-cigarette Use and Smoking Cessation Behaviors Among U.S. Adults**

Yang, Meng; Hu, Yi-Han; Lin, Hsien-Chang

Purpose: E-cigarette use is popular among adult smokers. The impact of e-cigarette use on smoking cessation remains controversial due to use of cross-sectional study designs or dissented frequency measures of e-cigarette use. Using e-cigarettes to quit smoking may involve a progression of e-cigarette/cigarette use, from experimenting with e-cigarettes, to replacement of cigarettes, to cessation of smoking cigarettes. This study examined the association of e-cigarette/cigarette use progression with smoking cessation

behaviors among U.S. adults. Methods: This study utilized Waves 1-3 (2013-2016) adult data from the Population Assessment of Tobacco and Health Study ( $N=6,618$ ). Wave 1 (baseline) relative frequency of cigarette vs. e-cigarette use in past 30 days was used to measure progression of e-cigarette/cigarette use. Two weighted linear regressions and two logistic regressions were conducted to investigate the associations between progression of e-cigarette/cigarette use and four cigarette smoking outcomes at Waves 2-3 (follow-up): 1) quantity of cigarette consumption, 2) frequency of cigarette consumption, 3) cigarette quit attempt, and 4) 1-month abstinence from cigarettes, controlling for sociodemographic factors. Results: Current cigarette smokers who used e-cigarettes more frequently than combustible cigarettes at baseline had lower smoking quantity and frequency at follow-up ( $\beta=1.50$  cigarettes daily,  $\beta=3.36$  days monthly, respectively; both  $p$ 's $<0.01$ ), compared to e-cigarette non-users. Logistic regression results showed that current cigarette smokers who used e-cigarettes more frequently than combustible cigarettes at baseline were less likely to reach one-month abstinence at follow-up ( $OR=0.41$ ,  $p<0.01$ ) than exclusive combustible cigarette smokers. Conclusions: E-cigarettes as a smoking cessation aid may be effective in reducing smoking quantity and frequency among adults only when e-cigarette use is more frequent than combustible cigarette smoking. However, e-cigarette use may not be effective in reaching abstinence from smoking. E-cigarette use behaviors may be one component when evaluating smoking cessation behaviors; however, recent safety and health concerns about e-cigarette use should also be considered.

**Poster 21-27****Impact of Electronic Cigarette Graphic Warning Messages on Perceived Susceptibility and Severity of Explosion and Lung Injuries**

Harp, Erica; Rossheim, Matthew; Zhao, Xiaoquan

**Purpose:** E-cigarettes are the most prevalent form of tobacco use among U.S. youth and young adults. In recent years, health professionals have learned about new risks from these products. However, little is known regarding how to effectively communicate these risks to the public. The current study tested the effectiveness of e-cigarette explosion and lung injury graphic warning messages. **Methods:** 343 young adults (18 to 28 years) were recruited via Amazon Mechanical Turk in October 2020. Participants were randomized to one of six exposure conditions: two images of patients with lung injuries, two images of battery explosion injuries, and two control images of e-cigarette products – one with a message about chemicals and one about nicotine/addiction. The explosion and lung injury images were displayed with the text: “Since 2015, an estimated 3,370 people have been hospitalized from electronic nicotine product explosions in the U.S.” and “Last year, 2,807 people were hospitalized for lung injury associated with electronic nicotine product use in the U.S.,” respectively. Perceived susceptibility to and perceived severity of e-cigarette lung and explosion injuries were measured before and after exposure to randomized message/image conditions. Linear regression models examined whether exposure conditions were associated with perceived susceptibility and severity of e-cigarette lung injuries and explosion injuries, adjusting for baseline scores and recent e-cigarette use (past 30 days).

**Results:** Both explosion injury images tested were associated with increased perceived susceptibility to and severity of e-cigarette explosion injuries. One of the two lung injury images was associated with increased perceived susceptibility to and severity of e-cigarette lung injuries. 23% of participants were current e-cigarette users. Current e-cigarette users were less affected by these messages. **Conclusions:** This study shows that graphic messages with factual statements about prevalence can increase perceived susceptibility to and severity of e-cigarette lung injuries and explosion injuries among young adults.

**Poster 21-36****Reasons College Students Choose Not to Vape: Implications for Vaping Prevention**

Greer, Anna, E.; Morgan, Kerry; Samuolis, Jessica; Diaz, Gabrielle; Elimanco, Kylie

**Purpose:** The prevalence of vaping among adolescents and young adults is rapidly increasing. A better understanding of reasons why some youth are choosing not to vape is needed. Our purpose was to examine: 1) the demographic characteristics of, and 2) reasons for not vaping among, college students attending a mid-sized northeastern university who reported never trying vaping. **Methods:** We used purposive and snowball sampling to recruit 1,229 college students (response rate=25%) attending a northeastern U.S. university to complete a questionnaire about vaping. The questionnaire invited students to report demographic characteristics (gender, age, white/nonwhite) and vape use status (vaped in prior 30 days, ever tried vaping, never tried vaping). Those who reported never vaping also completed reasons for never vaping using the Vaping Avoidance Scale (VAS). The VAS includes four subscales, each with three items and a possible score ranging

from 0 to 15. The four scales were: bad taste (e.g., “the flavors would be unpleasant;”  $\alpha=.865$ ), fear of cigarette use (“I’m afraid I would want to smoke cigarettes;”  $\alpha=.873$ ), health risks (“it would be hazardous to my health;”  $\alpha=.865$ ), and uncomfortable social interactions (“feel awkward asking to try someone’s device;”  $\alpha=.824$ ). Descriptive and independent t-test statistics were used to analyze the data in SPSS. Results: Respondents were mostly white (81.1%), females (67.3%), with an average age of 19.73 years ( $SD=1.39$ ). One-third (32.3%) of respondents reported never vaping. Average scores on the bad taste, cigarette use, health risks, and uncomfortable social interactions subscales were 8.64 ( $SD=4.43$ ), 5.87 ( $SD=5.20$ ), 10.95 ( $SD=4.03$ ), and 8.08 ( $SD=4.79$ ), respectively. Males had significantly higher scores for bad taste ( $p=.005$ ) and health risks ( $p=.001$ ) and females had a significantly higher score for uncomfortable social interactions ( $p=.031$ ). There were no associations between subscale scores and race ( $p>.05$ ) or age ( $p>.05$ ). Conclusions: These findings can be used by health professionals to prevent initiation of vaping among college students.

#### **Poster 21-45**

#### **Tobacco Smoke Exposure Status and Family Resilience Among U.S. School-aged Children**

Merianos, Ashley, L.; Nabors, Laura, A.; Fiser, Kayleigh, A.; Mahabee-Gittens, E. M.

Purpose: While declines in adult smoking and increases in smoke-free legislation have contributed to decreased tobacco smoke exposure (TSE) over time, about 4-in-10 U.S. school-aged children remain exposed.

Limited research has assessed TSE and family resilience, which is the family’s capacity to face and adapt to environmental stressors. The study objective was to assess the association between TSE status and family resilience among school-aged children nationwide. Methods: We used 2017-2018 National Survey of Children’s Health data, and included 15,423 children ages 6-11 years. TSE status was defined as not living with a smoker (no TSE), living with a smoker with no home TSE (smoking not allowed inside the home), and living with a smoker with home TSE (smoking allowed inside the home). Multinomial regression analyses were conducted while adjusting for child age, child sex, child race/ethnicity, child health status, number of adverse childhood experiences, parent education level, family structure, and federal poverty level. Results: About 13% of 6-11-year-olds lived with a smoker with no home TSE while 1.6% lived with a smoker with home TSE. Compared to children with high family resilience scores, children who lived with a smoker with no home TSE were 1.82 times more likely ( $95\%CI=1.23-2.70$ ) to have low family resilience scores, while controlling for the covariates. Children who lived with a smoker with home TSE were at increased odds to have low family resilience scores (aOR= 1.29,  $95\%CI=1.07-1.57$ ) and moderate family resilience scores (aOR=1.28,  $95\%CI=1.10-1.49$ ), while adjusting for the covariates. Conclusions: Children who lived with a smoker with no home TSE were at increased likelihood of having low family resilience, and those with home TSE were at distinct odds of having low-to-moderate family resilience. Family-level interventions are needed to increase family resilience and the adoption of voluntary smoking bans in school-aged children’s homes nationwide.

**March 19, 2021 3:30PM EST**

***Social Support***

**Poster 20-01**

**A Retrospective Examination of a University Success and Wellness Coaching Program**

Gatto, Amy; Bleck, Jennifer; DeBate, Rita

Purpose: Success & Wellness Coaching (SWC) provides students with a coach who helps guide, assist, and hold students accountable in order to attain personal goals and adopt desired behaviors. This research analyzes: (1) student satisfaction with the coaching intake process, (2) students' relationships with their coaches, and (3) how SWC affects students' self-efficacy to work towards their individual goals. Methods: The final sample included 123 students who had expressed interest in SWC, of which 85 students attended at least one SWC session. Constructs assessed include satisfaction with coach, satisfaction with intake process, usage of coaching services, self-efficacy towards goal achievement, and perceived success of the program. Results: Preliminary analysis revealed that the majority of students who participated in SWC attended 1-5 sessions ( $M=4.04 \pm SD=2.86$ ) on a weekly, bi-weekly, or sporadic basis. Regarding the intake process, the majority of students agreed that it was easy to schedule an appointment (88.2%), coaches were available (94.6%) and flexible (89.1%) for scheduling, and meeting locations were private (76.9%). In total, 29.5% of participants believed they met their initial goals and 65.4% had begun to make or made progress on their goals. In regards to self-efficacy, the majority felt that SWC increased their confidence (68.4%) and motivation (73.4%) towards reaching their goals. Most students felt that SWC helped

them overcome barriers (70.9%) and increased their use of goal setting skills (67.0%) and problem solving skills (59.4%). Overall, 55.7% of student participants felt that SWC helped them change their behavior. Of the SWC participants, over 95% said they would recommend SWC to a friend. Conclusions: SWC is effective in helping college students identify and work towards their individual goals thus improving student success. Further, these findings provide insight for improving the implementation process of wellness coaching programs at universities.

**Poster 21-05**

**Assessing Factors Related to Social Connection Among College Students in a Campus Recovery Program**

Nabil, Anas Khurshid; Lim, Eunji; Shigg, Natalie D.; Sosa, Hannah L.; Patterson, Megan S.

Purpose: Research shows that social support/connections have been linked to a variety of health conditions, and play a critical role in long-term recovery from addiction. Especially for college students in recovery, social networks are critical to long-term recovery and academic success. Recovery is defined as: a process of change that enables individuals to improve their overall health. As a result, campus recovery programs (CRPs) are on the rise to help college students fight addiction while also pursuing their college degree. Considering the goal of most CRPs is to socially support students, this study aimed to measure factors associated with social connections created between students involved in a CRP. Methods: College students involved in a CRP ( $n=40$ ) completed online surveys measuring their social connections within the program, along with their age, length of sobriety (in months), hours spent in the

recovery center per week, and stress, anxiety, and depression scores. Exponential random graph modeling assessed factors related to the presence of social ties between CRP members. Results: Transitivity (having “friends in common;”  $PE=1.56, p<.01$ ), being older ( $PE=0.03, p=.04$ ), having higher stress scores ( $PE=0.40, p=.04$ ), and spending more time in the recovery center ( $PE=0.01, p=0.03$ ) was associated with students being connected to others in their network. Contrarily, higher anxiety scores ( $PE=-0.58, p<.01$ ) and longer length of sobriety ( $PE=0.01, p=.01$ ) were negatively associated with tie presence in this network. Conclusions: This study filled an important gap in the CRP literature, namely by identifying key factors (e.g., participation in the program, length of sobriety, having friends in common) related to social connections created between students in recovery. Results support the use of CRPs in creating social connections for students, rationalizing their promotion and use on college campuses. Future research should examine how these relationships change over time within a student’s tenure in a CRP.

### **Poster 21-30**

#### **Online Gaming Network Communication Dynamics, Depressive Symptoms, and Social Support: Longitudinal Network Analysis**

Prochnow, Tyler; Patterson, Megan, S.; Hartnell, Logan; Umstatted Meyer, M. Renee

Purpose: Video games are becoming a daily part of life for most Americans despite public health concerns (e.g., depressive symptoms (DS), social isolation). Preliminary studies show gamers may be compensating for a lack of in-real-life (IRL) support with online connections. This study uses longitudinal social network analysis to investigate the social structure of an online gaming site and

how factors such as social support, sense of community, and DS relate to communication dynamics. Methods: Members ( $n=40$ ) of an online gaming site reported online and IRL support, sense of community, DS, and usernames of other members whom they spoke to about important life matters in May 2019 and again in March 2020. Separable temporal exponential random graph models (STERGMs) assessed changes in the network over time. STERGMs determine significant factors associated with the presence, formation, and dissolution of social connections over time. Results: Members were significantly more likely to send communication ties over time if they reported lower IRL support ( $PE=-0.52, SE=0.18$ ), more online support ( $PE=0.44, SE=0.16$ ), and fewer DS ( $PE=-0.06, SE=0.02$ ). Further, members who reported more IRL support were significantly more likely to dissolve outgoing communication ties over time ( $PE=-0.06, SE=0.02$ ). Conclusions: Online gaming provides a unique opportunity for individuals to connect and communicate. Examining the impact of this communication on feelings of support and DS is increasingly important as the popularity of gaming increases. These results are especially timely given the social isolation and mental health impacts related to the COVID-19 pandemic, as this study suggests online connectivity could be a source of support during this socially isolating time.

### **Poster 21-41**

#### **The Association Between Social Engagement and Alcohol Use Among U.S. Middle-aged and Older Adults**

Ou, Tzung-Shiang; Huber, Lesa; Lin, Hsien-Chang

Purpose: Alcohol is one of the most commonly used substances among middle-

aged and older adults; meanwhile alcohol use is associated with falls, impaired driving, unintentional injuries, and health conditions. Older age brings increasing losses across all areas of life, including physical health, social status, and opportunities for social engagement. The loss of social engagement may pose a great risk for problematic drinking. However, few studies have examined the association between social engagement and alcohol use including casual and problematic drinking. This study aimed to investigate the aforementioned associations among U.S middle-aged and older adults using data from a nationally representative longitudinal sample. Methods: This was a retrospective cohort study. Adults aged 50 and older (N=1,939) from the 2008, 2012, and 2016 Health and Retirement Study were included. Two linear mixed-effects regression models were conducted to examine the associations between social engagement and alcohol use measured by past 30-day frequencies of alcohol use and binge drinking, controlling for socio-demographic variables. Age was centered and included as a time-varying variable to capture overtime within-person differences. Results: A higher level of social engagement was associated with more days of alcohol drinking in a week ( $\beta = 0.005$ ,  $p < 0.05$ ) when sociodemographic variables were controlled. Additionally, a higher level of social engagement was associated with fewer days of binge drinking ( $\beta = -0.067$ ,  $p < 0.05$ ). Conclusions: The study findings suggested that social engagement was possibly associated with social drinking within an acceptable range of alcohol consumption among middle-aged and older adults. Additionally, social engagement could serve as a protective factor of binge drinking among this population. Our finding could add to present knowledge of social engagement, demonstrating the benefit of social engagement among adults age 50 and older on reducing binge drinking. Programs that

promote social engagement may have a secondary effect on preventing problematic drinking behavior.

### **Poster 21-42**

#### **The Effects of Social Connections on College Students' Healthy Habits: An Egocentric Network Analysis of Undergraduate Students**

Montour, Tyra; Alexander, Janae, T.; Francis, Allison; Goocher, Preslie; Shaw, Victoria; Patterson, Megan

Purpose: Despite exercise being a key contributor to a healthy lifestyle, college students often do not engage in recommended levels. College students' exercise behavior and positive mental health is associated with supportive social connections, which can be developed through campus group exercise programs. This study tested whether mental, social, and behavioral health variables were associated with a college student's supportive social connections. Methods: An egocentric network analysis was conducted on a sample of undergraduate students ( $n=465$ ) and their social ties ( $n=1925$ ). Respondents indicated their exercise behavior, group exercise involvement, and mental health, along with exercise habits and group exercise involvement of their social ties. Respondents also indicated whether their social ties provided them with health and wellness support. Multilevel modeling assessed factors related to students receiving health and wellness support through their social ties. Results: Students who reported less stress ( $\beta = -0.01$ ,  $p = .01$ ), and more exercise ( $\beta = 0.13$ ,  $p > .01$ ) received more health and wellness support through their social ties. Females ( $\beta = 0.12$ ,  $p > .01$ ) and ties who exercised more ( $\beta = 0.45$ ,  $p > .01$ ), provided students more support. Finally, relationships between students and

alters who were both involved in the campus group exercise program ( $\beta=0.18$ ,  $p=.04$ ) provided more health and wellness support, despite main effects of group exercise membership for the alter ( $\beta=0.09$ ,  $p=.13$ ) and the student ( $\beta=0.03$ ,  $p=.59$ ) being insignificant. Discussion: This study fills a gap in literature by identifying factors that relate to social support within college student social networks. Findings suggest a relationship between healthy habits and social support, and campus group exercise programs could be an environment to create reciprocal supportive ties. Future research could explore the effect of connecting students with “peer mentors” who model healthy behaviors and provide support for students.

#### **Poster 21-54**

##### **Youth Assets and Successful Transition to Early Adulthood**

Oman, Roy, F.; Sanchez, Louisiana; Lensch, Taylor; Yang, Yueran

Purpose: A considerable amount of research has found that youth assets protect youth from engaging in health risk behaviors. Much less research has investigated associations between youth assets and positive health-related outcomes. This study’s purpose was to investigate prospective associations between 14 specific youth assets (e.g., responsible choices, family communication, school connectedness) that are presumed to influence behavior at multiple levels (individual, family, community), and successful transition to early adulthood

(STEAs; general health, social support, life satisfaction, and financial health). Methods: Youth participants and their parents ( $N=1111$  youth/parent pairs) were recruited through door-to-door canvassing of stratified (by race/ethnicity and income), randomly selected census tracts and blocks to participate in a study that assessed prospective associations among the neighborhood environment, youth assets, and youth health-related behaviors. Five waves of data were collected annually over four years. The sample for this analysis included only youth ( $n=627$ ) who were 18 years or older at wave 5. The STEA variable was dichotomized into higher versus lower STEA based on the median STEA score. Logistic regression, controlling for demographic variables, was conducted to assess prospective associations between youth assets assessed at wave 1 (baseline) and STEA assessed 4 years later at wave 5. Results: Youth participant demographic characteristics were: mean age=19.2 years; 56% female; 42% white, 28% black, 26% Hispanic, and 5% other race/ethnicity). Nine of the 14 assets were significantly and prospectively associated with higher STEA (significant AORs ranged from 1.44 to 3.07,  $p<.05$ ). More specifically, 3 individual-, 1 family-, and 5-community-level assets were significantly associated with higher STEA. Conclusions: The results suggest that youth assets, particularly specific individual- and community-level assets, could be the focus of programmatic efforts that have a goal of not only preventing youth participation in health risk behaviors but also promoting positive health-related outcomes as well.

**March 19, 2021 3:30PM EST**

***Substance Use***

**Poster 20-13**

**Correlates of Positive Drug Expectancies Among Hispanic Adolescents: A Test of The Theory of Triadic Influence**

Jacobs, Wura; Bartoszek, Lauren; Unger, Jennifer

Purpose: Expectancies toward drug use develop during adolescence. These drug use expectancies are reinforced as they initiate and maintain use. Understanding their development is important for prevention efforts. This study employs the theory of triadic influence (TTI) which articulates the different variables that influence health-related behaviors into streams of influence— intrapersonal, social, and cultural—to better understand factors that influence positive drug use expectancies (PDE) among Hispanic adolescents. Methods: Data for the study came from Project RED which included 1,963 high school students in Southern California. The relationships between participants' drug expectancies and different streams of influence were examined using regression analysis. Results: Participants were mostly females (54.2%), with a mean age of 17.13 years. In the first model, assessing the cultural stream, controlling for other covariates, there were no variables associated with PDE. Model 2, assessing the social environment stream of influence, had a strong association with PDE (adjusted  $R^2=0.25$ ). PDE significantly increased with drug use consequences ( $\beta=.48$ ), parent ( $\beta=1.28$ ) and sibling ( $\beta=2.97$ ) alcohol use, and peer approval of alcohol use ( $\beta=2.0$ ). PDE decreased with increasing parental communication ( $\beta=-.22$ ) and peer disapproval of marijuana use ( $\beta=-5.2$ ). The third model, including intrapersonal factors, was

significant (adjusted  $R^2=0.26$ ). Regression showed a significant positive relationship between PDE and drug use consequences ( $\beta=.47$ ), parent ( $\beta=1.06$ ) and sibling ( $\beta=2.97$ ) alcohol use, peer approval of alcohol use ( $\beta=2.05$ ), and stress ( $\beta=.23$ ). There was a negative significant relationship with parental communication ( $\beta=-.21$ ), peer disapproval of marijuana use ( $\beta=-5.2$ ), and depression ( $\beta=-.09$ ). Conclusions: Findings from this study help organize and clarify the important influences associated with PDE among Hispanic adolescents. Leveraging the ordering and categorizations suggested by the TTI sheds light on the importance of social streams of influence and what shapes them, and could help identify targets for interventions.

**Poster 20-24**

**Patient-centered Medical Home Enrollment and Associated Substance Use Disorder Among U.S. Adolescents: A Propensity-score Analysis**

Ou, Tzung-Shiang; Lin, Hsien-Chang

Purpose: Substance use/misuse and substance use disorder (SUD) have been serious public health concerns among U.S. adolescents. Primary care providers could play an important role in substance use/misuse prevention and treatment. Patient-centered medical home (PCMH) is an innovative model that aims to improve healthcare quality and help patients meet healthcare needs by transforming primary care. However, it is unclear if PCMH enrollment could be linked to SUD. This study examined the association between PCMH enrollment and SUD among U.S. adolescents. Methods: This was a retrospective cross-sectional study. A total of 10,994 adolescents were extracted from the 2017 National Survey on Children's Health. Propensity-score analysis using 1:1 nearest



neighbor matching was conducted to reduce potential selection bias between participants who enrolled and did not enroll in a PCMH. A weighted logistic regression was conducted to examine the association between PCMH enrollment and current SUD diagnosis on the matched sample, adjusting for mental health conditions and other covariates guided by the Andersen model of healthcare utilization. Results: A balanced matched sample containing 9,252 participants was achieved (imbalance test: Chi-square=7.16,  $df=6$ ,  $p=0.306$ ), suggesting that potential selection bias was reduced. Results from the weighted logistic regression on the matched sample showed that adolescents who enrolled in a PCMH, compared to those who did not, were less likely to report a current SUD diagnosis ( $OR=0.30$ ,  $p<0.05$ ), while other mental health conditions were adjusted. Conclusions: This study concluded that PCMH enrollment was associated with a lower likelihood of having SUD among U.S. adolescents. This finding adds to the evidence that integrating patient-centered primary care services with SUD prevention and treatment in an innovative medical home setting may be an effective strategy in reducing SUD among adolescents. Policies that promote PCMH enrollment may have a secondary effect on preventing adolescent substance use.

### **Poster 20-27**

#### **Sociodemographic Factors Related to Concurrent Use of Electronic Cigarettes and Marijuana in a National Sample of College Students**

Huang, Shu-Tzu; Vidourek, Rebecca; King, Keith

Purpose: This study aimed to identify sociodemographic factors that were related to the concurrent use of electronic cigarettes

and marijuana in the past 30 days among college students in the United States. Methods: The research team conducted a secondary data analysis with Spring 2018 data from the American College Health Association - National College Health Assessment II (ACHA-NCHA II). Participants were college students in the voluntarily participating universities across the country. Logistic regression analyses were performed to examine the relationships between concurrent use of electronic cigarettes and marijuana in the past 30 days and sociodemographic variables including gender, race/ethnicity, grade level, enrollment status, international student status, relationship status, residence type, Greek member affiliation, grades, and participation in college athletics. Results: There were 88,178 college students who completed the survey. The prevalence of concurrent use of e-cigarettes and marijuana in the past 30 days was 5.2% in 2018. Results of the univariate logistic regression analyses revealed that all sociodemographic variables were associated with concurrent use of electronic cigarettes and marijuana. After controlling for the effects of other independent variables, the final multiple logistic regression model indicated that students who were male or of non-binary gender, white, in the 1st or 2nd year, full-time students, not in a relationship, living in college housing, Greek members, with poorer grades, and college athletes were more likely to report using both electronic cigarettes and marijuana in the past 30 days. Conclusions: More than 1 in 20 college students used both electronic cigarettes and marijuana recently, which may pose harm to their health. Multiple sociodemographic factors were identified in this study. It is urgently warranted to develop and implement prevention interventions targeting at-risk populations to address this emerging public health problem.

**Poster 21-23****Frequency of Cannabis Use Predicted by Stress and Social Factors Among Women of Childbearing Potential**

Crockett, Erica K.; Chiaf, Ashleigh L.; Croff, Julie M.; Wheeler, Denna

**Purpose:** Cannabis use is associated with other substance use, risk behaviors, and negative health impacts. Understanding the social-demographic variables contributing to cannabis use can help minimize potential harm to the cannabis using population. **Methods:** This 28-day study included 165 young adult females who reported past month drinking. All participants were between the ages of 15 and 24. At baseline, participants responded to a number of questionnaires including a 6-item Adverse Childhood Experiences (ACES), Children of Alcoholics Screening Test (CAST-6), Brief Young Adult Alcohol Consequences Questionnaire (BYAACQ), and questions about stress. Participants also reported weekly about their cannabis use. **Results:** Among this alcohol-consuming sample, 44.6% of participants used cannabis while in the study, with 12.8% using frequently. Factors significantly associated with frequency of cannabis use included stress ( $p=0.001$ ), consequences of alcohol ( $p=0.001$ ), and early life adversity/adverse childhood experiences ( $p<0.001$ ). **Conclusions:** Our findings suggest that social factors such as stress and alcohol consequences along with developmental influences like ACES have impacts on cannabis use through young adulthood.

**Poster 21-48****Using the Reasoned Action Approach to Explore Factors That Influence Pregnant Smokers' Intention to Switch from Combustible Cigarettes to E-Cigarettes**

Dobbs, Page, D.; Branscum, Paul; Tackett, Alayna, P.; Cohn, Amy, M.; Comiford, Ashley, L.; Luzius, Abbie

***AAHB Research Scholars Mentoring Program***

**Purpose:** Pregnancy has been reported as the most influential time for women to quit smoking. Quitting smoking is the primary reason reported by pregnant women for using electronic cigarettes (e-cigarettes). Few studies have explored pregnant women's intention to switch from cigarettes to e-cigarettes. This study used the reasoned action approach (RAA) to examine factors associated with pregnant smokers' intention to switch from cigarettes to e-cigarettes. **Methods:** Pregnant women aged 18-40 ( $n=267$ ;  $Mage=29.3$ ,  $SD=5.5$ ) who smoked at least one cigarette in the past 30 days completed a national, online, cross-sectional survey about switching from cigarettes to e-cigarettes during pregnancy. Adapted RAA items from previously validated RAA research assessed intention of switching from cigarettes to e-cigarettes during pregnancy. A confirmatory factor analysis confirmed the factor structure of latent factors for each RAA construct, and then structural equation modeling was used to test the theory's application. **Results:** After controlling for related items among each

construct, the 29-item measure provided acceptable model fit. All standardized factor loadings were significant (.66-.94), and all items predicted their respective construct. The model explained 65.2% of the variance for intention to switch in the next three months, and latent variables instrumental attitude ( $p < .001$ ) and descriptive norms ( $p < .001$ ) predicted intention. Conclusions: Health educators could use identified RAA constructs as interventional targets in future research and education. In this sample, believing e-cigarette use to be good or better

than combustible cigarettes (instrumental attitudes) and believing other pregnant women who smoke will switch during pregnancy (descriptive norms) increased intention to switch. Previous research has shown that 14.5% of pregnant women who smoke quit using all tobacco products during pregnancy, compared to 1.2% who switch to e-cigarettes. Thus, prenatal education focused on providing facts regarding tobacco/nicotine use during pregnancy could be effective in reducing tobacco/nicotine use during pregnancy.

**March 23, 2021 3:00PM EST**

***COVID-19 – Group 3***

**Poster 21-10**

**COVID-19 Stress, Food Insecurity, Personal Agency, and Intentions as Predictors of Fruit and Vegetable Consumption among College Students**

Levy, Taylor M.; Williams Jr., Ronald D.; Odum, Mary; Housman, Jeff M.; McDonald, Jacquelyn D.

Purpose: The purpose of this study was to explore the relationship between COVID-19 stress, food insecurity, and fruit and vegetable (FV) consumption among college students. Methods: A sample of 101 college students (mean age = 23.6 years, 75.2% female), recruited via email, participated in a pilot test of a 34-item survey created using modified scales from existing instruments to measure COVID-19 stress, food insecurity, FV personal agency (perceived behavioral control and self-efficacy), FV intention, and FV consumption. Results: Cronbach alpha reliability analyses indicated high internal consistency for all scales: COVID-19 stress ( $\alpha=.854$ ), food insecurity ( $\alpha=.778$ ), FV personal agency ( $\alpha=.900$ ), FV intention ( $\alpha=.824$ ), and FV consumption ( $\alpha=.766$ ). Multiple linear regression analyses indicated COVID-19 stress, food insecurity, personal agency, and intention explained 32.8% of the variance in FV consumption scores ( $F=12.454$ ,  $p<.001$ ). Personal agency ( $\beta=.349$ ,  $p<.001$ ) and intention ( $\beta=.301$ ,  $p<.001$ ) were the strongest predictors of FV consumption. COVID-19 stress and food insecurity were not statistically significant predictors of FV consumption. Conclusions: Both intention to consume FV and FV consumption personal agency were moderate predictors of FV consumption among college students. While research

indicates that periods of high stress and food insecurity may impact the ability to consume a healthy diet of FV, these factors were not significant in this study; however, the instrument used in this pilot study produced reliable data which suggests it can be used to explore these relationships using larger college populations or non-college populations who may experience differing rates of stress and food insecurity.

**Poster 21-15**

**Examining the Use of a Facebook Group to Share COVID Related Child Physical Activity Information**

Edmeade, Jendayi; Prochnow, Tyler; Ross, Allison

Purpose: Social media is an important form of communication because of its vast reach. Understanding what communication types are most effective can inform best practices around information dissemination. This study investigated social media communication during initial school closing and school re-entry planning phases of the COVID-19 pandemic to determine types of social media posts most effective at disseminating information, differences between phases, and sentiments relayed through comments. Methods: A mixed-method design was used to examine posts across two phases of the pandemic within a public Facebook group (roughly 1,500 members) created to promote school-based physical activity. Phase I comprised onset of school closures through release of national school re-entry guidelines. Phase II included release of guidelines through the start of the school year. A total of 418 posts were made between March 1, 2020 and August 1, 2020. One-way ANOVAs were used to determine differences between content types and reactions, shares, and comments. Independent t-tests tested for differences in

effectiveness between phases of the pandemic. Inductive analysis produced themes from comments shared during both phases. Results: Posts about *national and local policy and guidance* had more comments compared to posts about *civic engagement*. *Feel good stories* had the highest number of reactions. Group members reacted more to posts made during Phase II, which mainly consisted of *policy and guidance* (86%). Four major themes of *information and resources*, *personal disclosures*, *questions and concerns*, and *support for educators* emerged. Conclusions: Using social media to share local and national guidance during a pandemic may be a promising strategy to disseminate information, encourage discussion, and provide member support. The interaction and communication in a Facebook group appeared to be a source of social and informational support for members during the onset and initial school reentry phases of the COVID-19 pandemic.

### **Poster 21-18**

#### **Factors Related to Indoor Bar and Restaurant Visits During the COVID-19 Pandemic**

Maddock, Jay E.; Sues, Courtney

Purpose: Social distancing is one of the most effective ways to prevent the spread of COVID-19. Eating or drinking inside at a bar or restaurant is considered a high-risk behavior because individuals spend time indoors without wearing masks. In this study, we examined who was most likely to have eaten inside in a restaurant or drank at a bar between the start of the pandemic and November 2020. A nationwide online survey was started by 3,008 people with 2,600 providing complete data. Among the participants, 33.0% reported having eaten inside a restaurant and 20% reported having

drank inside a bar. These behaviors were highly related with only 4.6% of people who had been to a bar not reporting going to a restaurant, therefore only restaurant goers were examined in this paper. Bivariate analyses showed no significant differences in having eaten inside a restaurant by gender, age, education or having tested positive for COVID-19. White, non-Hispanic and Hispanic, respondents were more likely to eat in a restaurant than black respondents. People with pre-existing conditions including hypertension, asthma, COPD, and emphysema were less likely to have eaten in a restaurant (all  $p$ 's<.001). People who reported being very fiscally (44.9%) or socially (45.1%) conservative were significantly more likely to have eaten inside at a restaurant than people who reported being socially (27.3%) or fiscally (25.1%) liberal (all  $p$ 's<.001). People who reported being not at all cautious (53.2%) were also significantly more likely to eat inside a restaurant than those who reported being extremely cautious (24.7%,  $p$ <.001). Those with higher perceived susceptibility and severity were less likely to have eaten in a restaurant ( $p$ <.001). About a third of adults in this sample have eaten inside at restaurants. Political tendencies, perceived susceptibility and severity, and pre-existing conditions were stronger predictors of this behavior than demographics.

### **Poster 21-39**

#### **Telephone-based Support for Physical Activity During the COVID-19 Pandemic**

Ylitalo, Kelly; Cox, Wendy; Lucas, Raejone; Smith, Jordan; Pettee Gabriel, Kelley; Rafalski, Matthew; Gill, John; Niceler, Brock

Purpose: Physical activity (PA) is essential to maintain physical and mental well-being during the COVID-19 pandemic. The pandemic presents an emerging opportunity

to transition in-person health promotion activities to telephone-based activities. The purpose of this paper is to describe a telephone-based PA support strategy among racially/ethnically diverse patients during the COVID-19 pandemic. Methods: Adult patients at a large, Federally Qualified Health Center with a referral to an on-site exercise facility were eligible to receive telephone support with a personal fitness advisor following a March 2020 shelter-in-place mandate. Surveys about pre-pandemic PA habits and environmental characteristics were initiated within two weeks of the mandate. Follow-up calls by fitness advisors every 2 weeks thereafter used motivational interviewing and goal-setting strategies to support PA. Results: From March 23-July 23, 2020, 122 patients were contacted, and 72 participated in  $\geq 1$  phone call with a fitness advisor. Participants were, on average, aged 51.3 ( $\pm 11.6$ ) years, 87.5% female, 31.9% Hispanic/Latino, 19.4% non-Hispanic white, and 47.2% non-Hispanic black. During the first 4 months of the program, fitness advisors completed 270 phone calls, with 3.8 ( $\pm 2.1$ ) calls per participant. Patients with a home treadmill participated in twice the rate of calls compared to those without (RR=2.22; 95%CI:1.35,3.64;  $p=0.002$ ), but no other behavioral or resource characteristics predicted participation rate. Patients who were meeting PA guidelines prior to the mandate reported significantly more planned exercise in a week (100.0% vs. 55.3%;  $p<0.001$ ), more exercise days at home (5.0 vs. 1.7;  $p<0.001$ ), and a higher proportion of visits accomplishing personal PA goals (57.0% vs. 39.7%;  $p=0.11$ ) than patients who were not meeting guidelines. Conclusions: Pre-pandemic PA behavior appeared to predict pandemic PA behavior, but more work is needed to identify long-term PA changes worldwide. Telephone-based support for PA is feasible and may support healthy behaviors both during and after the pandemic.

### **Poster 21-51**

#### **What Happens When Gyms Are Not Available? How COVID-19 Affected Regular Gym Users' Physical Activity**

Beattie, Cassandra, M.; DeBlauw, Justin; Besenyi, Gina.; Mailey, Emily; Heinrich, Katie, M.

Purpose: Physical activity (PA) plays a crucial role in managing mental and physical health. Fitness facilities (i.e., gyms, clubs, studios) provide settings for PA. Access to these spaces is related to meeting PA recommendations (i.e., engaging in moderate, vigorous, and muscle-strengthening PA). COVID-19 restrictions, including shutdowns, compromised the use of fitness facilities nationwide, therefore limiting an important PA resource. The purpose of this study is to understand shifts in PA patterns among fitness facility users as a result of COVID-19 restrictions and shutdowns. Methods: An online survey, administered from April-June 2020, asked adult participants to identify and describe PA changes as a result of COVID-19 restrictions. Responses of somewhat/frequent fitness facility users ( $N=542$ ; M age=36.9 $\pm$ 14.9 years; 67.7% female) were analyzed. Participants answered questions including PA behaviors, fitness facility use, and changes in PA location and mode due to COVID-19, as well as open-ended questions asking them to explain how their PA behaviors changed. Results: Total PA minutes before (461.8  $\pm$  309.3) and during (455.9  $\pm$  341.2) COVID-19 among fitness facility users remained consistent. Approximately 91% ( $n=493$ ) somewhat or strongly agreed that they changed their PA location due to COVID-19. Only 1.6% ( $n=9$ ) reported sometimes or frequently attending fitness facilities during COVID-19. Most respondents, 83.9% ( $n=455$ ) somewhat or strongly agreed that they changed their PA

mode due to COVID-19. Participants' PA mode changes were split into 8 themes: home bodyweight (plyometrics, calisthenics, stretching, yoga, Pilates); trails (walking/hiking); outdoor activities (running, walking, jogging); biking (indoors/outdoors); virtual training (Zoom, DVD, YouTube, Facebook, livestreams); housework (indoors/outdoors), dancing, and home-gym

equipment use. Conclusions: Results suggest participants were positive deviants due to their creativity in maintaining PA behaviors despite fitness facility closures. Researchers should focus on the 8 identified themes to develop suggestions for continued PA participation. Additionally, governments should consider prioritizing alternative opportunities for PA within communities.

**March 23, 2021 3:00PM EST**

***Mental Health***

**Poster 20-07**

**Campus Integration Moderates the Association Between Psychological Resilience and Anxiety Among Underrepresented College Students**

Steinhardt, Mary; Wright, Jaylen; Whyne, Erum; Lehrer, Henry; Woo, Jihun

Purpose: Generalized anxiety disorders are among the most prevalent mental health concerns for college students. Underrepresented students are at an increased risk for anxiety given the unique academic and social challenges of adjusting to college, including a sense of isolation. A critical component of reducing anxiety is the ability to recover from adversity, termed psychological resilience. The association between resilience and anxiety may be heightened by strong integration with the college campus. Therefore, we examined whether campus integration moderated the association between resilience and anxiety among underrepresented minority college students. Methods: Students ( $N=446$ ; Mean age=19.06; 62.4% first-generation) at a large public institution completed a Qualtrics survey near the end of the semester. Hierarchical multiple regression examined the moderating effect of campus integration (5-item Purdue Gallup Index, e.g., My professors care about me as a person) on the association between resilience (6-item BRS) and anxiety (7-item GAD-7). Demographic variables were included as covariates. Post-hoc probing of the interaction and simple slopes were performed using methods outlined by Aiken and West. Results: The main effect for resilience was negatively associated with anxiety ( $\beta=-.42$ ,  $p<.001$ ), however there was a non-significant

association between campus integration and anxiety ( $\beta=-.05$ ,  $p>.05$ ). Analysis revealed a significant interaction effect ( $\beta=-.09$ ,  $p<.05$ ), such that campus integration moderated the relationship between resilience and anxiety. The final model accounted for 21% of the variance in anxiety ( $F=10.48$ ,  $p<.001$ ). Analysis of simple slopes indicated that greater resilience was associated with lower anxiety more so for participants with higher versus lower campus integration. Conclusions: Given the vulnerability of underrepresented minority students on university campuses, future research should explore whether enhancing psychological resilience and campus integration fosters mental health and reduces generalized anxiety.

**Poster 20-28**

**Temporal Trends and National Patterns in Adolescent Mental Health Service Use for Depression Across Service Settings**

Lu, Wenhua

Purpose: Untreated major depression can lead to various negative health and social consequences among adolescents. This study aimed to examine national patterns, temporal trends, and disparities in U.S. adolescents' use of mental health services for 12-month major depression across different settings. Methods: Data were drawn from adolescents aged 12 to 17 ( $N=109,578$ ) who participated in the annual, cross-sectional National Survey on Drug Use and Health from 2011 to 2017. Patterns, time trends, and disparities in adolescents' service use in specialty mental health, educational, and general medical settings, two or more settings, and combination of different settings were examined using Pearson's  $\chi^2$  test and multivariable logistic regression, adjusting for survey years, sampling weights, non-response bias, and



non-coverage bias. Results: Among adolescents with depression ( $N=11,877$ ), 49.2% reported having received any type of treatments. Overall, service use in specialty mental health settings was the most common, followed by educational and general medical settings. Across the survey years, a significant increase was observed in adolescents' service use in specialty mental health ( $OR=1.09$ ,  $p<0.001$ ) and general medical settings ( $OR=1.06$ ,  $p<0.05$ ), whereas the rate of school-based service use remained stable. Around 40% of adolescents received services in two or more settings each year, with no significant change over time. Among multi-setting service users, the combination of specialty mental health and educational settings was the most common. Adolescents' age, race, gender, family income, and family and school experiences significantly influenced their service use in different settings. Conclusions: Findings highlight the importance of providing integrative care in individual settings and call for more collaborative efforts to facilitate linkages between service settings. Strengthened funding and policy support are critical to improve safety-net mental health services for adolescents from uninsured, low-income, and racial/ethnic minority families.

### **Poster 20-30**

#### **The Role of Sleep Duration in Changing Narratives of Multiple Suicide Attempts Among Adolescents**

Xiao, Yunyu; Agle, Jon

Purpose: Suicide attempts and suicide-related mortality have increased among adolescents in recent years. These trends have implications for etiology and prevention

of suicide and suggest the need to study emerging risk factors, including sleep duration. This study estimated the trends of association between sleep duration and suicide attempts among the U.S. nationally representative samples of high school-attending adolescents from 1991 to 2017. Methods: Data were drawn from a sample of 68,301 adolescents in 9th-12th grades from 1991 to 2018 National Youth Risk Behavior Surveys. Suicide attempts measured the number of attempts (0, 1, 2-3, 4 or more times) in the past year. Sleep duration was categorized as short (<6 hours), normal (6-8 hours), and long (>8 hours). Multinomial logistic regression analyses were used to assess trends of association between sleep and suicide attempts, controlling for depressive symptoms, health behaviors, and bullying. Survey year was treated as a continuous variable and was used to examine the linear trend. Clustering effect and sampling weights were further adjusted to ensure that the sample was nationally representative and the statistical inferences were appropriate. Results: Over time, short sleep duration was consistently associated with greater risks of 1 (Relative Risk Ratio [RRRadj.] = 2.72), 2-3 (RRRadj = 2.93), and 4+ suicide attempts (RRRadj = 5.73). Long sleep duration was also found to increase the risk of 4+ attempts (RRRadj = 2.52). Such associations have been strengthened over time. Trends were generally similar by race/ethnicity; racial/ethnic minorities had greater risks of suicide attempts compared to white adolescents. Females were more likely to have 1 (RRRadj = 1.45) and 2-3 (RRRadj = 1.88) attempts, but less likely to have 4+ attempts (RRRadj = 0.71) than males. Conclusions: Sleep quality is complex, and this study suggests variation above or below recommended sleep duration is associated with emerging changes in incidence of suicide attempts.

**Poster 21-03****Addressing Stress Reduction, Sleep, and Depressive Symptoms in Adolescents: Feasibility of a Trust-building Intervention**

Hardin, H.; Bender, Anna E.; McVoy, Molly; Moore, Shirley M.

Purpose: Depressive symptoms are on the rise among adolescents in the United States. The most effective approaches to adolescent behavior change, such as stress reduction and sleep, involve parents. Trust is a key factor in relationships; therefore, family-based interventions with trust-building components may be key to addressing stress reduction and sleep to reduce depressive symptoms in adolescents. Therefore, our purpose was to assess the initial feasibility, acceptability, and safety of the novel Trust-building depressive symptom Self-management Together (TRUST) intervention among adolescents with moderate depressive symptoms. Methods: Adolescents aged 14-17 years with moderate depressive symptoms along with a parent were recruited for an exploratory, pilot randomized controlled trial. The experimental intervention, TRUST, included adolescent/parent trust-building exercises and evidence-based stress reduction, and sleep training. Feasibility of the intervention was assessed using exit surveys with participants and percentage rates of recruitment, screening, enrollment, and retention. Acceptability of the TRUST intervention was assessed using exit surveys of adolescents and parents. Safety was evaluated using adverse event reports completed by the research team and intervention evaluation forms completed by participants. Results: Eighteen adolescents and a parent were enrolled in the study. Among families indicating interest in the

study, 31% completed screening and 70% of those screened met criteria for enrollment. Among families that enrolled in the study, 63% completed the intervention. In weekly and final intervention evaluations, participants found the intervention groups to be acceptable and made positive comments about the content. Remarks made in the exit surveys and evaluation forms suggested guidance for intervention refinement, which included greater attention to practicing stress reduction techniques. No adverse events were reported during the trial. Conclusions: Preliminary evidence supported the feasibility, acceptability, and safety of a trust-building intervention for adolescent stress reduction, sleep, and depressive symptom in adolescents with moderate depressive symptoms.

**Poster 21-12****Discrimination and Mental Health Experiences Among US-born Adolescents of Undocumented Latino Immigrant Parents**

Munoz, Alex; Obasi, Ezemenari, M.; Grzywacz, Joseph; Granger, Douglas; Hernandez, Daphne, C.

Purpose: Although it is expected that discrimination places undocumented immigrants at risk for poor mental health, their US-born children may also be at risk. Discrimination-related stressors have increased among the Latino community, yet the absence of direct assessment of parental documentation status poses as a barrier to understanding the mental health disparities of Latino adolescents. This oversight is particularly pernicious considering that Latino children are the fastest-growing child immigrant population. The purpose of this study was to determine the potential mental health vulnerabilities of US-born Latino adolescents with undocumented parents

regarding discrimination experiences. Methods: Self-identifying Latino immigrant parents and their US-born youth (12-16 years) participated as part of a larger feasibility study examining salivary cortisol among US-born adolescent-immigrant parent dyads in Houston, TX (September 2019-January 2020). Parents self-reported their documentation status. Youth self-reported discriminating experiences based on racism, bullying, and disrespect at school (7-item Hispanic Stress Inventory-Adolescent Discrimination Stress subscale), health care discrimination (7-item Health Care Discrimination), depression (8-item Patient Health Questionnaire Adolescents), and anxiety (7-item General Anxiety Disorder Screener-7 Adolescents). Descriptive statistics and Pearson correlations between the discrimination and mental health variables were conducted. Results: Nineteen US-born adolescents of undocumented parents participated [Adolescent: Mean age=14 (SD age=0.40), 37% female]. On average, discrimination (Mean=8.32, SD=.86), health care discrimination (Mean=2.37, SD=.61), depression (Mean=5.26, SD=1.08), and anxiety (Mean=5.05, SD=.91) were reported. A strong correlation was observed between discrimination and depression ( $r=.55, p<.05$ ). Strong correlations were also observed among health care discrimination and depression ( $r=.54, p<.05$ ) and health care discrimination and anxiety ( $r=.52, p<.05$ ). Correlations were significantly prevalent among boys [discrimination-depression ( $r=.63, p<.05$ ); health care discrimination-depression ( $r=.65, p<.05$ ), and -anxiety ( $r=.81, p<.05$ )]. Conclusions: Despite their legal status, US-born Latino adolescents are at risk of experiencing depression and anxiety based on discriminating experiences centered on racism, bullying, and disrespect, in addition to health care discrimination.

### **Poster 21-44**

#### **The Role of Parental Acceptance on Body Esteem Among U.S. College Students**

Wang, Jingyi; Brown, Andrew; Luo, Juhua; Chow, Angela

Purpose: About two-thirds of college women and a third of college men are dissatisfied with their body. Low body esteem strongly predicts the development of eating disorders, a condition with the highest mortality rate of all mental illnesses. Parental acceptance is positively associated with female body satisfaction. Despite approximately one third of men being dissatisfied with their bodies, previous research has overlooked the effect of parental acceptance on body satisfaction in males. Therefore, this study examines the effect of perceived parental acceptance on body esteem for both sexes. Methods: A sample of 532 college students (white= 77%; female=325) at a midwestern university were surveyed. Participants' body esteem, self-esteem, and perceived parental acceptance were assessed by the Body Esteem Scale-Revised, Rosenberg's Self-Esteem Scale, and the 30-item Children's Report of Parent Behavior Inventory subscale, respectively. Hierarchical linear regressions were conducted to examine the relationship between perceived parental acceptance and body esteem. Bootstrapping techniques were utilized to explore the mediation role of self-esteem in this relationship. Results: For females, perceived maternal acceptance predicted all body esteem subdimensions, and self-esteem fully mediated these associations. Conversely, maternal acceptance was not significantly associated with any subdimension of male body esteem. For males, perceived paternal acceptance was significantly associated with all body esteem subdimensions, and the associations remained significant after controlling for the effects of self-esteem. Notably, paternal

acceptance was not significantly associated with any subdimension of female body esteem. Conclusions: Perceived parental acceptance is positively related to body esteem of both sexes, but the effects of parental acceptance on body esteem were only significant in same-sex parent-child dyads, not in opposite-sex dyads. Self-esteem fully mediated the effect of perceived maternal acceptance on female body esteem subdimensions, but it only partially mediated the association between perceived paternal acceptance and the male body esteem subdimensions.

### **Poster L21-12**

#### **Differential Effects of Family, Peer, and Romantic Relationships on Adolescent Mental Health**

Story, AlliGrace; Gardner, Antonio, J.; Hunt, Barry, P.

Purpose: Research has shown that 49.5% of adolescents have experienced a mental health disorder and that many mental health disorders onset during adolescence. African American adolescents may be at higher risk for more severe mental health problems than the white population and may also be less likely to use mental health services. There is limited research addressing effects of family, peer, and romantic-partner social support on adolescent mental health. The purpose of this study was to assess whether these types of relationships differ in their effect on

adolescent mental health using data collected through the National Survey of American Life – Adolescent Supplement (NSAL-A). Methods: This study examined psychological disorders along with risk and protective factors among 1170 African American and Caribbean black adolescents aged 13-17 years. Data were collected through face-to-face and telephone interviews. A chi-square test of independence was conducted to assess relationships between family, peer, and romantic partner support variables and adolescent mental health. Significance was set *a priori* at .05 for statistical analyses. Results: Results indicated that aspects of family, peer, and romantic partner social support were related to twelve-month prevalence of any psychological disorder in adolescents. Twenty-three family social support variables were significantly related to adolescent mental health. Four of the peer social support and two romantic partner social support variables were significantly related to adolescent mental health. Conclusions: Results of the study support past findings that have shown social support to be an important factor in adolescent mental health. Results also suggest that family, peer, and romantic partner social support may have different relationships with adolescent mental health problems. Most notably, family social support seemed to have a stronger relationship with twelve-month prevalence of any psychological disorder in adolescents than peer or romantic partner social support.

**March 23, 2021 3:00PM EST**

***Physical Activity***

**Poster 20-25**

**Predicting Beneficial Exercise Behavior Among College Students in Recovery: A Social Network Analysis**

Patterson, Megan S.; Russell, Alex M.; Spadine, Mandy N.; Heinrich, Katie M.; Prochnow, Tyler

***AAHB Research Scholars Mentoring Program***

Purpose: Exercise is especially beneficial for individuals recovering from addiction. In addition to improved physical, emotional, and mental health, exercise is related to longer sobriety for addiction recovery. Because college students have high addiction risk, it is important to understand individual and social factors related to exercise behaviors for students in recovery. Social network analysis (SNA) is a method that tests how individual attributes and within-group relationships influence targeted outcomes. The purpose of this study was to use SNA to understand exercise behaviors within a group of college students in addiction recovery. Methods: Using SNA, this study assessed the relationship between exercise and sobriety, mental health variables, and social connections among a network of students involved in a campus recovery community (CRC). Exercise scores were determined by the Godin Leisure Time Exercise Questionnaire (Godin LTEQ), where scoring 24 or higher indicated engaging in beneficial levels of exercise. Results: Logistic regression analysis revealed a significant model ( $R^2=.598$ ,  $p<.0001$ ) predicting whether CRC members scored a 24 or higher on the Godin LTEQ. Length of sobriety (OR=1.240,  $p=.020$ ),

higher stress (OR=1.389,  $p=.024$ ), lower depression (OR=.789,  $p=.021$ ), having fewer network ties (OR=.448  $p=.019$ ), and being connected directly to others scoring a 24 or higher on the Godin LTEQ (OR=7.100,  $p=.037$ ) were significant predictor variables in the model. Conclusions: This study provides evidence of a relationship between sobriety, mental health, and exercise, as well as interpersonal influences on exercise behaviors. Incorporating exercise opportunities as part of CRC programming may help students stay sober. These results suggest that “who” someone is connected to matters more for exercise than number of network connections. Future research is needed to determine directionality of these variables, as well as replicability across other networks.

**Poster 21-22**

**Fostering Community in Behavioral Research: Case Study of a High Intensity Functional Training Intervention**

Heinrich, Katie M.; Kurtz, Brady K.; Patterson, Meg; Barry, Adam; Crawford, Derek A.

***AAHB Research Scholars Mentoring Program***

Purpose: High dropout (>50%) from exercise programs is oftentimes due to perceived lack of “fit” or feeling unwelcome. Developing a sense of community (SOC; i.e., belongingness, mattering to others, commitment to togetherness) may facilitate adherence. This study examined effects of fostering SOC within a high-intensity functional training (HIFT) intervention. Methods: Participants ( $N=30$ ; 57% female; age=36.7±4.5 years) were recruited for an 11-week randomized controlled study to examine effects of manipulating training intensity by heart rate variability (HRV).

Participants were randomized to intervention (HIFT+HRV) or comparison (HIFT) groups, yet exercised together five days/week during 60-minute morning, early afternoon, or evening sessions. Daily workouts systematically varied and were individually modified as needed. Coaches fostered community through supportive and encouraging positive interactions and frequent social media communications. An online post-intervention survey included an adapted SOC in Sport scale and eight group dynamics questions. Answers ranged from 1="strongly disagree" to 5="strongly agree." Results: All participants adhered except one (i.e., non-study-related emergency dental surgery) and 28 completed a survey. The 14 SOC items and 5 subscales were all rated between "agree" to "strongly agree." Having social spaces for interaction was rated highest ( $4.93 \pm 0.27$ ), while sharing common interests was rated lowest ( $4.51 \pm 0.68$ ). Similarly, the group dynamics item 'wanting others to succeed' was rated highest ( $4.85 \pm 0.36$ ), and 'working out with a group made me excited to come every day' lowest ( $4.30 \pm 0.72$ ). One participant stated, "I loved the supportive group environment! Everyone started out at a different place, but...I created a bond with the people I was in class with daily." Conclusions: Intentionally fostering SOC was associated with an exceptionally high adherence rate. Future intervention studies may consider strategies to foster SOC among study participants (e.g., group-based training opportunities, social media communication, and creating interactive social spaces) to decrease exercise attrition.

### **Poster 21-28**

#### **Interactions Between Child Sex and Maternal Perceptions of Physical Activity Space Availability: Implications for Physical Activity and Screen Time Among Mexican-heritage (MH) Children in Texas Border Colonias**

Prickett, Drew; Prochnow, Tyler; Gomez, Luis; Sharkey, Joseph; Umstattd Meyer, M. Renee

#### ***AAHB Research Scholars Mentoring Program***

Purpose: Child physical activity (PA) has many mental and physical health benefits; however, girls and Latinx children are less physically active. Mexican-heritage (MH) children residing in functionally rural colonias face unique barriers to finding places to play. This study examined relationships between child sex and mothers' perceptions of PA places regarding PA and screen time (ST) of MH children residing in colonias along the Texas-Mexico border. Methods: Promotora-researchers recruited mothers with a child age 8-10 years old ( $n=335$ ) from colonias in Hidalgo County, Texas. Mothers reported child's hours of PA and ST per day during the week and weekend separately. Mothers were also asked if there were places for their child to be physically active. Two-way ANCOVAs were run to determine significant differences in mother-reported child PA and ST based on presence of PA places and child sex, controlling for demographics.

Results: Only 46.0% of mothers ( $n=159$ ) reported places for their child to be physically active; with no significant difference based on sex (boys=50.0%; girls=41.4%). There was a statistically significant two-way interaction between child sex and presence of a PA place for weekday PA ( $p=.04$ , partial  $\eta^2=.05$ ) and ST ( $p=.03$ , partial  $\eta^2=.03$ ). Having a safe place to play (or perception of this) was differentially beneficial for girls in both cases. There was a significant positive main effect of PA places for weekend PA ( $p=.01$ , partial  $\eta^2=.06$ ). There were no significant main or interaction effects associated with weekend ST. Conclusions: Findings suggest a need to increase perceived and/or actual access to PA places in colonia communities. When developing programming and policy to increase child PA, it is important to consider cultural perceptions of play places and implications of child's sex. Changes to built environments or formal programs geared towards girls, during the week, may address PA and ST disparities.

### **Poster 21-46**

#### **Translating Research to Practice: Statewide Dissemination of an Email Walking Program Delivered Through Cooperative Extension**

Richards, Elizabeth A.; Woodcox, Stephanie

Purpose: Changing health behaviors should focus on strategies that are effective with wide reach that foster maintenance. Effective dissemination of evidenced-based physical activity interventions require organizational commitment to ensure appropriate reach and implementation. One such network that could facilitate this dissemination is the Cooperative Extension System. Methods: Using the RE-AIM framework, we evaluated the statewide dissemination of an evidence-based, email-delivered physical activity

intervention implemented through Cooperative Extension. The Get WalkIN' program, comprised of 16 email messages sent over 12 weeks, targets social cognitive theory constructs of self-efficacy, goal-setting, self-monitoring, and social support. Program reach, effectiveness, adoption, implementation, and maintenance were assessed with quantitative measures in a pre-post design. Results:

- Reach: Between August 2017 to May 2019, 36 Extension educators recruited 560 participants across 58 counties.
- Effectiveness: Program effectiveness demonstrated an increase of  $77.1 \pm 49.9$  minutes in weekly walking post-program, which was maintained three months post-program.
- Adoption: The adoption rate for this program was 42.4%, 36 out of 85 educators implemented Get WalkIN' at least once during the two-year dissemination period.
- Implementation: Before county-level implementation, educators completed a protocol form agreeing to deliver Get WalkIN' in its entirety, including all 16-email messages and the 3-month maintenance email. The lead researcher monitored program start and end dates for each county and contacted educators to track response rates.
- Maintenance: The maintenance rate was 30.6%, 11 out of 36 Extension educators who implemented Get WalkIN' during the dissemination period conducted the program at least twice.

Conclusions: Dissemination findings suggest Get WalkIN' is effective in increasing physical activity and has a high program adoption rate among Extension. The flexibility of an email-based program is attractive for educators to deliver. Capturing data on the implementation process was challenging. Overall, results indicate success in program adoption and maintenance with

further efforts needed to improve follow-up data collection from participants.

### **Poster L21-10**

#### **Assessing the Social Environment Relative to Preference for and Tolerance of Exercise Intensity Within a Group-based High-intensity Functional Training Program**

Patterson, Megan S.; Heinrich, Katie M.; Prochnow, Tyler; Graves-Boswell, T.; Spadine, Mandy N.

#### ***AAHB Research Scholars Mentoring Program***

Purpose: High-intensity functional training (HIFT), an exercise modality focused on functional movements completed at high intensities, often yields health outcomes superior to repetitive aerobic workouts in less time. Preference for and tolerance of high-intensity exercise are defined as a predisposition to select high-intensity exercise when given the opportunity [preference], and one's ability to continue exercising at high-intensity beyond the point of discomfort [tolerance]. This study explored whether preference and tolerance scores were associated with the social environment within a group of HIFT-exercisers. Methods: Members of a group-based HIFT gym ( $n=108$ ; 68.4% response rate;  $33.07\pm 9.52$  years; 65.0% female; 87.8% white) completed online social network surveys assessing social ties between/among gym

members. Linear network autocorrelation modeling (LNAM) determined associations between individuals' preference and tolerance scores and that of their social ties. Exponential random graph modeling (ERGM) assessed factors associated with the presence of social ties between members.

Results: LNAMs (preference  $R^2=0.18$ ,  $p<.001$ ; tolerance  $R^2=0.23$ ,  $p<.001$ ) suggest members reported similar preference ( $\beta=.07$ ,  $SE=.02$ ) and tolerance ( $\beta=.07$ ,  $SE=.02$ ) scores to those of their social ties. ERGMs revealed social connections existed between members who had similar preference ( $PE=.03$ ,  $SE=.01$ ) and tolerance scores ( $PE=.06$ ,  $SE=.01$ ). Members with higher preference scores ( $PE=.03$ ,  $SE=.01$ ) sent more social ties to others, while those with higher tolerance scores ( $PE=0.03$ ,  $SE=.01$ ) received more social ties from others. Conclusions: This study provides evidence for a relationship between the social environment and preference and tolerance scores within HIFT-exercisers. This deviates from previous work, which defines preference and tolerance as fixed/dispositional characteristics among exercisers. Findings suggests the possibility that preference and tolerance scores might manifest differently in group-settings as compared to individual exercise settings. Longitudinal research could help solidify whether people select others based on their preference and tolerance dispositions, or if the social environment changes preference and tolerance for HIFT-exercisers.



**March 23, 2021 3:00PM EST**

***Vaccines & Prevention***

**Poster 20-03**

**Arguments in Favor of and Against the HPV Vaccine School-entry Requirement in Puerto Rico: A Content Analysis of Newspaper Media**

Vazquez-Otero, Coralia; Martinez Tyson, Dina; Beckstead, Jason; Lockhart, Elizabeth; Vamos, Cheryl; Romero-Daza, Nancy; Daley, Ellen

Purpose: Support from different stakeholders and public involvement are necessary for policy adoption. In 2018, Puerto Rico's (PR) DOH announced that the HPV vaccine would be required for school entrance. This study examined the arguments in favor of and against this requirement. Methods: Content analysis methodology was used to review the two most circulated Puerto Rican newspapers. Articles published between 1/1/2015 and 7/31/2018 that contained the Spanish terms for "HPV" and "human papillomavirus" were included. Data were summarized using descriptive statistics. Articles were reviewed qualitatively using applied thematic analysis. Results: A total of 286 news articles included the key terms. Thirty-four articles mentioned the HPV vaccine school-entry requirement, and most were published in 2017. From those, 20 (58.8%) presented arguments in favor, five (14.7%) presented arguments against, and five (14.7%) presented both arguments. Four (11.8%) articles only mentioned the existence of the requirement ( $n=2$ ) or the DOH requirement announcement ( $n=2$ ). Arguments in favor of the requirement included the need for cancer prevention, concerns about current high cervical cancer incidence, and the increasing incidence of

oropharyngeal cancer. Arguments against included concerns related to side effects of the HPV vaccine, the sexual nature of HPV transmission, and parental right to decide if their child should be vaccinated. Conclusions: Understanding stakeholders' reasons to support or not support an HPV vaccine school-entry requirement is important for policy processes to be successful. Arguments against the HPV vaccine school-entry requirement were about the HPV vaccine and the virus, as well as parental autonomy. Arguments in favor highlighted the need for cancer prevention and control. Mass education efforts must continue to change the overall HPV vaccine narrative to create behavioral change. Thus, cancer-prevention messages should be crafted to raise awareness, educate, and gain support among parents and other stakeholders towards this type of population-based cancer prevention strategy.

**Poster 20-17**

**Does Scientific Publication Inform Public Discourse? A Case Study Observing Social Media Engagement Around Vaccinations**

Nelon, Jordan L.; Moscarelli, Michael; Stupka, Payton; Sumners, Christina; Uselton, Taylor; Patterson, Megan S.

Purpose: The purpose of this study was to explore whether online public discourse about vaccinations changes before and after major scientific publications, and to measure what is related to social engagement around vaccinations on Twitter. Methods: In September 2018, two weeks' worth of Twitter posts ( $n=2,919$ ) discussing vaccinations were collected, coded, and analyzed before and after two major 2014 scientific publications. Linear regression analyses examined variables related to engagement with vaccination-related Tweets pre- and

post-publication. Results: Of the 2,919 Tweets included, the majority occurred after publication (54.8%) and contained pro-vaccine rhetoric (60.5%) compared to an anti-vaccine (13.0%) or a neutral bias (26.5%). Anti-vaccine related Tweets decreased by over 25% after scientific publications, while pro-vaccine Tweets increased by 16.6%. Verification status, number of followers, type of cited source, and bias were assessed as independent variables in the model to predict number of likes and were subdivided by time period. The regression model statistically significantly explained 36.5% of the variance in likes ( $F(6)=125.421, p<.0001$ ) before the scientific publication and explained 19% of the variance after ( $F(6)=63.37, p<.0001$ ). The same variables were used to predict the number of retweets by time period. The regression model statistically significantly explained 23.3% of the variance in retweets ( $F(6)=67.701, p<.0001$ ) before the scientific publication and explained 30.0% of the variance after ( $F(6)=115.193, p<.0001$ ). Verification status and number of followers were the strongest predictors of Twitter engagement (i.e., likes and retweets). Discussion: Findings indicate that scientific publications might influence the public health information people share online, and how people engage with online content. In a time when false information is easily spread online, this study suggests the need for continual scientific publication on “hot topics,” and urges researchers to partner with influential individuals on social media to disseminate effective, evidence-based, and user-friendly public health information to the public.

### **Poster 21-09**

#### **Correlates of HPV Vaccination Intentions Among Adults Ages 27-45 Years Old in the U.S.**

Thompson, Erika L.; Garg, Ashvita; Galvin, Annalynn M.; Moore, Jonathan D.; Kasting, Monica L.; Wheldon, Christopher W.

Purpose: Recently, the HPV vaccine was recommended for 27-45 year olds in the U.S. based on a shared clinical decision between the patient and their provider. This study examined knowledge, attitudes, and beliefs of adults 27-45 years old and the association with both the likelihood of asking a healthcare provider about the HPV vaccine and the likelihood of getting the HPV vaccine. Methods: We conducted a cross-sectional survey of U.S. adults aged 27-45 years from April-May 2020. Primary outcomes were likelihood of asking their provider about the HPV vaccine and likelihood of getting the HPV vaccine. Demographic variables, knowledge, attitudes, and beliefs (perceived effectiveness, likelihood of benefit) were examined as covariates. Adjusted models were estimated for each outcome variable with a Poisson distribution and log function to improve model fit and convergence. Results: Of the 706 respondents, 691 had heard of HPV and were included in the analyses. More than half (55.7%) were likely to ask their provider about the HPV vaccine, but less than half (42.9%) were likely to get the HPV vaccine. In adjusted models, likelihood of asking their provider about the HPV vaccine was only significantly associated with perceived

likelihood of benefitting from the vaccine (aOR=2.45; 95% CI=1.69-3.57). However, likelihood of receiving the vaccine was associated with positive attitudes (aOR=1.04; 95% CI=1.01-1.07), perceived effectiveness against HPV infection (aOR=4.03; 95% CI=1.01-13.53), and perceived likelihood of benefitting from the vaccine (aOR=4.31; 95% CI=2.64-7.03).

Conclusions: Our findings suggest increasing positive attitudes, perceived effectiveness against infection, and perceived likelihood of benefitting from the vaccination are important factors to address when facilitating a shared clinical decision between patients and providers for HPV vaccination. Understanding factors associated with likelihood of discussing and receiving the HPV vaccine among people aged 27-45 years is important to successfully implement the guidelines for shared clinical decision-making.

### **Poster 21-17**

#### **Factors Associated with Cervical Cancer Screening Adherence with mHealth App Use Among Females in the U.S.: Is There an Association Between these Health Behaviors?**

Sanaullah, Syeda F.; Kenjura, Paige; Trautmann, Daniel; Schichl, Kyle; Wigfall, Lisa T.

Purpose: Cervical cancer is caused by human papillomavirus (HPV). Mobile health applications (mHealth apps) can increase HPV knowledge and cervical cancer screening, which will decrease incidence and mortality rates. A Pap test is recommended triennially for females ages 21-65 years. Our

objective is to describe factors associated with and the relationship between adherence and mHealth app use. Methods: This cross-sectional study used 2019 Health Information National Trends Survey (HINTS 5, Cycle 3) data. Chi-square tests ( $\chi^2$ ) examined factors associated with adherence and mHealth app use. Weighted percentages and unweighted frequencies are reported. Logistic regression analyses examined the weighted adjusted odds ratio (AOR) of mHealth app use among females who were adherent, controlling for HPV knowledge, race/ethnicity, marital status, and family type. Results: Our nationally-representative sample included 3,008 females ages 21-65 years. Most females (70.8%;  $n=2,130/3,008$ ) were adherent, of which 67.1% ( $n=1,356/2,130$ ) used mHealth apps ( $\chi^2:p<0.001$ ). HPV knowledge was low (Mean=2.0 $\pm$ 0.03SD, score range:0-5). Among females with high HPV knowledge (score=5), 72.6% were adherent ( $n=374/495$ ,  $\chi^2:p=0.0013$ ), and 70.3% ( $n=519/799$ ) used mHealth apps ( $\chi^2:p<0.001$ ). Smartphone/tablet owners who did not download or use mHealth apps were less likely to be adherent than those with a basic cell phone or no device (AOR=0.84, 95%CI:0.5-1.4). Similarly, those who downloaded (AOR=1.7, 95%CI:1.0-2.9) or used mHealth apps (AOR=1.7, 95%CI:1.1-2.6) were more likely to be adherent. Conclusions: Behavioral interventions can decrease cervical cancer incidence and death. While mHealth behavioral interventions show promise for reducing the burden of cervical cancer, barriers must be factored into app design and program implementation.

### **Poster 21-35**

#### **Quality Over Quantity: Perceptions of Human Papillomavirus Vaccine Information on Social Media and Associations with Adult and Child Vaccination Intention**

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

Purpose: Human Papillomavirus (HPV) vaccination is recommended for 11-12-year-olds, and available for catch-up until age 26. Recent guideline changes recommend the HPV vaccine for adults aged 27-45 with a shared clinical decision with their healthcare provider. Given the rise of social media as a vaccine information source, the frequency of HPV vaccine posts seen and the associations between post perceptions and intention to vaccinate remain unknown. This study assesses HPV vaccination intention of adolescents and 27-45-year-old adults with exposure to HPV vaccine information on social media and perceptions toward HPV vaccine social media information. Methods: Participants (51% women), aged 27-45 years, were surveyed online ( $n=691$ ). Outcomes included HPV vaccination intention (intend/do not intend) for themselves and for their adolescents (among participants with unvaccinated adolescents,  $n=223$ ). Adjusted odds ratios were calculated for social media information perceptions (e.g., credibility, polarity) and both outcomes, adjusting for demographic covariates. Results: Approximately 55% of participants intended to vaccinate themselves, and 44% with eligible adolescents intended to vaccinate their adolescent. Frequency of seeing HPV vaccination on social media was not significant when adjusting for other social media perception variables. Seeing mostly negative/mixed information about the HPV vaccine on social media was associated with

lower odds of intention to vaccinate themselves (aOR=0.34, 95%CI 0.15-0.79) and their adolescent (aOR=0.34, 95%CI 0.21-0.53). Believing that social media HPV vaccine information is not credible had lower odds of vaccine intention for adults (aOR=0.17, 95%CI 0.07-0.41) and teens (aOR=0.16, 95%CI 0.10-0.29). For adults, the Internet as a source of HPV vaccine information was positively associated with vaccination intention (aOR=1.76, 95%CI 1.10-2.84). Conclusions: Although frequency of seeing HPV vaccination on social media was not associated with vaccination intention outcomes, findings support developing social media strategies that increase the dissemination of credible information in favor of HPV vaccination, which may promote HPV vaccination uptake.

### **Poster 21-49**

#### **What Are the Implementation Factors to Consider for an HPV Self-sampling Intervention?**

Garg, Ashvita; Galvin, Annalynn, M.; Griner, Stacey, B.; Rosberger, Zeev; Daley, Ellen, M.; Thompson, Erika, L.

Purpose: With the emergence of primary HPV testing, self-sampling for HPV provides another option for cervical cancer screening, especially among hard-to-reach populations. This study evaluated the association between the implementation factors for HPV self-sampling and women's willingness to have at-home HPV self-sampling. Methods: We conducted a cross-sectional study in 2018 among U.S. women ages 30-65 years, with no history of hysterectomy ( $n=816$ ). The outcome variable was willingness to have at-home HPV self-sampling test (yes/no). Primary predictor variables included preferred source for HPV self-sampling information, who would make the decision to have self-sampling, willingness to pay for

self-sampling, the preferred method of receiving the self-sampling kit, and preferred method of sending the self-sampling kit. Adjusted logistic regression identified variables associated with willingness to have at-home HPV self-sampling. Results: Half of participants (56%) were willing to have at-home HPV self-sampling instead of a physician-collected sample in a clinic. Participants who preferred receiving information from healthcare providers (OR=2.64; 95%CI 1.54, 4.52) or who preferred receiving information from media or other sources (OR=2.30; 95%CI 1.51, 3.48) had higher odds for willingness toward HPV self-sampling. Participants who did not want to pay for self-sampling (OR=0.21; 95%CI 0.14, 0.32) or who did not know if they would pay for self-sampling (OR=0.35; 95%CI 0.22, 0.54) had lower odds for willingness toward HPV self-sampling. Participants who did not know which method they preferred for receiving a self-sampling kit (OR=0.15, 95%CI 0.07, 0.31) or preferred delivering the sample to the lab themselves (OR=0.59; 95%CI 0.36, 0.96) had lower odds for willingness to self-sample compared to participants who preferred the mail. Conclusions: Given the importance of cervical cancer screening and the benefits of HPV self-sampling, especially among hard-to-reach populations, understanding the preferences of women regarding the implementation of HPV self-sampling can help ensure improved uptake for this screening method.

#### **Poster L21-14**

##### **The Association Between Testicular Self-examination and Stages of Testicular Cancer Diagnosis**

Rovito, Michael, J.; Adams, Wesley, B.; Craycraft, Mike; Gooljar, Chayna; Maresca, Michael; Guelmes, Janet; Gallelli, Alexa

Purpose: Testicular cancer (TC) is the most prevalent tumor diagnosed in men 15-40 years of age. Survivorship and quality of life dramatically decrease with late-stage diagnosis. Testicular self-examination (TSE) is a diagnostic method used to discover early-stage tumor incidence. This study examines the relationship between practicing TSE and stage of diagnosis for testicular cancer survivors. Methods: A cross-sectional study design employed a 40-item survey among TC survivors ( $n=619$ ). Bivariate analyses consisted of Spearman Rho correlations of all primary variables with stage diagnosis of TC. Multivariate analysis employed an ordered logistic regression to determine stage diagnosis predictors. Results: 'Regular' TSE practice significantly related with awareness ( $r=0.4533$ ) and knowledge of ( $r=0.4866$ ) TSE, confidence performing TSE ( $r=0.4961$ ), and feeling shape/feel differences of the testicle prior to diagnosis ( $r=0.2115$ ). Factors that had a statistically significant negative association with later-stage diagnosis included awareness ( $r=-0.1180$ ) and knowledge of ( $r=-0.1586$ ) TSE, confidence performing TSE ( $r=-0.1138$ ), and feeling shape/feel differences of the testicle prior to diagnosis ( $r=-0.2938$ ), among others. Regular TSE practice significantly predicted decreased odds of later-stage diagnosis within the sample subset reporting delay (OR=0.1628;  $p<0.05$ ); however, there was no significant relationship between regular TSE practice and stage diagnosis within the other model variations. Conclusions: This exploratory analysis aimed to provide baseline evidence of the possible association between the practice of TSE and the stage of TC diagnosis, therefore making an indirect claim that TSE has the potential to improve quality of life and decreased TC mortality, particularly among AYAs.

**March 23, 2021 3:30PM EST**

***Programs & Evaluation***

**Poster 20-02**

**An Innovative Market Research Method for the Promotion of a Behavioral Change Program Targeting University Students**

Bleck, Jennifer; Haywood, Christine; French, Kaitlyn; DeBate, Rita

**Purpose:** The University of South Florida's Success & Wellness Coaching program guides students in identifying and attaining self-determined health and wellness goals. The program aims to improve adjustment to college, specifically academic, social, and emotional adjustment, as well as increase confidence, motivation, and readiness towards behavior change. As wellness coaching is a relatively new field, without prior knowledge, students often do not understand exactly what the program is and how it differs from other health and wellness services on campus. Thus, a key aspect for the dissemination and growth of this program is marketing—specifically, marketing the program to students in an approachable way that is both informative and inviting. This study aimed to develop promotional materials for the coaching program using innovative market research techniques. **Methods:** Students were recruited through campus listservs to complete an online market research survey. The survey quizzed their knowledge of coaching and then provided a formal definition of coaching. Students were subsequently presented with images and slogans and asked to match them to develop advertisements. The survey resulted in student-developed promotional materials as well as directly promoted the program to the participants. **Results:** In total 2,192 students completed the survey. The survey resulted in the development of four

advertisements that were used throughout the following semester. During the Fall semester, when staff-developed advertisements were used, there were a total of 165 intake forms completed by students interested in setting up a coaching session. During the following Spring semester, when the student-developed materials were used, the number of completed intakes increased to 337 students. **Conclusions:** This innovative marketing technique of having students develop their own promotional materials was extremely effective. Moreover, the survey itself served as a marketing tool. Overall, this technique increased program utilization and can serve as a guiding method for program marketing.

**Poster 20-04**

**Assessing Associations Between Viewership and Perceptions of Health Themes Among Audience Members of a West African Serial TV Drama C'est La Vie (CLV)**

Glik, Deborah; Massey, Philip; Kearney, Matthew; Rideau, Alex; Niang, Cheikh

**Purpose:** We assessed how exposure to a French West Africa produced serial television program, C'est la Vie, with explicit health storylines is associated with beliefs and perceptions among viewers compared to non-viewers. **Methods:** We used tablet technologies at local markets in 4 geographic regions of Senegal to collect intercept surveys in late 2017. Data collection with graduate students from the University in Dakar comprised research training workshops to pretest and field questionnaires. Students also learned descriptive and bivariate survey analysis techniques. **Results:** Among all respondents ( $n=1494$ ), media utilization source varied by mean age, older respondents using radio (37 years) and television (35 years), and

younger respondents using cellphones (29 years) and Internet (29 years). CLV exposure also varied as 334 had heard of CLV (22.4%) and 136 had watched CLV (9.1%). More women than men had heard of and watched CLV ( $p < 0.001$ ), and audience members were significantly younger (30 years vs. 33 years,  $p = 0.0086$ ). Compared to non-viewers, viewers were more likely to have heard of the morning after pill ( $p < 0.001$ ), know about ( $p = 0.001$ ) and been tested for an STI ( $p = 0.014$ ), and been tested for HIV ( $p < 0.001$ ). Viewers were more likely to use Facebook and WhatsApp ( $p < 0.001$ ). Conclusions: CLV engages younger and more female audiences, a key target for family planning and reproductive health topics. Defining audience characteristics is an important tool to cultivate audiences as well as to identify opportunities to expand audience share and communicate about important health topics. Graduate students from Universite Cheikh Anta Diop learned the basics of survey research as well in this project.

### **Poster 20-10**

#### **Civic Engagement and Youth Development: A Two-year Evaluation of the Next Generation Community Leaders Initiative in New Jersey**

Lu, Wenhua; Danley, Stephen; Mitsdarffer, Mary; White, Samantha; Perry, Anetha; Razi, Lili; Williams, Curtis; Kumari, Rashmi; Craig, Peggy Jean; McCaffrey, Matthew

Purpose: Civic engagement programs empower youths to develop their capacity to become agents of positive change in their communities. With an aim to improve the culture of health in New Jersey, the Next Generation Community Leaders (NGCL) initiative funded 11 underserved communities to develop teams of youth leaders to design and implement community summer

health projects. This study provides a two-year evaluation of the NGCL initiative in improving positive youth development. Methods: Adult coaches from 11 NGOs and community health organizations across New Jersey recruited youths from their respective communities. At baseline and post-programming, youths were assessed on their civic engagement attitudes and behaviors, health literacy, and community health knowledge. Throughout the year-long programming, youths were further surveyed about their perceived impact of the initiative on improving different aspects of their personal development at three different time points. Data for youths who participated in the 2017 and 2018 NGCL initiative were pooled and analyzed. Matched pair t-test and growth curve modeling were used for data analysis. Results: Altogether 214 youths participated in the NGCL initiative. Most youths (69%) were aged 16 to 18 and over 70% were Hispanics or blacks. At post-programming, significant increase in youths' community health knowledge ( $p < 0.05$ ) was observed. Throughout the programming, longitudinal increase in youths' cognitive skills ( $p < 0.001$ ), social skills ( $p < 0.05$ ), leadership skills ( $p < 0.001$ ), and identify exploration ( $p < 0.05$ ) were noted. Youths developed and implemented a total of 24 community health projects, including 10 infrastructure improvement projects, 7 summer feeding projects, and 7 health education/promotion projects. Conclusions: Evaluation revealed positive impact of the NGCL initiative in improving youths' personal development. Public health practitioners can use civic engagement as a promising approach to both encouraging youths to become leaders in their communities and having youths impact the health of their communities.

**Poster 20-12****Comparing the Internal Consistency of Psychological Measurements Among People with Different Education and Health Literacy Levels**

Chen, Xuewei; Schofield, Elizabeth; Orom, Heather; Hay, Jennifer; Kiviniemi, Marc; Waters, Erika

**Purpose:** The purpose of this study was to examine and compare the internal consistency of several psychological scales related to risk perceptions in groups with adequate versus limited health literacy and higher versus lower education. **Methods:** Participants ( $N=1005$ ) from a nationally representative GfK panel completed eight self-report psychological scales assessing their beliefs about diabetes and colon cancer through an online survey. We used the Newest Vital Sign to assess participants' health literacy (limited health literacy vs. adequate health literacy). We also classified them into two groups with high school or less vs. greater than high school education. We compared Cronbach's alphas for each measure between groups with different health literacy and education levels using the Feldt test. **Results:** Scale internal consistency was significantly lower among people who completed high school or less than those with above a high school education for four scales: perceived severity for diabetes (0.70 vs. 0.75,  $p=0.03$ ), present orientation (0.60 vs. 0.66,  $p=0.04$ ), need for cognition (0.73 vs. 0.80,  $p<0.001$ ), and social desirability (0.61 vs. 0.70,  $p=0.04$ ). Scale internal consistency was significantly lower among people with limited health literacy than those who have adequate health literacy for five scales: information avoidance for colon cancer (0.83 vs. 0.88,  $p=0.002$ ), unpredictability for diabetes (0.82 vs. 0.88,  $p<0.001$ ), perceived severity for diabetes (0.69 vs. 0.75,  $p=0.04$ ), need for cognition

(0.66 vs. 0.82,  $p<0.001$ ), and social desirability (0.53 vs. 0.68,  $p=0.001$ ). **Conclusions:** Several commonly used psychological instruments elicited questionable internal consistency when applied among populations with limited health literacy and education. To advance health disparity research, we need to revise these instruments, as well as identifying new items or alternative conceptualizations of the constructs to target vulnerable populations (e.g., conducting cognitive interviews).

**Poster 21-07****Barriers and Opportunities for Messaging Parents About Rear-facing Car Seats: A Mixed-methods Evaluation**

England, Kelli J.; Edwards, Ann L.; Gordon, Emily R.; Putnam, Emily L.; Dobyms, Taylor; Springer, Charles E.

**Purpose:** Motor vehicle crashes are a leading cause of death and injury for children. Child passenger safety recommendations from the American Academy of Pediatrics (AAP) emphasize that children should ride rear facing as long as possible, even up to age 4. Virginia law requires rear facing only to age 2. Yet, only 14% of 1-3 year-olds nationwide ride in rear-facing seats. The purpose of this qualitative study was to examine barriers and opportunities for messaging parents about rear-facing seats. **Methods:** Fifty-one parents were recruited for one of two study arms: virtual focus groups (3 groups,  $n=23$ ) or an online survey ( $n=28$ ). Qualitative data were analyzed using NVIVO software and common theme analysis, and descriptive survey data were analyzed using SPSS. **Results:** More than half of the study parents were aware of VA law for rear-facing child seating (57.1%) but were not always certain of the age 2 specification. Parents had learned about the law via social media (32.1%), newspapers, and doctors' visits



(each 17.9%). Half of parents (46.5%) were unaware of AAP guidelines extending rear facing until age 4 and felt that others were also unaware (64.3%). Barriers to rear-facing use included discomfort, lack of room for multiple seats in the car, and peer pressure. Parents' suggestions for message content included showing crash simulations and explaining injury potential. Parents thought it was important to know the "why" behind the guidelines. Suggested locations for informational campaigns included places where parents frequent, such as pediatricians' offices, social media groups, and WIC appointments. Conclusions: Even if parents are aware of the law/recommendations, unsafe norms and limited knowledge of the reasons for the recommendations limit compliance. Messaging for rear-facing seats should be persuasive, share the injury prevention rationale for rear-faced positioning, dispel barriers when possible, and message parents in domains they are likely to already frequent.

### **Poster 21-37**

#### **Smoking Behavior in Philadelphia Parks During 2015-2019**

McIntire, Russell, K.; Shah, Dhruvi; Hampton, Isabella

Purpose: Physical distancing due to the COVID-19 pandemic has highlighted the importance of access to healthy public spaces such as parks. In 2014, Philadelphia began prohibiting smoking in all public parks, however this behavior is still common. This study uses data on smoking behavior in Philadelphia parks during 2015-2019 to

address the following research questions: 1) What was the percentage of smokers among patrons of four Philadelphia Parks (Washington Square, Independence Square, Rittenhouse Square, and Louis Kahn) during data collection periods per year?; 2) How did the percentage of smokers vary by gender and park per year?: and 3) Among smokers, how did the percentages of the type of tobacco product observed change per year? Methods: During May and June of each year, trained researchers collected observational data on all patrons entering the parks on Thursdays from 4:15-4:45 PM. Researchers used handheld electronic devices to categorize patrons by smoking status, age, gender, and tobacco product. Results: Over the course of five years, researchers collected data on 40,142 park patrons. The percentage of smokers among adult park patrons, overall, decreased from 2.9% in 2016 to 1.4% in 2019. During each year, Louis Kahn had the highest adult percentage of smokers, and Rittenhouse or Washington Square had the lowest. Overall, the percentage of male smokers was higher than the percentage of female smokers, but this varied by park. Among smokers, the percentage using cigarettes decreased over time, while the percentage smoking e-cigarettes increased. Conclusions: Our study identified decreasing smoking behavior in Philadelphia parks during 2015-2019. The percentage of smokers overall, and by gender, varied between parks, but was consistent over time within parks, suggesting that the parks have distinct tobacco use environments. Increasing use of e-cigarettes in parks reflected the increasing popularity of e-cigarettes in the general population during 2015-2019.

**March 23, 2021 3:30PM EST**

***Sexual Health***

**Poster 21-02**

**A Longitudinal Model of Communication Networks Among HIV Service Providers in a Ryan White System**

Prochnow, Tyler; Lightner, Joseph, S.; Patterson, Megan, S.; Shank, Jamie; McBain, Ryan, K.

Purpose: The Ryan White HIV/AIDS Program (RWHAP), a program dedicated to HIV prevention and treatment, has recently funded initiatives to improve cross-sector collaboration between healthcare and housing—including data integration systems. This presentation models the change in communication and professional networks over time within a RWHAP-funded area during data integration. Methods: Medical case managers, housing providers, and RWHAP administrators identified up to ten people who were important to them in their professional network regarding housing and healthcare coordination, along with reporting contact frequency and how much they valued each person's input at two time points between 2018-2019. Network size, average contact frequency, and average input value were calculated for total network and cross-sector connections and were analyzed using repeated measures linear modeling. Separable temporal exponential random graph modeling (STERGM) assessed changes in the whole network. Results: While participants' ( $n=35$ ) total and cross-sector network scores did not significantly differ across time points, STERGM revealed participants were more likely to form ties with others from a different employment sector ( $PE=-1.19$ ,  $SE=0.42$ ), and communication ties were generally more likely when they created a transitive relationship ( $PE=0.72$ ,

$SE=0.08$ ). Transitive ties are those occurring between two people who share a third contact. Finally, medical case managers were significantly more likely to form outgoing communication ties in the network ( $PE=1.79$ ,  $SE=0.42$ ). Conclusions: A primary goal of this initiative was to improve service coordination to better serve clients at risk for or living with HIV. Formation of transitive and cross-sector collaborations indicates this RWHAP area has been successful in improving communication between providers, largely due to new connections for medical case managers. A significant shift towards transitivity in this network may also be a sign of strengthening “weak ties”. Data integration may be a mechanism to improve prevention and treatment efforts for HIV.

**Poster 21-25**

**Hookup Culture Perceptions and Implications Among College Undergraduate Students**

Collins, Erica; Roan, Kaileigh; Sult, Samantha; Chen, Tian; Patterson, Meg

Purpose: Hookups are defined as casual sexual interactions that do not require an emotional connection/commitment. Hookups and casual sex are occurring more often on college campuses, and have been associated with increased risk of sexual assault and sexually transmitted infection (STI) transmission. Social norm theory suggests those who overestimate hookups could be at greater odds of engaging in hookups. The purpose of this study was to investigate factors related to college students overestimating rates of hookups among peers. Methods: Undergraduate students ( $n=682$ ; 77.7% female, 68.6% white) reported their gender, race/ethnicity, hookup behaviors, history of emotional, physical, and sexual abuse victimization, and the proportion of their peers they believed

engaged in hookups. Based on survey responses, we determined the proportion of respondents who overestimated hookup occurrences. Logistic regression analysis assessed factors related to a student overestimating hookup rates among their peers. Results: 55% of this sample reported at least one hookup relationship, and 60% overestimated hookup occurrences among their peers. Female students were 56.6% more likely to overestimate hookup occurrences among their peers ( $p=.024$ ). Additionally, students with higher hookup scores were 18% more likely ( $p<0.01$ ), and students who had experienced emotional abuse victimization were 49.6% more likely ( $p=.036$ ) to overestimate rates of hooking up among their peers. Discussion: This study adds to the body of literature explaining social norms related to hookup culture among college students, supporting an association between higher hookup rates and overestimation. Additionally, results suggest being female and experiencing emotional abuse, two groups already at increased risk for sexual assault on college campuses, tend to overestimate hookups. Due to its connection to sexual assault and STIs, understanding factors associated with overestimation of hookups could be important in reducing negative outcomes among students.

### **Poster 21-29**

#### **Novel Sexually Transmitted Infection Screening Methods: Characteristics of Innovators and Early Adopters**

Griner, Stacey, B.; Vamos, Cheryl, A.; Puccio, Joseph, A.; Beckstead, Jason, W.; Perrin, Kay; Daley, Ellen, M.

Purpose: Screening rates for sexually transmitted infections (STIs), including chlamydia and gonorrhea, are low among young adult women. Self-sampling methods

may be a novel solution to improve screening rates in this population. Adopter categories are a key construct in the diffusion of innovations (DOI) framework, with innovators and early adopters viewed as thought leaders who may influence adoption and reach critical mass among the wider population. This study's purpose was to explore perceptions of innovator and early adopter characteristics with regard to self-sampling methods for STI screening. Methods: Primary qualitative data were collected via in-depth interviews with sexually active college women, age 18-24 ( $n=24$ ). Interviews were guided by the diffusion of innovations theory and were audio recorded and transcribed. A thematic analysis using *a priori* theory-based codes and emergent themes was conducted to identify salient characteristics of innovators and early adopters. Interviews were analyzed thematically by two coders (Kappa=.83). Results: Characteristics of innovators and early adopters for self-sampling methods included social and personality traits such as openness, extroversion, confidence, and more involvement with college and other social events. Specific groups within the social system, such as sororities, were viewed as innovators for self-sampling method adoption and "transmitters of information" for those within and outside of their social groups. Medical students, biology majors, and those in health-related organizations were viewed as innovators given their interest in health and comfort with their bodies. Conclusion: This study identified salient social groups viewed as innovators and early adopters in the college context. Leveraging these groups and utilizing their thought leadership and influence to disseminate information to the early majority may be beneficial. These results can be used to inform the development of health communication campaigns and interventions to promote adoption of self-sampling

methods, and transform the narrative of risk into wellness.

### **Poster 21-32**

#### **Perceptions and Condom Use Among Sexually Active College Students**

Bhochhibhoya, Shristi; Lu, Yu; Zingg, Taylor; Maness, Sarah, B.

**Purpose:** Condom use prevents the transmission of sexually transmitted infections (STIs) including HIV/AIDS. A majority of college students are involved in risky sexual behaviors including having multiple partners and unprotected sex, putting them at higher risk of STI transmission. This cross-sectional study was conducted to examine the perceived acceptability, accessibility, affordability, availability, and attitudes towards condom use among college students and their associations with both past and intention of future condom use. **Method:** A total of 475 sexually active college students from a southwest U.S. university were enrolled in an online survey in which they were asked about their perceptions of condoms on their college campus. A set of Likert statements were used to measure acceptability (8 items,  $\alpha=0.95$ ), accessibility (3 items,  $\alpha=0.86$ ), affordability (3 items,  $\alpha=0.71$ ), availability (3 items,  $\alpha=0.64$ ), and attitudes (5 items,  $\alpha=0.67$ ) towards condom use. **Results:** Approximately 40% of the sample used a condom in their last sexual intercourse. Students perceived condoms to be fairly acceptable, accessible, and available on their campus and priced affordably when they needed to buy them. Ordinal regression analyses suggested that more favorable attitudes towards condom use were associated with higher odds of past condom use (OR:4.17, 95%CI: 2.84-6.13) and intention of future use (OR:5.30, 95%CI: 3.35-8.36), after controlling for age, race, gender,

and their current dating status. Interestingly, accessibility, affordability, and availability did not show significant associations, while higher acceptability was associated with lower odds of past condom use (OR:0.78, 95%CI: 0.65-0.94). **Conclusions:** A smaller percentage of students using a condom even with higher acceptability and availability of condoms poses a serious problem among adolescents. Proper health information programs aimed to improve attitude and acceptability of condom use is essential to increase consistent use of condoms among young adolescents.

### **Poster 21-40**

#### **The Association Between Adverse Childhood Experiences and HIV and STI**

Iwundu, Chisom, N.; Hernandez, Daphne, C.; Ferguson-Colvin, Kristin; Narendorf, Sarah; Santa Maria, Diane

#### ***AAHB Research Scholars Mentoring Program***

**Purpose:** Youth experiencing homelessness (YEH) are at increased risk of being infected and transmitting the human immunodeficiency virus (HIV) and sexually transmitted infections (STI). HIV/STI screening is critical for detecting asymptomatic individuals and confirming suspected cases. Exposure to adverse childhood experiences (ACEs) is linked to sexual risk behaviors which could consequently impact HIV and STI screening. Yet, the research between ACE and HIV/STI screening is limited. Our aim was to evaluate the association between ACEs and HIV and STI screening and identify the correlates associated with HIV and STI screening among YEH. **Methods:** YEH were recruited ( $n=200$ ; June 2016–July 2017) across seven U.S. cities from shelters, street outreach, drop-in service centers, and transitional

housing. YEH self-reported on ACEs (high vs. low), HIV and STI screening (screened in  $\leq 6$  months vs never screened), along with demographic characteristics (sex, race/ethnicity, work/school engagement, sexual orientation), years of homelessness, health-seeking behaviors, and mental health (stress, depression). Logistic regression models estimated the association between ACEs, correlates listed above, and HIV and STI screening. Results: High ACE levels were associated with increased odds of HIV screening (AOR=1.60, 95%CI=1.07–2.40) and STI screening (AOR=1.51, 95%CI=1.05–2.16). Amongst the explored correlates, greater odds for HIV and STI screening were related to being female, and lower odds for HIV and STI screening were associated with being a sexual minority and getting professional help for a health problem. Lower odds of HIV screening were linked with lack of work/school engagement and greater perceived stress. Higher odds of STI screening were associated with being black, multiracial/other, and experiencing  $\geq 2$  years of homelessness. Conclusions: Targeting screening towards YEH who are sexual minorities, lack work/school engagement, seek professional help for health problems, and experience greater stress may assist with promoting HIV/STI screening adherence and decrease infection rates.

### **Poster 21-53**

#### **Young, Nulliparous Women's Perspectives about Key Factors Contributing to Their Initiation of Long-acting Reversible Contraception**

Mahony, Helen; Vamos, Cheryl, A.; Marhefka, Stephanie, L.; Puccio, Joseph; Daley, Ellen, M.

Purpose: Women ages 18-25 have the highest rate of unintended pregnancy. Long-

acting reversible contraception (LARC; intrauterine device [IUD] and implant) have a central role in reducing unintended pregnancy. The purpose of this study was to explore important aspects of a young woman's choice to initiate use of either the IUD or the implant. Methods: In-depth interviews were conducted with 30 nulliparous women ages 18-25 who were currently using either the IUD or the implant. The semi-structured interview guide was developed based on constructs from social cognitive theory. The guide included questions regarding communication with social network members, behavioral skills, and opportunities and barriers. Results: Most participants identified as white (70%) and non-Hispanic (90%). Participants began considering LARC as an option because they were inconsistent with their previous method of birth control, (e.g., forgetting to take the pill). Participants then described seeking knowledge regarding LARC from sources such as the Internet and from members in their social network, (i.e., health care provider, friends, and/or family members). In seeking knowledge from these sources, participants often discussed receiving inaccurate information. Upon making the decision to use LARC, participants intentionally set a goal of using LARC and used behavioral skills and self-efficacy to overcome barriers and achieve LARC initiation. Most participants experienced barriers to obtaining LARC (e.g., health care providers engaging in non-evidence based practice behaviors and an unusually long delay between the consultation appointment and the insertion appointment). Conclusions: Targeting these key factors in future interventions can lead to an increase in LARC use among young women. Furthermore, addressing policy and practice barriers to LARC initiation will allow women easier access to these highly effective methods, which will ultimately lead to a

decrease in the rate of unintended pregnancy.

**Poster L21-11**

**Risk for Unintended Pregnancy Among Those with a Fertility Problem**

Shreffler, Karina M.; Jespersen, Jens; Erato, Gina; Croff, Julie M.

**Purpose:** Women with unintended pregnancies are at higher risk for prenatal substance exposure, lower folic acid uptake, and adverse birth outcomes. Women with a common fertility problem that makes it more difficult—but not impossible—to become pregnant (polycystic ovarian syndrome; PCOS) may be less likely to use contraception when they are not actively trying to conceive. The purpose of this study is to examine how women with PCOS think about their fertility problem and how that shapes their responses to questions about their fertility intentions as well as reproductive behaviors. **Methods:** We used

the National Survey of Fertility Barriers and structural equation modeling to examine associations between PCOS, identity as someone with a fertility problem, fertility intentions, and reproductive behaviors. **Results:** There were no significant associations between PCOS and fertility intentions, but there were significant associations with reproductive behaviors; as compared to those with no fertility problem, those with PCOS were more likely to be trying to conceive and to be ambivalent about pregnancy. **Conclusions:** Women with PCOS are at increased risk for an unexpected pregnancy because they report being more likely to report that they are not trying to get pregnant but also not trying to prevent a pregnancy. These findings have critical implications for maternal and child health because women who think they have a fertility problem and therefore are not using contraception are at risk for a substance-exposed pregnancy, delayed and fewer prenatal care visits, and inadequate nutritional intake.

**March 23, 2021 3:30PM EST**

***Substance Use – Group 2***

**Poster L21-01**

**Mediating Role of Drinking Family Members and Peers in the Association Between Parental Attachment and Alcohol Consumption**

Wang, Qian

Purpose: Alcohol use in association with parental attachment has been understudied among young adults in China. The purpose of this study was to assess the mediating role of drinking family members and peers in the association between parental attachment and alcohol consumption. Methods: Students aged 18-25 from several Chinese colleges were invited to complete an online survey. Parental trust, communication, and alienation were assessed by the Inventory of Parental and Peer Attachment. Alcohol consumption was assessed by the Alcohol Use Disorders Identification Test. Only respondents that had consumed alcohol other than a few sips were directed to complete the AUDIT questionnaire. An aggregate variable was created by combining number of drinkers among family members and peers. Demographics (age, gender, father's education, household income, academic performance) and lifestyle factors (physical activity, smoking) were included as covariates. Hayes' PROCESS macro was used to derive mediation effect. Results: Data from 584 respondents (52.7% male; mean age=20.49, SD=1.62) were used in final analysis. Alcohol consumption was negatively correlated with parental trust ( $r=-0.168$ ,  $p<0.001$ ), and positively correlated with parental alienation ( $r=0.280$ ,  $p<0.001$ ) and number of drinking family members and peers ( $r=0.527$ ,  $p<0.001$ ). Number of drinking family members and peers

explained 27.55% of the association between parental trust and alcohol consumption, and 19.65% of the association between parental alienation and alcohol consumption. Parental communication was not correlated with alcohol consumption or number of drinking family members and peers. Conclusions: The association between parental trust, parental alienation, and alcohol consumption can be partly explained by the number of drinking family members and peers one had. Strategies to enhance parental trust and decrease parental alienation should be fundamental in preventing risky alcohol consumption. When faced with weakened parental attachment, efforts to reduce the influence of drinking family members and peers may be helpful in preventing risky alcohol consumption.

**Poster L21-03**

**Are Warnings in Spanish More Effective Among Spanish Speakers? An Experimental Study Comparing English, Spanish, and Dual-language Warnings on E-cigarette Advertisements**

Razzouk, Jacob, A.; Bilić, Anna; King, Jessica, L.

Purpose: Tobacco advertisement warnings, often in English, may not be as effective among Spanish speakers. We randomized Spanish speakers to view warnings in either English, Spanish, or both languages and examined their perceptions. Methods: We used Prolific and MTurk to survey 841 Spanish-speaking adults in the United States. Participants were categorized into one of the following groups based on their language preference: bilingual but prefers English, bilingual but prefers Spanish, or Spanish-only. We randomized participants to one of three warning conditions: English-only, Spanish-only, or English and Spanish. Participants viewed two e-cigarette

advertisements varying in brand and design, each containing the FDA-mandated nicotine warning text. We examined associations between conditions and perceived message effectiveness, ad appeal, reactance, affect, recall, attention, and intentions to use e-cigarettes using chi-square and ANOVA where appropriate. Results: Of the 841 Spanish-speaking participants, 54.7% were male, 47.4% preferred English, 37.1% preferred Spanish, and 49.5% had used e-cigarettes within the past 30 days. Respondents exposed to English-only warnings expressed lower advertisement appeal compared to those exposed to bilingual and Spanish-only warnings (39.9 vs. 45.6 vs. 45.1;  $p < .001$ ). Reactance (7.6 vs. 8.3 vs. 7.4;  $p = .005$ ) and affect (11.4 vs. 12.3 vs. 11.2;  $p = .032$ ) scores were lower for those exposed to Spanish-only warnings instead of English warnings. We did not identify differences in recall, attention, intentions to use, or message effectiveness across conditions. Conclusions: Among a Spanish-speaking population, those exposed to bilingual and Spanish-only warning text reported higher advertisement appeal compared to those exposed to standard English warnings. Bilingual warnings elicited higher affect and reactance suggesting those warnings led viewers to experience greater negative emotions. Warning language appears to influence perceptions, though additional analyses will explore findings according to language preference.

### **Poster L21-04**

#### **The Significant Prospective Effect of Parental Communication on Adolescents' Health Risk Behaviors**

Sanchez, Louisiana, M.; Oman, Roy, F.; Lensch, Taylor; Yang, Yueran

Purpose: The identification of adolescents' health risk behaviors that can be prevented by strong parent-youth communication is critical for developing effective prevention strategies. The purpose of this study was to assess the prospective effect between parent/youth communication and adolescents' health risk behaviors, such as alcohol, tobacco, drug use, physical fighting, weapon carrying, truancy, number of sexual partners, and birth control use. Methods: Five waves of data were collected annually over a 4-year period ( $N=1,111$ , 52.8% female, mean age=14.3) from a racially/ethnically diverse sample of adolescents. Generalized linear mixed models were used to identify prospective associations between parent/youth communication and adolescent health risk behaviors while controlling for sociodemographic characteristics. Results: Adolescents who had stronger parent/youth communication were prospectively and significantly less likely to engage in alcohol, tobacco, and drug use in the past 30 days (Adjusted Odds Ratio [AOR]: 0.71; Confidence Interval [CI]: 0.58-0.87), participate in truant behaviors in the past 30



days (AOR: 0.70; CI: 0.57-0.86), engage in weapon carrying in the past 30 days (AOR: 0.73; CI: 0.55-0.98), engage in physical fighting in the past 12 months (AOR: 0.79; CI: 0.64-0.97), and were more likely to use birth control (AOR: 1.35; CI: 1.08-1.69). However, parent-youth communication was not significantly associated ( $p>.05$ ) with number of sexual partners. Conclusions: The findings demonstrate that youth who have stronger parent/youth communication are less likely to participate in several specific health risk behaviors. Health promotion professionals should consider implementing intervention strategies that focus on establishing clear and consistent communication channels between parents and adolescents that include discussion of health-related activities and that encourage parents to be actively involved in their adolescent's life.

#### **Poster L21-07**

##### **Indirect Marketing of E-cigarettes Through Hashtags: Using Comparative Topic Models to Determine Content Differences Between @JUULVapor and #juul.**

Valdez, Danny; Unger, Jennifer

#### ***AAHB Research Scholars Mentoring Program***

Purpose: This case study highlights the difficulty in regulating social-media content for age-restricted products, such as e-cigarettes and vape-pens. Methods: We used Twitter's Automated Programming Interface (API) to download two sets of Twitter data: (1) JUUL Lab Inc.'s official Twitter timeline '@JUULVapor' ( $n=3200$  tweets), and (2) a collection of tweets containing one or a combination of the following hashtags: #JUUL, #MyJUUL, #vape, #ecig ( $n=11,253$  tweets). We analyzed the data with comparative latent Dirichlet allocation (LDA) topic models (an

automated text-consolidation approach) for similarities and differences. Results: We identified a clear discrepancy between topic models generated for @JUULVapor and various JUUL-related hashtags. @JUULVapor seemingly uses their handle for customer support (i.e., Topic: Complaints, Words: please, sorry, hear, share, feedback); and also contained references to age product-related age restrictions (i.e., Topic: Underage Use, Words: issue, youth, legally, limited, FDA). By contrast, the topic model for the hashtag dataset uncovered phraseology that may appeal directly to youth, including lifestyles (i.e., Topic: Vapelife, Words: ejuce, happy, glad, ecig, vape, vaping), flavors (i.e., mint, lemon, bubblegum), and references to licit and illicit substances (i.e., beer, cocaine, @loadedliquor). Conclusions: JUUL Lab Inc.'s attempt to comply with FDA marketing restrictions on e-cigarettes is notably diminished by how JUUL and other e-cigarettes are contextualized online. Indeed, despite efforts to present a cleaner image on Twitter, JUUL remains indirectly marketed to youth through hashtags which may negate FDA compliance. These findings underscore the observation that regulating social media remains a persistent public health challenge.

#### **Poster L21-08**

##### **Vape Shop Compliance to FDA's Elimination of Free Sampling**

Meza, Leah; Galimov, Artur; Huh, Jimi; Baezconde-Garbanati, Lourdes; Sussman, Steve

Purpose: E-cigarettes and other products sold at vape shops remained largely unregulated until 2016, when the U.S. Food and Drug Administration (FDA) introduced the "Deeming Rule". Among several regulations, this rule prohibited provision of free samples of vaping products. This study

investigates compliance and adaptation to the elimination of free samples at vape shops and assessed nicotine levels used for sampling. Methods: We selected and recruited vape shops in heterogeneous neighborhoods in Southern California. Trained teams of data collectors consented and interviewed 121 vape shop employees. Employees responded to a set of questions pertaining to the general protocol of sampling at their shop and provided nicotine levels used for sampling. Results: Shops are generally compliant, with 92.6% either charging a minimal fee for sampling or eliminating sampling of e-liquid altogether. Only  $n=9$  (7.4%) shops were non-compliant to federal sampling rules. Nearly all shops (97.7%) are also offering low levels of nicotine for sampling (0-3mg/ml). However, the use of various types of minimal fee protocols minimized the impact of the no-free sampling policy on sampling of vaping products at the shops. Discussion: Results demonstrate that simple adaptations to the loosely defined federal tobacco sampling rule are prevalent. Vape shops can easily bypass the elimination of free sampling of vaping products due to lack of specificity on parameters of compliance, among other issues. Further research is needed, and future implications are discussed.

### **Poster L21-09**

#### **Youth Appeal of 2019 & 2020 Vaping Ads: A Content Analysis**

Liu, Jessica; Vázquez-Otero, Coralia; Stevens, Elise, M.

Purpose: Youth e-cigarette (EC) use remains high in the United States – and advertising is a contributor. In 2018, EC companies became more highly scrutinized for producing advertisements that appealed to

youth, and there has been little research examining what content changes may have occurred in their advertisements from 2019 and 2020. Methods: Using a systematic, quantitative content analysis, three trained coders coded all available EC advertisements from JUUL, Puff Bar, Vuse, and Blu from 2019 and 2020. Based on previous work, they coded for: type of advertisement, flavors, promotions, product cues, descriptors, claims, imagery, youth-oriented themes, and sensational appeals. Results: Of the 401 EC advertisements, the majority were emails (38.2%) and Instagram posts (30.9%). Over half (53.6%) showed flavors other than tobacco, with Puff Bar leading the brands (70.2%;  $p<0.001$ ). The most utilized promotion was price reduction (25.4%). The most frequently used product cues were showing the product (51.4%) or packaging (42.4%). The biggest claims were being an alternative to smoking (14.2%) or saving money (13.0%). The most frequently used imagery was fruit (14.0%), employed most by Puff Bar ( $p<0.001$ ). The only youth-oriented theme used was humor in 4.2% of the advertisements. Positive sensations (e.g., good taste, good smell, or satisfying; 17.1%) were used most, with Puff Bar using it at the highest frequency ( $p<0.001$ ). Conclusion: Even with stricter regulations around EC brands, advertisements still include youth-appealing content such as flavors, fruit imagery, and positive sensations. Puff Bar led in all of these categories, possibly because there are no restrictions on disposable product flavors. Advertisements also employed price reductions and showing the product in the advertisements, both of which may cue youth to use the product. Research should continue to monitor the characteristics of EC advertisements and consider the messages that these advertisements convey.

**Poster L21-13****Social Support, Cigarette Use, and Alcohol Misuse Among Individuals with Subjective Cognitive Decline**

McDaniel, Justin, T.; Hascup, Kevin, N.; Hascup, Erin, R.; Albright, David, L.; Wallace, Juliane, P.

Purpose: Although there is evidence to suggest that heavy alcohol use and cigarette use may accelerate cognitive decline in individuals experiencing problems with their memory, little research has examined the prevalence and predictors of heavy alcohol consumption and cigarette use among individuals with subjective cognitive decline (SCD). Social support, as described in the stress-support matching hypotheses, may be a salient predictor of health behavior and, therefore, a potential predictor of alcohol/cigarette use among individuals with SCD. In a cross-sectional study, we examine the

association between social support and the previously described adverse health behaviors in a sample of individuals with SCD ( $n=850$ ) from the 2015-2016 Behavioral Risk Factor Surveillance System (BRFSS). Results showed that 7.65% (95%CI = 5.95–9.64) of the individuals with SCD reported “never” receiving needed social support. Prevalence rates of heavy alcohol consumption and cigarette use among persons with SCD were as follows: heavy alcohol consumption, 4.82% (95%CI = 3.48–6.49); cigarette use, 22.59% (95%CI= 19.82–25.55). Inadequate social support was associated with heavy alcohol consumption (aOR = 3.47, 95%CI= 1.43–8.48,  $p=0.006$ ) and cigarette use (aOR = 2.53, 95%CI=1.44 – 4.45,  $p=0.001$ ) in adjusted analyses. This is the first study to examine the relationship between social support and health behavior among individuals with SCD. Interventions aimed at increasing social support and reducing these adverse health behaviors in persons with SCD are needed.

**March 23, 2021 3:30PM EST**

***Violence and Trauma***

**Poster 20-15**

**Development and Validation of an Instrument Measuring Determinants of Bystander Intervention to Prevent Sexual Assault: An application of the Reasoned Action Approach**

Hackman, Christine; Rush-Griffin, Sarah; Branscum, Paul; Castle, Arden; Katague, Marina; Greenband, Marissa

Purpose: Sexual assault is a major public health issue that disproportionately affects college students. Bystander intervention (BI) is a common approach to reduce sexual assault in college populations, and is considered the gold standard by public health and governmental organizations. However, few surveys are available to measure and evaluate the predispositions students have towards engaging in BI. Therefore, the purpose of this study was to develop and validate a theory-based instrument with college students at two U.S. universities. The theoretical model used in this study was Fishbein and Ajzen's Reasoned Action Approach. Methods: First, an elicitation of beliefs (i.e., behavioral and normative beliefs) was accomplished to inform items on the survey. Next, the survey was developed and sent to an expert panel to establish face and content validity. Afterwards, the instrument was administered to undergraduate college students ( $n=291$ ), and the following psychometric properties were evaluated: construct validity using confirmatory factor analysis (CFA), and internal consistency reliability using Cronbach's alpha. Results: Data were fit into two separate models to assess fit. In the first model, a 4-factor solution was evaluated (intentions, attitudes, perceived norms, and

perceived behavioral control), and results showed that overall fit was modest (Root Mean Square Error of Approximation (RMSEA)=0.121; Tucker Lewis Index (TLI)=0.773, and Comparative Fit Index (CFI)=0.803). However, in the second model, a 7-factor solution was evaluated (intentions, instrumental and experiential attitudes, injunctive and descriptive norms, capacity and autonomy), and results showed that overall fit significantly improved (RMSEA=0.058; TLI=0.948, and CFI=0.958). Discussion: Valid and reliable instruments are greatly needed in this area of public health, especially those tailored to BI. Researchers and practitioners examining BI in college students can use this instrument to measure theory-based determinants of BI to reduce the rate of sexual assault on college campuses.

**Poster 20-19**

**Examining College Student Perspectives of a Theory-based Social Marketing Campaign to Promote Bystander Intervention**

Hackman, Christine; Hagadorn, Ellis; Lucas, Faith; Alber, Julia

Purpose: Bystander intervention (BI) is an important approach for decreasing the rate of sexual assault on college campuses. Properly developed, theory-based social marketing campaigns can shift beliefs regarding sexual assault and contribute to behavior change in the community. The purpose of this study was to examine student feedback regarding a Reasoned Action Approach (RAA)-based social marketing campaign aimed at increasing BI intention and behavior. Methods: Six audio-recorded focus groups were utilized to provide feedback on social marketing messages that have been developed based on the results from a previous study examining RAA-

related barriers and facilitators to BI in college students. Trained researchers facilitated conversations around participant ( $n=56$ ) opinions and ratings of messages. Transcripts were created and pseudonyms were used to protect participant identity. Results: The data were cleaned for clarity and organized to prepare for qualitative and quantitative analysis. Thematic analysis was used to orient the researchers with the data using NVivo 12 for Windows (QSR International, 2015). The final eight themes included: message understanding; personalization or tailoring; message content; message design and features; message appeal; trust in message; personal preferences; and delivery channels. Within each theme there were two to four sub-themes. For example, message content included the sub-themes color, font, staged/unnatural, and layout. Mean rating of each message was computed (1=strongly dislike, 10=strongly like). Means ranged from a 4.05 (message #6) to 7.34 (message #1). Conclusions: Edits will be made to the messages based on the results, and messages will be tested in a wider population for final feedback. The finalized messages will be studied for effectiveness in attitudinal and behavioral improvements in BI. University campus populations would benefit from theory-based health communication messages, as they could influence beliefs and, as part of a larger intervention, shift behavior in a high-risk population.

### **Poster 20-26**

#### **Predicting Rape Myth Acceptance in Minority College Students**

Nelson, Jordan L.; Hendricks, Kyle; Naik, Sarina; Ortega, Samantha; Taylor, Kara; Patterson, Megan S.

Purpose: The purpose of this study was to examine factors associated with rape myth

acceptance (RMA) in a sample of minority college students. Methods: Students completed surveys at two separate universities regarding demographics, personal experiences with violence, alcohol use, hookup behaviors, and RMA. Hierarchical linear regression analysis examined variables related to RMA across different racial and ethnic minorities. The Illinois RMA Scale was used and is based on a scale from 0-120, with a higher score indicating rejection of myths. Results: Of the 441 participants who identified as non-white, 72.1% of the sample identified as female. The mean age was 19.91 years ( $SD=2.405$ ) and 23.6% ( $n=104$ ) of the students identified as African American, 30.4% ( $n=134$ ) Hispanic/Latinx, 18.4% ( $n=81$ ) Asian or Pacific Islander, and 21.1% ( $n=182$ ) biracial or multiracial. For African American students, the model explained 23.2% ( $p=.043$ ) of the variance, with being female and witnessing father abuse increasing RMA score by 10 and 18 points respectively; and witnessing their mother abuse her partner decreased scores by 16. The model for Hispanic students explained 25.5% ( $p=.002$ ) of the variance, with being female, being a senior in college, and ever viewing porn related to higher scores by 12, 9, and 5 points respectively. For Asian and Pacific Islander students, the model was not statistically significant ( $p=.402$ ). For Bi- and Multi-racial students, the model was statistically significant and explained 28.1% ( $p=.021$ ) of the variance, with being female related to higher RMA scores by 13 points. Conclusions. Much of the literature regarding RMA among college students focuses on white students or aggregates all non-white students together. Cultural upbringing can create differing conceptualization of social movements and how the world works. Personal beliefs about rape myths, coupled with minorities experiencing sexual assault at higher rates than their white counterparts,

indicate the need to create culturally tailored educational material and interventions.

### **Poster 20-32**

#### **Trauma and Instability Dimensions of Adversity Contribute to Youth Health Outcomes**

Schuler, Brittany, Gardenhire, Rachel, Moore, Shirley, Borawski E.

Purpose: Adversity plays a fundamental role in predicting youth health outcomes. However, our understanding of how adversity should best be conceptualized remains elusive; interventions are presently unable to target specific adversities that confer risk. Adversity is typically defined as a unidimensional construct, but is likely more complex, inclusive of traumatic events (e.g., crime victim, loss of parent) and instabilities (e.g., divorce, food insecurity, moving), which can co-occur and may have differential effects on child health. This study tests whether trauma and instability differentially associate with child health outcomes and behaviors known to increase risk of long-term chronic disease. Method: This prospective study, part of a larger randomized control trial, includes 360 youth-parent dyads recruited from urban Cleveland schools as youth entered 6th grade (T1). Those with a BMI>85th percentile were eligible and were followed annually for 3 years (T2-T4). We assessed effects of adversity dimensions at T2 (trauma/instability in past year) on health outcomes (change in BMI, blood pressure, cholesterol [HDL], and blood glucose from T1-T4), and behaviors and other more proximal outcomes (caloric intake, physical activity, sedentary behaviors, sleep, stress) at T2 controlling for child sex and age. Results: Youth were primarily female (57.8%,  $n=208$ ) and non-Hispanic black (76.7%,  $n=276$ ). At T1, mean BMI percentile was 95.69

(SD=3.72). Approximately 31% of youth experienced >1 trauma, and 55% reported some form of instability. Trauma ( $b=2.70$ ,  $p=.04$ ) and instability ( $b=2.95$ ,  $p=.01$ ) predicted poorer sleep quality. Instability, not trauma, was predictive of higher stress ( $b=1.10$ ,  $p=.004$ ), decline in HDL ( $b=-.45$ ,  $p=.02$ ), and increase in BMI ( $b=0.35$ ,  $p<.001$ ). Stress was predictive of decline in HDL ( $b=-.07$ ,  $p=.008$ ). Conclusions: Trauma and instability-related experiences are associated with lower sleep quality among lower-income overweight and obese youth. Instability, but not trauma, is associated with decline in HDL and increase in BMI over a 4-year period.

### **Poster 21-14**

#### **Does Being a Survivor or Witness to Sexual Assault Influence Bystander Intervention Beliefs? An Application of the Reasoned Action Approach**

Rush Griffin, Sarah; Hackman, Christine; Branscum, Paul; Hagadorn, Ellie; Lawston, Ashlynn

#### ***AAHB Research Scholars Mentoring Program***

Purpose: Bystander intervention (BI) is a commonly used approach to train college students to prevent sexual assault. Recent research indicates that personal history of sexual assault victimization may be an important factor in subsequently engaging in BI. One model that can be utilized to examine predictors of BI is the reasoned action approach (RAA). Our purpose was to evaluate differences in theory-based determinants of BI participation between students who have a personal history of victimization, or witnessing victimization, and those who have no personal history. Methods: Undergraduate students ( $n=291$ ) participated via an online survey at two

universities in the United States. The survey evaluated RAA constructs (i.e., intentions, and perceived behavioral control (PBC)), and anticipated regret towards participating in BI. Separate regression models (personal history/no personal history) were used to examine predictors of BI intentions. Results: Students were traditionally aged (18-24 years old), mostly women (60.1%), and freshmen or sophomores (80.4%). Students with a personal history of victimization exhibited significantly higher intentions, attitudes, PBC, and anticipated regret towards engaging in BI compared to those with no history (all  $p$ 's<0.05). Both regression models showed the RAA constructs predicted a significant amount of the variance of intentions to engage in BI for both groups [students with a history ( $R^2=.529$ ); students with no history ( $R^2=.665$ )]. Anticipated regret was a significant predictor for students with a personal history of victimization ( $p<.001$ ), but was not significant among students with no history ( $p=.128$ ). Conclusions: Results from this study indicate students having a personal history of victimization influences their beliefs towards engaging in BI. Anticipated regret was only significant for students with a personal history, indicating they may exhibit greater empathy and understand the consequences of victimization more so than others. Further research examining the role of personal history of victimization in BI may inform university programming at different levels of intervention.

### **Poster 21-38**

#### **Social Factors Influencing College Students' Confidence to Report Intimate Partner Violence Victimization**

Flores, Sara; Spillers, Karley Ann; Almansour, Najla; Patterson, Megan, S.

Purpose: Intimate partner violence (IPV) is prevalent on college campuses and often goes unreported. Because many assailants are repeat offenders, reporting IPV can reduce future incidents. Further, while reporting can be difficult, it can make available campus resources that support recovery and academic success for the complainant. The decision to disclose abuse is partially influenced by an individual's confidence in their support sources. This study explored factors related to students' confidence that their personal support network would believe them if they chose to disclose abuse. Methods: An egocentric network analysis was conducted on a sample of undergraduate students ( $n=656$ ) and their social ties ( $n=2757$ ). Respondents indicated their own gender and history of IPV, as well their social ties' gender and history of IPV. Respondents also indicated whether they felt confident their social ties would believe them if they experienced IPV. Multilevel modeling assessed factors related to students feeling confident their ties would believe them if they experienced IPV. Results: Female students ( $\beta=-0.09$ ,  $p<.01$ )

felt more confident their ties would believe them. Female social ties ( $\beta=0.08$ ,  $p<.01$ ), siblings ( $\beta=0.08$ ,  $p<.01$ ), and significant others ( $\beta=0.14$ ,  $p<.01$ ) gave students more confidence, while social ties who had experienced IPV ( $\beta=-0.03$ ,  $p<.01$ ) provided the student less confidence. While a student's history of IPV related to less confidence ( $\beta=-0.10$  and  $p<.01$ ), if their tie also experienced IPV ( $\beta=0.08$ ,  $p=.01$ ) and if their tie was female ( $\beta=0.09$ ,  $p<.01$ ), they

reported more confidence. Conclusions: This study uniquely explored social factors that could explain underreporting IPV on college campuses. Further study is necessary to examine the relationship between these factors and their influence on college students' decision to disclose abuse. A better understanding of abuse disclosure could improve reporting rates and reduce IPV occurrences on college campuses.



**March 23, 2021 3:30PM EST**

***Weight Status & Food Issues***

**Poster 20-31**

**The Role of Weight Status and Individual Attributes on Adolescent Social Relations: Implications for Obesity Prevention**

Jacobs, Wura; Merianos, Ashley; Smith, Matthew Lee; Nabors, Laura; Fajayan, Alane; Valente, Thomas

Purpose: This study examined associations between weight status and likelihood of nomination (indegree) for five different and essential social network types important for adolescents' development – friendship, romantic, admiration, success, and popularity. Methods: We conducted a secondary analysis of the University of Southern California Social Networks and Networking Pilot Study (SNS) including 1,110 tenth-grade students from four high schools. Multiple Poisson regression analyses using GLM were conducted to examine the relationship between BMI categories calculated using CDC BMI-for-age references (underweight, normal weight, overweight, obese) and adolescents' indegree for the five different network types. Regression analyses controlled for socio-demographics, academic grades, sports participation, current alcohol and/or tobacco use, and school attendance. Results: Obese adolescents were significantly less likely to be nominated as romantic interest (OR=0.29, 95%CI=0.19–0.42), admired (OR=0.80, 95%CI=0.65-0.97), or popular (OR=0.71, 95%CI=0.57-0.86) compared to their normal weight peers. Overweight adolescents were also less likely to be nominated as a romantic interest (OR=0.57, 95%CI=0.42–0.78) or popular (OR=0.67, 95%CI=0.53-0.84) compared to those who were normal weight.

Underweight adolescents were less likely to be nominated as friends (OR=0.76, 95%CI=0.60–0.98), someone admired (OR=0.61, 95%CI=0.42-0.90), likely to succeed (OR=0.62, 95%CI=0.44-0.87), or popular (OR=0.40, 95%CI=0.25-0.64). Conclusions: Our results suggest BMI status is associated with being selected by peers into different types of adolescent networks. In addition to overweight and obese adolescents, underweight adolescents are a unique group at increased risk for social isolation and/or social stigma due to their weight. There is a need for programs designed to combat the negative stereotypes and social norms surrounding adolescent weight-related stigmatization.

**Poster 21-20**

**Food and Fotos: Using Photos to Transform the Narratives of Community College Students' Experiences with Accessing Food**

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Purpose: Survey data provides statistics on the percentage of individuals that experience food insecurity, or the inability to access a sufficient amount of food due to a lack of resources. It does not provide us the opportunity to “see” nor “hear” about the barriers that prevent individuals from accessing food nor the triumphs that occur when food is accessible. To transform the narrative from a statistic to an impactful and tangible description, participatory action methods that involve photo elicitation can be utilized. The study explored the various narratives that low-income community college students face when accessing food. Methods: Photo elicitation and in-depth one-on-one interviews were conducted among a subsample of low-income community college

students that had previously participated in a food assistance intervention (February – April 2020; Houston, TX). Each participant provided six of their own photographs and reported on their experiences with accessing food. One-on-one interviews were recorded, transcribed, and analyzed using the constant comparative approach of grounded theory. Results: Participants were 26 community college students (Xage=40 [SD=13], 75% female, 68% black, 79% single, 82% unemployed, 50% enrolled in school at time of interviews). Students' images and stories highlighted the various ways their experiences with accessing food intersected with their academic and personal lives. The following themes emerged from the students' photographs and interviews: (a) academic/vocational achievement (17 photographs, 6 participants) (b) economic hardship (34 photographs, 11 participants), and (c) familial support (17 photographs, 7 participants). Collectively, these three themes provided a deeper understanding of the sociocultural context of accessing food, which extended beyond food. Conclusions: The personal benefits and challenges that the students experienced outside of the school setting were central to their experiences with accessing food. For food assistance programs to be successful, it is imperative to transform the narrative that accessing food is solely about food.

### **Poster 21-21**

#### **Food Distribution Program Positively Influences the Dietary Behavior of Community College Students: A Mixed-method Study**

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Purpose: Community college students report less healthful dietary behaviors compared to

4-year college students. While there are few dietary interventions/programs focused on community college students, there is even less of an understanding of the how these programs influence students' dietary behavior. The purpose of this study was to quantitatively assess the dietary intake of community college students who participated in an 8-month food distribution program (FDP). Focus groups explored students' experiences related to diet and behavioral changes associated with FDP participation. Methods: Among 495 students enrolled in the FDP, a subsample of students ( $n=34$ ) were selected to participate in focus groups. Dietary intake was assessed using the Block rapid food screener for fruit and vegetable (10-items) and fat (17-items) at baseline and the end of FDP. The changes in dietary components between two time points were compared using paired t-test among high (attended  $\geq 3$  distributions) and low/no attendees (attended 0-2 distributions). Fifteen focus groups were conducted among high (6) and low attendees (9) following the program conclusion. The focus groups were audio-recorded and transcribed verbatim, and were examined using the constant comparative approach of grounded theory. Results: Dietary data of participants (Xage= 40 (13); 62% high attendees; 85% female; 65% black; 31% Hispanic) revealed that high attendees had a significant increase in ( $p<0.05$ ) in their vitamin C, magnesium, potassium, and dietary fiber intake between the two measurements. Low/no attendees showed a significant increase ( $p<0.05$ ) in their total fat, saturated fat, and cholesterol intake. Three main themes emerged from the focus groups related to FDP; 1) It is hard to eat healthy, 2) Increased access to healthier foods, and 3) Healthier lifestyle changes. Conclusions: Community college students frequently experience food hardships. FDP on campus improved their access to fruits and vegetables and induced positive dietary changes.

**Poster 21-34****Projecting the Impacts of Sugar-sweetened Beverage Warning Labels and Restaurant Menu Labeling Regulation on Energy Intake, Weight Status, and Healthcare Expenditures in the US: A Microsimulation**

An, Ruopeng

Purpose: Accurate, readily accessible, and easy-to-understand nutrition labeling is a promising policy strategy to address poor diet quality and prevent obesity. This study projected the impacts of nationwide implementation of sugar-sweetened beverage (SSB) warning labels and restaurant menu labeling mandate extended to all restaurants. Methods: A stochastic microsimulation model was built to estimate the impacts of SSB warning labels and menu labeling regulation on daily total energy intake, body mass index (BMI), and healthcare expenditures among U.S. adults. The model used individual-level data from the National Health and Nutrition Examination Survey, Medical Expenditure Panel Survey, and other validated sources. The model was simulated using the bootstrapped samples, and the means and

associated 95% confidence intervals (CIs) of the policy effects were estimated. Results: SSB warning labels and restaurant menu labeling regulation were estimated to reduce daily total energy intake by 18.66 (95% CI=18.37, 18.95) and 18.12 (95% CI=17.88, 18.36) kcal, cumulative BMI by 0.98 (95% CI=0.96, 1.00) and 0.94 (95% CI=0.92, 0.96) kg/m<sup>2</sup>, and cumulative healthcare expenditures by \$55.48 (95% CI=54.32, 56.64) and \$56.31 (95% CI=55.35, 57.27) over five years, respectively. The reduced per capita healthcare expenditures translate into an annual total medical cost savings of \$2.83 billion for SSB warning labels and \$2.87 billion for the menu labeling regulation. The policy impacts differed by sex, age group, and race/ethnicity. Compared to their female, older, and other racial/ethnic counterparts, men, younger adults, and non-Hispanic blacks had a more substantial reduction in daily total energy intake, BMI, and healthcare expenditures in response to the two nutrition labeling policies. Conclusions: SSB warning labels and an extended restaurant menu labeling mandate can be effective policy leverage to prevent weight gains and reduce medical expenses attributable to adiposity. Both can be cost-saving and scalable at the population level.

**Poster 21-47****Using Egocentric Network Analysis to Assess Social Ties that Exacerbate Body Image Concerns Among College Sorority Women**

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Purpose: Body image issues including body dissatisfaction and disordered exercise disproportionately affect college-aged women. These issues can result in depression, low self-esteem, and the onset/maintenance of shape-changing behaviors such as compulsive exercise and restricting calories. Further, women tend to worry more about their weight and shape and feel guilty about their exercise behaviors not being consistent or rigid enough compared to men. Because body image is often socially influenced, this study assessed individual, dyadic, and network-level factors related to sorority women connecting with people who exacerbate feelings of exercise guilt and body dissatisfaction. Methods: Sorority women ( $n=207$ ) completed online surveys measuring physical activity, body dissatisfaction, compulsive exercise, and egocentric networks. Participants nominated

1,105 alters and indicated the gender and exercise behaviors of, their relationship to, how often they communicate with, and how long they have known each alter. Each participant also reported the frequency with which alters made her feel good about her looks and guilty about her exercise habits. Two random coefficient multilevel models assessing network relationships with alters who make participants feel: 1) guilty about her exercise habits, and 2) good about her looks, were computed using R. Results: Random coefficient multi-level models revealed alter- ( $\beta=-0.18, p=.01$ ) and network-level ( $\beta=-.40, p<.001$ ) exercise patterns were related to an ego feeling guilty about her exercise habits; alter gender ( $\beta=-.19, p=.01$ ) and communication frequency ( $\beta=.07, p<.001$ ) was related to an ego feeling good about her looks; and ego's body dissatisfaction score was related to both an ego feeling guilty ( $\beta=.02, p<.001$ ) and feeling good about her looks ( $\beta=-.02, p<.001$ ). Conclusions: By identifying factors associated with potentially harmful social connections, intervention opportunities to promote positive body image were revealed. Findings support and extend literature highlighting the importance of someone's immediate social network on their body image and related behaviors.