

Board 201

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

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

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

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

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

Board 202

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

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

Opioid use disorders (OUD) and deaths have been increasing alarmingly nationwide. There is evidence that overprescribing to opioid-naïve surgical patients substantially contributes to OUD, making it critical to address clinician prescribing behaviors. Opioid stewardship programs (OSP) within healthcare settings provide an avenue for introducing interventions to regulate prescribing. This study examined the association of OSP policies limiting exposure on changes in opioid



outcomes and patient pain to inform safety and quality improvement. An OSP within a large healthcare system implemented four policies between 2016

and 2018; use of non-opioid medication during surgery, sequential decrease of available opioid dosage vials, standardization of opioid in-patient practices, and limit to initial post-surgery supply. Generalized linear mixed effects models assessed the impact of each policy on changes in outcomes and patient pain on 9,262 opioid-naïve patients undergoing elective surgery. Outcomes were discharge pain, morphine milligram equivalent (MME) in the first prescription post-surgery, and opioid prescription refill. The results showed decreases in all outcomes following onset of OSP interventions (all p's <.001). The influence was supported by decreases associated with specific policies. Standardization of in-patient prescribing practices through electronic health record alerts had the greatest impact on decline in post-surgical prescriptions. Importantly, there was no evidence of an increase in discharge pain related to any of the interventions. This study promotes the potential of OSPs to affect opioid prescription behaviors without causing unnecessary harm. Standardization of in-patient prescribing practices through electronic health record alerts, the policy that was observed to have the greatest impact, is also that which works most directly on prescribers' behaviors. This suggests that reminding prescribers to re-evaluate the patient's need, rather than prescribing out of habit, is effective in changing behavior. These findings offer considerations for policy implementations by OSPs in health systems nationwide to help combat the opioid epidemic.

Board 203

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

Su-I Hou & Samuel Towne

Purpose: Aging-in-community (AIC) has been a preferred way to aging among many older adults. This study examines and compares five dimensions key to living a healthy lifestyle among three community-based programs promoting AIC. Methods: The five dimensions measure (FAITH, FOOD, FITNESS, FOCUS, and FRIENDS), adapted from a faith-based healthier life program, was used. Older adults from three community-based programs were studied: a university-based lifelong learning group, a county neighborhood lunch program, and a village program sample. Results: A total of 289 older adults participated, with 38% from lifelong, 29% from neighborhood lunch, and 33% village programs. Mean age was 72.4 (SD=8.68) years. All the five dimension scales of healthier life showed satisfactory reliabilities, with Cronbach's alphas ranged .79 to .89 (CITC ranged .401 ~ .830), ANOVA analyses showed significant differences on FAITH, FITNESS, and FRIENDS. Post-hoc analyses showed that participants in the lifelong learning group scored higher on FAITH, compared with lunch or village programs (p=.001). Village participants scored lower than lunch program participants on FITNESS (p=.010). Older adults from the lunch program scored higher on FRIENDS compared with the lifelong or village participants (p=.016). There were no statistical significant differences on FOOD or FOCUS among groups. Discussion: Results showed interesting and somewhat surprising findings on the higher FRIENDS scores among the senior lunch program participants, and no significant differences on FOOD or FOCUS comparing with the other two membership-paying groups. These validated measures have implications on assessing key dimensions towards healthy aging as older adults seek to aging-in-community.



Board 204

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

Su-I Hou & Samuel Towne

Purpose: Village to Village (VtV) Network is a voluntary national membership organization that provides networking and information sharing among individual Villages to promote older adults aging in community.

This study examined source of health information and program strategies among two villages in Florida, USA for planning effective cancer prevention program among community-dwelling older adults. Methods: Members and volunteers from two villages, both are members of the VtV network, in Central Florida participated. Results: A total of 96 village members and volunteers participated. About 79% were females, 91% were whites, 56% were married, 86% had college education, and 46% living alone. Mean age was 70.7 (SD=10.10). Overall there were no differences between villages on sources of health information, topics of interests, preferred day or time of the week, frequency or delivery mode of the program. Data showed that overall, on a 5-point Liker scale, the most frequent sources of health information were doctors / nurses (3.56), Internet (3.28), and newsletters / magazines (3.26), with social media among the lowest (1.78). The most interested topics were keeping my community healthy (89%), giving back and help others (87%), and brain health (82%). Talking about early detection of cancers was, however, among the least interested topics (56%). Monday (62.2%) was the best day of the week, with afternoons (53.3%) being the most preferred time for health promotion programs. Most desired program frequency was on a weekly basis (40%) and delivered in small group modes (78%). Discussion: Current findings highlight frequent sources of health information and most interested health topic areas with recommended health program delivery day, time, frequency, and mode among community-dwelling older adults. Results have implication on planning effective community-based cancer prevention programs for community-dwelling older adults.

Board 205

PREDICTORS OF DEPRESSION AND PTSD DURING THE COVID-19 PANDEMIC

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

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



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

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

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

Board 206

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

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

Introduction: Self-esteem (i.e., a person's confidence in their own abilities and worth) is an important indicator of future success (i.e., academic, career, and personal success) in current high school students. High school students report having exceptionally low self-esteem when dissatisfied with their current life circumstances (e.g., parental or peer relationships, past or current trauma, intrinsic and extrinsic academic pressure, etc.). Current literature on self-esteem and life satisfaction has been primarily conducted on adult and older adult populations. Looking at self-esteem and life satisfaction in high school students can further our understanding of how self-esteem and life satisfaction are related, allowing us to find solutions for improving both. Purpose: This study aims to examine the relationship between satisfaction with life and selfesteem levels amongst high school students enrolled in physical education classes. We hypothesized that satisfaction with life will predict high school students' self-esteem. Methods: Thirty participants (male=22, female=8, mean age=15.8±1.06 years) completed two surveys; the 5-item Satisfaction with Life Scale and Rosenberg Self-Esteem Scale. A Pearson's correlation analysis was run followed by a simple linear regression analysis to test if satisfaction with life significantly predicted self-esteem. Results: Self-esteem scores averaged 28.6±5.3 (of 40), while satisfaction with life scores averaged 25.1±6.4 (of 35). Self-esteem and satisfaction with life were positively correlated (r=0.41, p=0.012). Satisfaction with life significantly predicted 17% of the variance in self-esteem, F(1,29)=5.72, p=0.024. For every one-point increase in satisfaction with life, self-esteem increased (β = 0.412). Conclusion: Satisfaction with life is positively correlated with and predicts 17% of variance in self-esteem amongst high school students. Future studies should examine this relationship over time and explore how this may differ depending on peer influence and family socio-economic status. Future research should also examine if satisfaction with life shares a relationship with adolescent cognitive performance.



Board 207

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

Mandy N. Spadine & Megan S. Patterson

Purpose: The Tripartite Influence Model proposes that peer, parental, and media influence affect body image and eating disturbances. This study investigated social relationships that could intensify fad diet use among college students. Multilevel modeling determined individual-, dyadic-, and network-level factors related to college students connecting with people who 1) make them feel guilty about their diet, and 2) make them feel good about their looks.

Methods: 1,178 dyadic relationships were explored between 239 undergraduate students and their network ties. Participants completed an online survey and were asked about personal attributes (i.e., body satisfaction, fad diet use) and up to five people they felt close to in their life. Participants reported fad diet use, level of support concerning health goals, diet advice provided and meal preparation support for each of their network ties. Also, participants reported guilt they feel from ties about eating behavior and the degree to which a network ties makes them feel good about their looks.

Results: Students who reported higher body dissatisfaction (β =0.01, p<.001) and having an egocentric network composed of more fad dieters (β =0.004, p<.001) were more likely to be connected to people who induced guilt about their diet. Network ties who offered the participants more health support were less likely to induce guilt (β =-0.07, p=.014). Ties who provided the ego more support (β =0.40, p<.001), those who the ego went to for food advice (β =0.07, p=.017) and grocery shopped or prepped meals with (β =0.06, p<.029) were more likely to make the ego feel good about their looks.

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

Board 208

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

Mandy N. Spadine & Megan S. Patterson

Purpose: Although fad diets have existed for centuries, changes in social influence have impacted their popularity and spread. College students are especially susceptible to peer influence, and dietary behaviors established during college years are likely to be maintained throughout the students' life course. Therefore, the purpose of this study was to examine individual-level health factors and egocentric network characteristics related to fad diet use among college students.

Methods: 239 undergraduate students completed an online questionnaire and were asked to provide information regarding fad diet use, eating patterns, and egocentric networks. Participants nominated a collective 1,178 social ties and indicated attributes such as demographic and fad diet information for each. Egocentric network variables were calculated using E-Net. Descriptive



statistics and a three-step hierarchical binary logistic regression analysis predicting individual fad diet use were conducted in SPSS version 26.0.

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

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

Board 209

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

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

Background. Although Pro-Choice and Pro-Life are synonymous with abortion ideology, empirical assessments of how people communicate personal abortion views are lacking. Advances in bigdata science now afford opportunities to study words, or patterns of words, that may denote inflexible and/or rigid ways people communicate beliefs. Purpose. This pilot study applies Natural Language Processing (NLP) methods to compare qualitative interview transcripts about abortion beliefs against a lexicon comprised of n-grams (or a series of words) indicative of cognitive distortions. Cognitive distortions are linguistic markers used in Cognitive Behavioral Therapy (CBT) to identify inflexible or rigid thinking. Methods. We ran interview transcripts against a cognitive distortion lexicon and tallied the number of cognitive distortions spoken per interview divided by interview length to standardize our findings. Results. We found that people who strongly identified as Pro-Choice or Pro-Life used more cognitive distortions to express their views than people who identified as equally Pro-Choice and Pro-life or did not associate with either Pro-Choice or Pro-Life labels. The three most represented classes of cognitive distortions included (1) dichotomous reasoning (or, black and white thinking e.g., ... abortion is always wrong) (2) mind reading (or, believing one's views are mirrored in others, e.g., ..., you know what I mean when I say abortion is awful) and (3) normative thinking (or, expressing one's views as morally correct e.g., ... I think the government should never intervene when it comes to abortions). Discussion & Conclusion. Our findings suggest that polar abortion views may be grounded in inflexible thinking patterns that suggest strong attachment to their beliefs. By contrast, people with moderate or uncertain abortion views may be more open-minded or conflicted in their beliefs. These findings suggest strong attachment to social issues may hamper the ability to think openly about the issue or consider points contrary to one's own belief system.



Board 210

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

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

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

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

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

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

Board 211

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

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

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



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

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

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

Board 212

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

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

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

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

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

Conclusion: This study explores the social support received by ESA owners in addition to the support they experience from their ESA. Results suggest parents and other animal owners



provided the highest level of support provision to those who own ESAs. Future studies could investigate how to improve support provision through peer/friendship ties, particularly when ESA owners are residential college students likely surrounded by peers. Connecting ESA owners to one another, or to other pet owners, could be an important starting point in creating socially supportive network ties for ESA owners.

Board 213

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

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

Purpose: Physical activity (PA) is essential for physical, mental, and emotional health; however, few adults engage in enough PA for health benefits. Group environments such as those established in CrossFit can promote sustained exercise habits through social influence, support, and norms. This study aims to examine possible social influences on PA for adults participating in CrossFit.

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

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

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



Board 214

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

Ashley Khanhkham & Tyler Prochnow

Purpose: As more adolescents and young adults become involved in online gaming, it is important to explore online gaming's effects on mental health. Online games connect people to meet and interact, providing young adults with social opportunities they might not have otherwise. During the COVID-19 pandemic, many people were isolated through stay-at-home orders and social distancing. With more people staying at home, there was more opportunity to become involved in online gaming. This presentation uses social network analysis to investigate the relationship between sense of community, support, and mental health among a network of online gamers during the COVID-19 pandemic. Methods: In March 2020, members of an online gaming website were asked to report demographic information, online game hours, depressive symptoms, online social support, "in-real-life" (IRL) social support, and sense of community online. Members were also asked to nominate those in their gaming network with whom they spoke to about important life matters. Linear network autocorrelation models (LNAM) determined the association between variables while controlling for the effects of the network. An LNAM was used to determine if online gaming participation was significantly associated with depressive symptoms. Results: Gamers' depressive symptoms were significantly associated with online support (B=3.41, p=.01), IRL support (B=-3.23, p<.01), age (B=0.17, p=.04), and hours spent on the gaming website (B=-0.11, p=.08), yet not sense of community online (B=1.16, p=.35). Additionally, there was not a significant association between a gamer's depressive symptoms and the depressive symptoms of the users they chose to discuss important life matters with online (B=-0.01, p=.78). Conclusions: Although gamers' depressive symptoms were not linked with having a sense of community online, other parameters show the mental health benefits of participating in online gaming. These results suggest online games provide opportunities for young adults to make connections amidst the COVID-19 pandemic stay-at-home orders.

Board 215

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

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

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

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

Results: Individual and network-level properties were related to perceived increases in use of tobacco products (R2=.40, p<.001) and illicit drugs (R2=.40, p<.001) during COVID- 19 pandemic.



Perceived increases in tobacco use was inversely associated with respondents' vaccination status (β =-.60, p=.01) and positively correlated with more alcohol consumption among network members (β =0.58, p=.02), and more loneliness across network members (β =0.35, p=.03). Perceived increases in drug use were associated with more drug use across network members (β =.59, p<.001) and greater depression reported among network members (β =-0.83, p=.02).

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

Board 216

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

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

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

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

RESULTS: Students reported significantly more depressive symptoms (r^2 =.13) when one's network included depressed supporters (β =.32, p = .01). Students also reported greater sense of isolation (r^2 =.13) when they perceived their network to be lonely (β = .39, p=.02) or healthy (β = .16, p=.05). Likewise, students reported more hopelessness (r^2 =.14) when they perceived their network to be depressed (β = .35, p=.01), healthy (β = .15, p=.04), or not vaccinated (β = .19, p=.03).

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



Board 217

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

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

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

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

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

Results: QAP correlation results indicated a significant, moderate association between the collaboration and funding networks (r=.35). MR-QAP results indicated a significant model associated with the collaboration network (R2=.37). Receiving funds from an organization (β =3.92, p<0.001), higher activity (β =4.07, p<0.001), higher perceived ability of the coalition to move from talk to action (β =1.09, p<0.01), and similar perceptions of trust increased likelihood of collaboration (β =6.12, p<0.001). Organizations of the same type were less likely to collaborate (β =7.66, p<0.001).

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

Board 218

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

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

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



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

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

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

Board 219

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

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

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

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

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



Discussion: Among national samples spanning multiple years (2017-2020), marijuana use was significantly associated with chronic health conditions, such that likelihood of being a marijuana user increase significantly as the number of chronic health conditions increased. Given the association between having a chronic health condition and marijuana use, future research should seek to determine whether medical or recreational reasons are influencing marijuana use.

Board 220

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

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

Purpose: Throughout the COVID-19 pandemic, many facets of daily have been altered, due to work-from-home, lockdown, and social distancing recommendations. The purpose of this study was to track self-reported physical activity and unhealthy dietary behaviors across one year of the COVID-19 pandemic. Methods: Participants (n= 75) completed monthly online surveys about their overall health behaviors for 12 months beginning in June 2020. Moderate (MPA) and vigorous physical activity (VPA) were measured using the International Physical Activity Questionnaire (IPAQ), while unhealthy dietary behaviors (DB) were measured using the Rapid Eating Assessment for Participants (REAP-S) scale; both have been extensively tested and validated elsewhere. Longitudinal trends were examined using a time series regression model. Results: Across each outcome variable, significant longitudinal trends were observed, with major inflection points at approximately four months into the pandemic. Participants' MPA significantly decreased across the 12-month period (p <.001), following a quadratic trend. Overall participant VPA also decreased across the entire year (p < .001). Participants' DB became less healthy across the pandemic year (p < .001), again with a quadratic trend. Conclusions: Across one year of the pandemic, individuals' physical activity levels and dietary behaviors declined. Interestingly, for both MPA and unhealthy DB, major inflection points were observed at approximately the 4-month period (i.e., September 2020). Similarly, VPA declined across the pandemic year, with only a minor spike around the same 4-month period. These data indicate that participants became generally less active and began eating more unhealthy food items. Our results suggest individuals' may have engaged in more healthful behaviors in the earliest periods of the pandemic. but these behaviors were not maintained as long-term habits. These trends also mirror demotivation to follow public health recommendations (i.e., pandemic fatigue) markers and may suggest an interrelated nature between wider COVID messaging and health behaviors.

Board 221

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

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

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



Methods: Ten variables were selected through a comprehensive literature review, expert input, and data availability to comprise a Childhood Obesogenic Environment Index (COEI). Using publicly available sources, county-level data for four physical activity variables (exercise opportunities, school proximity, walkability, crime) and six nutrition variables (grocery stores, farmers markets, fast-food restaurants, full-service restaurants, convenience stores; births at baby-friendly hospitals) were collected for all counties in the US (n=3,142). Variables were ranked and allocated a percentile for each county (with positive environmental variables reverse scored) and a total obesogenic environment score was created by averaging variable percentiles. One way ANOVA analyses were used to assess differences by tertiles of county-level median household income (low/intermediate/high), percentage non-Hispanic White residents (low/intermediate/high), and rurality (rural/micropolitan/metropolitan).

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

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

Board 222

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

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

Purpose: The purpose of this study was to develop and evaluate the reliability and validity of self-efficacy and intentions measures for time spent in nature (TSN). TSN is related to improvement in psychological well-being and health, yet most people spend very little time in such settings. Theory-based interventions based on the Theory of Planned Behavior have been effective in increasing physical activity, a related behavior, and may be one mechanism to increase TSN. However, Theory of Planned Behavior scales for nature have not yet been developed and are needed to develop effective interventions. Methods: Scales were developed using a sequential nine-step procedure: identification of the domain and item generation; content validity; pre-testing of questions; sampling and survey administration; item reduction; extraction of factors; tests of dimensionality; tests of reliability; and tests of validity. The 14-member multidisciplinary, researcher and practitioner investigative team generated 50 unique items for self-efficacy and 24 unique items for intentions. After subjecting items to content validity and pre-testing, item sets were reduced to 21 assessing self-efficacy and 9 assessing intentions. A nationwide sample of 2,109 adult participants (49.7% female, Mean Age = 58.1; 59.8% White, 18.4% Hispanic, 13.3%



Black) answered these items via an on-line survey. Results: Using split-half measures, principal components analysis indicated a one-factor solution for both scales. The factor structure was upheld in confirmatory factor analyses and had high internal consistency (α = .93 self-efficacy; .91 intentions). The scales were moderately correlated with each other (r = .56, p < .001) and were strongly related to TSN with large effect sizes (eta2 > .20). Conclusions: The study resulted in reliable and valid self-efficacy (14 items) and intentions (8 items) scales that can be used to develop future theory-based interventions to increase TSN and thereby improve population health.

Board 223

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

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

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

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

Results: From baseline to follow-up, students significantly increased their awareness of the risks associated with marijuana use and of having sex while under the influence of alcohol/drugs (p<.001), decreased the number of days they drank alcohol (p=.012), and increased their confidence in asking their partner to use a condom (p=.030). Repeated measures ANOVAs did not reveal any significant differences in outcomes for students who participated in programmatic activities in-person before COVID compared to those who participated after the COVID-related modifications were implemented.

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



Board 224

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

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

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

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

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

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

Board 225

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

Tapati Dutta & Jon Agley

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

Methods: Elite interviews were conducted between April and June 2021 with the president, provost, dean of student engagement, human resources director, and chief of police. Interviewees were purposively selected due to their positions of authority. Each one-hour interview used a



semi-structured guide for standardization and was conducted either virtually or in-person while following COVID-19 protocols. The lead author's interviewing expertise and insider position as faculty facilitated trustworthy and transparent conversations. The general inductive method was used to identify categories and codes within the transcripts. The second author reviewed the coded text to verify conceptual plausibility of findings.

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

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

Board 226

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

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

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

Methods: Six food environment variables (access to grocery/superstores, farmers markets, fast food, full-service restaurants, convenience stores, and breastfeeding-friendly facilities) and four PA environment variables (access to exercise opportunities and schools, walkability, and violent crimes) were included in the childhood obesogenic environment index (COEI), as is described elsewhere (Kaczynski et al., 2020;doi:10.1186/s12966-020-00984-x). Total COEI, PA environment, and food environment index scores were generated by calculating the average percentile for related variables. Urban Influence Codes (UIC; metropolitan, micropolitan, rural), Rural Urban Continuum Codes (RUCC; metropolitan, non-metropolitan), and U.S. Census Bureau percent rural (majority urban, intermediate, majority urban) categories were used. Oneway ANOVA was used to detect urban-rural differences.



Results: Greatest urban-rural disparities in COEI were seen using RUCC (F=310.1,p<.0001), but significant differences were also found using percent rural (F=242.8,p<.0001) and UIC (F=175.9,p<.0001). For food environments, greatest disparities were seen using percent rural (F=49.5,p<.0001), and significant differences were also found for UIC categories (F=7.3,p=.0007) but not RUCC. For PA environments, greatest disparities were seen for percent rural (F=1041.2,p<.0001), and significant differences were identified for RUCC (F=617.9,p<.0001) and UIC (F=407.0,p<.0001). Comparing variables within the rural category, differences were seen for COEI (F=2.3,p=.0309) and PA environments (F=7.5,p<.0001), but not food environment.

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

Board 227

CHANGES IN BEHAVIORAL HEALTH OUTCOMES FOR MARGINALLY HOUSED YOUTH IN DAYTON, OH

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

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

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

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

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



Board 228

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

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

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

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

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

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

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

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

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

Methods: We utilized data from Dating it Safe, an ongoing longitudinal study begun in 2010 that collects annual data from 1,042 ethnically diverse adolescents originally enrolled in 7 Texas public



high schools. We used three waves of data (T4, T5, and T6) in which 776, 698, and 758 participants were retained. The mean age of the participants was 18 years (SD=0.79) at T4 where 32.1% self-identified as Hispanic, followed by 29.9% White and 25.2% African American. Two separate cross-lagged panel analyses were employed in STATA16 to examine how sexting is associated with CDA victimization and perpetration, respectively.

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

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

Board 230

ECOLOGICAL GRIEF IN THE FERNALD COMMUNITY COHORT: A PILOT STUDY

Rachael D. Nolan & S. Pinney

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



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

Rachael D. Nolan & Christopher Johnson

Purpose: The purpose of this mixed-methods study was to examine the awareness and utilization of annual cancer screenings as secondary prevention measures for top (breast) and bottom (cervical, uterine, ovary) cancers, as well as cancer risk for both cancer types among persons who identify as trans male/masculine and who were assigned female at birth (AFAB). Methods: A semi-structured interview guide was used to conduct a single 1-hour, audio-recorded interview via telephone with each participant. The interviews were used to examine participants' level of awareness and utilization of annual health screenings and to assess self-perceived risk for both cancer types. An adapted version of the valid and reliable Cancer Awareness Measure (CAM) was used to assess perceived warning signs, symptoms, reasons for not being screened, and factors related to both top and bottom cancer development. Results: Participants (n=6) who completed the CAM survey demonstrated adequate ability to identify warning signs and symptoms of cancer risk. Most common reasons provided for not being screened were lack of inclusivity and worry about the diagnosis. Factors believed to most influence cancer development were nicotine use, smoking, STDs, and alcohol misuse. Most participants (n=5) reported being on hormonal therapy (HRT) for at least 1-year. Qualitative analysis (n=2) illuminated issues with health literacy and cancer screening behavior, lack of self-risk awareness, a need for specific standardized screening recommendations and evidence-based guidelines on the unique aspects of transitioning among trans male/masculine/AFAB persons. Conclusions: Participants, as a whole, were able to identify cancer risk but not able to discern self-risk awareness, which suggests some discontinuity between self-perceived and population-specific cancer risk. To this point, future research on the health and cancer risks associated with prolonged use of HRT is warranted. as are more inclusive and explicit cancer screening recommendations and best-practices specific to transitioning for trans male/masculine/AFAB persons.

Board 232

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

Misty Pacheo

Purpose: The purpose of this study was to assess the factors that may exist regarding viral suppression and satisfaction with care among Native Hawaiians and Other Pacific Islanders (NHOPI) living with HIV/AIDS during the beginning stages of the Covid-19 pandemic in rural Hawaii. Methods: AIDS Service Organizations throughout Hawaii were asked to help recruit NHOPI clients (18 years of age and older). Utilizing the behavioral model for vulnerable populations (BMVP), semi-structured interviews (N= 16) were conducted. Data analysis was done utilizing the reflexive thematic method. Results: Factors from all domains of the BMVP were represented within the four themes identified: 1) AIDS Service Organizations play a major role



during times of crisis; 2) Mental health takes priority in overall health; 3) The tables are turned when it comes to disease infection; and 4) Telehealth is crucial and should be here to stay.

Conclusions: It is evident from the qualitative findings that to achieve satisfaction with care and viral suppression, attention to all three domains of the BMVP are necessary (predisposing, need, and enabling). Having HIV/AIDS makes an individual more vulnerable during times of an emergency, like the Covid-19 pandemic. A plan needs to be in place to make sure they get what they need to remain virally suppressed; with telehealth and mental health support being prioritized.

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

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

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

Methods: We conducted a statewide needs assessment survey in 2021 to discern how tobacco use was being addressed at Texas organizations that provide treatment or services to individuals with SUDs. One hundred forty-eight employees from substance use treatment centers (SUTCs; n=57), Federally Qualified Health Centers (FQHC; n=14), local mental health authorities (LMHAs; n=69), community centers (n=2), and private practices (n=6) completed the survey. Respondents were asked to report on their organization's LDCT eligibility screening and referral practices.

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

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



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

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Purpose: Health-related quality of life (HRQoL) is a multidimensional assessment of one's physical and mental health. Homelessness is associated with stressors that can reduce HRQoL. Social support is the availability of individuals, or resources provided by individuals, to cope with stress. Interpersonal social support may be important in buffering the negative implications of stress on HRQoL. The purpose of this study was to examine this association in a marginalized group known for high rates of physical and mental health comorbidities: adults experiencing homelessness. Methods: Participants (N=581; 63.7% men; M age =43.6+12.2) were recruited from homeless-serving agencies in Oklahoma City. Social support was measured with the 12item Interpersonal Support Evaluation List. HRQoL was measured using self-rated health, the number of poor mental and poor physical health days over the last 30 days, respectively, as well as the number of limited activity days as the result of poor mental and/or physical health. Perceived stress was assessed using the 4-item Perceived Stress Scale. The potential moderation effect was examined by assessing the interaction term of social support and stress in linear regression analyses controlling for sex, age, months homeless, race, education, health insurance status, serious mental illness diagnosis, and recruitment site. Results: There were significant interaction effects of social support and stress, whereby social support significantly mitigated the association of stress with days of poor physical health, days of poor mental health, and days of limited activity (all p's ≤ .05). Conclusions: Results add to a growing literature on the potentially protective benefits of social support on HRQoL, extend them to a large sample of adults experiencing homelessness, and demonstrate the significance of this moderating effect of social support above the influence of several sociodemographic variables. Future work should determine if interventions can buffer the effects of stress on HRQoL among this marginalized population.

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

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

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



study examines the effects of simultaneous use of activity trackers by humans and their dogs on PA of humans.

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

RESULTS: Over the 8-week study period, light physical activity significantly differed between the two groups (p=0.048; chi-square=3.896; df=1). Dog owners in the group that used both human and dog activity trackers compared to dog owners in the group that used only human activity trackers completed more light physical activity. For sedentary minutes, there was no significant difference between groups. There were only significant differences by day (p=0.036; chi-square=75.274; df=55), where sedentary minutes decreased over time. The interactions were not significant.

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

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

Wasantha Jayawardene & Elizabeth Richards

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

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

Results: This survey has a 7.9% completion rate (n=1,585). A majority of students self-rated their health as good or higher (85.9%). When needed, 48.5% of participants reported they often or always get social and emotional help. Whereas 15% reported rarely or never receiving the help they need. Students also reported experiencing one (27.1%) or two or more losses (9.2%) over the past year. On average, participants reported using tobacco (mean=5.1; standard deviation [SD]=9.9), alcohol (mean=4.3; SD=5.4), and drugs (mean=2.8; SD=6.8) days over the past 30 days. Compared to females, males reported significantly higher number of days of using alcohol (5.3 vs 3.3; t=7.38; p<0.0001) and tobacco (5.9 vs 3.9; t=2.89; p=0.004). Compared to Experiencing a loss was associated with increased use of all substances with the greatest



increases found with experiencing two or more losses compared to none (smoking=1.0 days; drinking=4.6 days; drug use= 2.4 days; p<0.05).

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

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

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Purpose: The current study aims to describe skin cancer-related content on Instagram, including the origin (i.e., source characteristics) and attributes of these social media posts (i.e., content characteristics). The study also seeks to reveal content themes in terms of skin cancer risks, treatment, and prevention. Methods: Crowdtangle, a tool owned and operated by Facebook, was used to retrieve content from publicly available accounts on Instagram for the 30 days preceding May 14, 2021. Out of 1,000 posts reviewed, N=591 (59.1%) met the inclusion criteria and were manually/human coded and analyzed. Two raters coded the posts independently. The median Cohen's Kappa was .78, reflecting substantial agreement between raters on identifying codebook constructs. Results: Profiles representing organizations were slightly more common than individual accounts: n=321 vs 256 (54% vs 43%). The type of media included in the posts varied, with posts containing photos occurring more frequently (n=315, 53%), compared to posts containing infographics (n=233, 39%), or videos (n=85, 14%). Melanoma was the most mentioned type of skin cancer (n=252, 43%). Prevention methods were discussed in Instagram posts more often than risk factors (n=404, 68%) vs (n=271, 46%). The "sun" was coded as the top-named risk factor for skin cancer (n=227 posts, 88.7%), followed by artificial tanning (e.g., indoor tanning; n=48, 18.8%), and genetics (n=15, 5.9%). While sunscreen was the most commonly identified prevention method (among posts discussing skin cancer prevention methods), getting a checkup from a physician, wearing protective clothes, and self-examinations were included in 33%, 25%, and 13% of posts. Interestingly, other and quite important prevention methods were infrequently mentioned in reviewed posts, representing missed opportunities. For instance, one of the more critical prevention methods, avoiding ultraviolet (UV) radiation, was included in only 10% (staying away from the sun) and 5% (not using tanning beds) of posts. Only 80 out of 592 posts (14%) provided a citation from a medical source. Conclusions: This study's findings highlight the potential role of Instagram as a platform for improving awareness of skin cancer prevention and risks. We believe social media is a promising venue for researchers and dermatologists to dedicate their efforts and presence in widely reaching the public to educate about skin cancer and empower prevention. Such innovative efforts are sorely needed, given the rise in skin cancer cases in the U.S. and worldwide.