

Board 101

Sexual Behavior Motivation and the Risk and Protective factors for STI among MSM with multiple sex partners: An application of designing an educational microfilm

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Purpose: A two-year study, aiming to evaluate the effects of a microfilm-based brief sexual health intervention for men who have sex with men (MSM) at high risk for STIs has been hosted by the first author. The current abstract presented the results from the first-year work, aiming to assess the educational needs of MSM based on the "information-motivation-behavioral skills model"(IMB model), as the basis for making the microfilm.

Methods: Respondents were recruited at an STD clinic and from snowball sampling in Taiwan in 2022. A total of 7 MSM, aged 26-33, completed one-on-one online interviews with semi-structured interview outlines. All 7 respondents gave informed consent. All interviews were transcribed. A qualitative method of Thematic Analysis was applied to extract themes from the texts. Triangulation congruence was also used to improve the reliability of the study.

Results: There were three main themes followed by several subthemes emerging from the texts. 1) The motivation of having multiple sex partners, including releasing sexual desire, looking for intimate feelings, and searching for sexual identity and acceptance from other homosexuals. 2) The risk factors of STI, including a lack of a sense of self-protection, unstable relationships, the nature of internet dating heightening the possibility of having sex, and using drugs during sex. 3) The protective factors, including a sense of protecting self and others, looking for a committed relationship and stable life, knowing how to negotiate and reject risky sexual behavior, regular screening, and rejecting drugs during sex. Embedding aforementioned themes into the script of the microfilm, a 15-minute educational microfilm entitled "Finding Love, Finding Self" was shot in June and was in the can in July, 2022.

Conclusions: It is productive to apply the IMB model to the field of sexual health communication. The research team is writing a one-hour lesson plan based on the film and will implement and evaluate it soon.

Board 102

The potential for college campus prevention programs to disrupt the adverse childhood experiences and past 30-day substance use association among diverse students

Shahverdi, Abnous; Forster, Myriam; Alhassan, Sarah; Dahlman, Linn; Vigil, Jorge; Rainisch, Bethany

Background: Research has demonstrated a robust link between adverse childhood experiences (ACE) and substance use among college students. However, whether perceived risk of harm from substance use can mitigate the negative effects of ACE on substance use has not been well researched. The current study assessed whether enhanced perceptions of perceived risk can offset the association between ACE and substance use.

Methods: Data are baseline responses from diverse students (N=752) enrolled in a novel, mHealth prevention program offered at a Hispanic Serving Institution in southern California. Negative binomial regression models assessed the direct effects of cumulative ACE and

perceived health risks associated with substance use on past 30-day alcohol and marijuana use; and estimated if perceived risk moderated the ACE-substance use relationship.

Results: Every additional adversity, was significantly associated with a 1.08 and 1.14 higher incident rate ratio (IRR) of past 30-day alcohol and marijuana use (95% CI: 1.03-1.14, 95% CI: 1.02-1.28, respectively), adjusting for age, gender, ethnicity, perceived prevalence of substance use, and socioeconomic status. Higher perceptions of health risk were associated with a 0.86 and 0.45 lower IRR of past 30-day alcohol and marijuana use (95% CI: 0.78-0.96, 95% CI: 0.36-0.58, respectively), adjusting for covariates. Students with ACE exposure, but low perceptions of the health risks associated with marijuana use had higher past 30-day marijuana use than students with ACE exposure and high perceived health risk of marijuana use ($p < 0.05$).

Conclusion: ACE and perceived risk of harm predicted past 30-day alcohol and marijuana use among diverse students. High perceptions of risk from marijuana use offset the negative impacts of ACE for marijuana use. Our findings underscore the importance of programs that provide accurate health information and the benefits of extending the reach of prevention programs to vulnerable student populations.

Board 103

The effectiveness of a novel multi-module prevention web-app on enhancing perceived health risk associated with substance use among diverse college students at a Hispanic serving institution in Southern California

Shahverdi, Abnous; Forster, Myriam; Alhassan, Sarah; Dahlman, Linn; Vigil, Jorge; Rainisch, Bethany

Background: Given the high prevalence of substance use during the college years and students' preference for mHealth technology, it is important to assess the effectiveness of innovative college web-based prevention programs. The current study examines whether a novel multi-module prevention web-app delivered to diverse students attending a Hispanic Serving Institution in southern California can enhance students' perceptions of the health risks, a robust protective factor, of substance use.

Methods: Data are pre and 30-day post-test responses from students (N=752) randomly assigned to either: a) a 5-week multi-module web-app prevention (n=244) group; b) comparison (n=251) group; or c) control (n=257) group. Program effects on perceptions of the health risks associated with alcohol, marijuana, and illicit substance use (i.e., prescription and non-prescription opioid use) across the three groups were assessed.

Results: At baseline, there were no differences in perceived risk of harm across groups. At posttest, the risks associated with illicit substance use for the prevention group was nearly seven times that of the comparison group, and almost 21 times that of the control group (Cohen's $d = 0.21$ vs 0.03 vs 0.01 , respectively). Similarly, the perceived risks associated with alcohol use for the prevention group was twice that of the comparison and control group (Cohen's $d = 0.20$ vs 0.09 vs 0.10 , respectively). The perceived health risks associated with marijuana use among the prevention group was one and a half times that of the comparison group, and eight times that of the control group (Cohen's $d = 0.49$ vs 0.35 vs 0.06 , respectively).

Conclusion: Our results suggest that mHealth technology, such as the present multi-module web-app, delivering interactive prevention materials can significantly increase perceived risks associated with substance use among diverse college students. Future studies should assess the

5:30 pm – 6:30 pm

benefits of this sustainable and innovative web-app across campuses that serve diverse, historically under-represented student populations.

Board 104

Examining the Relation between COVID-19 and Alcohol Behaviors among College Students

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Purpose: The COVID-19 pandemic has influenced college student alcohol consumption. It is unknown if a COVID-19 diagnosis relate to drinking behaviors. Therefore, the purpose of the current study was to examine the relationship between COVID-19 diagnosis, drinking behaviors, and attitudes towards alcohol consumption. In addition, is COVID-19 diagnosis related to future alcohol consumption?

Methods: Students (n=3499) were recruited for a multiple health behavior study (T1 fall 2021; T2 spring 2022). Participants were predominantly Caucasian; average age of participants was 19.35 (SD=1.63).

Results: Approximately, 25.1% (n=879) reported testing positive for COVID-19 whereas an additional 14.6% (n=512) indicated that they had the symptoms but did not test positive. Approximately, 86.7% of the participants had been vaccinated. When asked why they got vaccinated, 11.4% indicated that it was so that they could go to the bars whereas 33.5% reported getting vaccinated so that they could have an active social life. People who tested positive for COVID-19 drank significant more days per week, drank more drinks on a drinking occasion, and had a higher peak drinking occasion that those who did not think they had COVID-19. In addition, those who were positive for COVID-19 were more likely to drink for social, coping, enhancement, and conformity reasons than those who did not have COVID-19. Having COVID-19 at T1, predicted 6 month (T2) drinking quantity, frequency, problems, motives, and centrality.

Conclusions: It seems that COVID-19 status predicted current and future risky drinking behaviors. It may be a proxy for risky health habits in general. Given that alcohol consumption can impair immune system functioning, this relationship warrants future examination. Intervention efforts might use this information to craft interventions that target more risky alcohol consumption among college students.

Board 105

Impact of a public health awareness campaign on patients' perceptions of expanded pharmacy services in South Dakota using the Theory of Planned Behavior

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Purpose

Community pharmacists can be an important but often underutilized public health ally in managing diabetes and cardiovascular disease (CVD), particularly in rural areas. The objective

5:30 pm – 6:30 pm

of this project was to impact public awareness of diabetes and CVD related pharmacy services and evaluate intent to use pharmacy services.

Methods

A non-randomized pre-post study design using a modified theory of planned behavior (mTPB) to assess knowledge, attitudes, perceived norms, perceived control, and their influence on intention was completed. A 73-item survey was administered to a convenience sample (N=172) across South Dakota. The “Your Pharmacists Knows,” campaign included a 30 second advertisement which was distributed via TV, live streams, print and media announcements posted at pharmacies, and print materials distributed to participants. Regression models were conducted using age, gender, race, education level, population size of the community, and insurance status as predictors for mTPB constructs. Logistic regression was conducted to assess intent and utilization.

Results

The most common predictors across mTPB constructs were female gender and higher education level ($p < .001$), indicating the need to refine messaging to males and those with lower education. All mTPB constructs were significant predictors of intent to use services ($p < .001$). Pre-existing knowledge and participant’s perceived control (the participant’s perception of ease of access for services) had the largest influence on intent. Additionally, there was significant improvement in post-campaign service utilization ($p < .001$).

Conclusion

This campaign positively influenced intent to seek and utilize services in rural communities often characterized as health profession shortage areas. In these communities pharmacies may be the only healthcare option for miles. Furthermore, underutilization of expanded services can compromise healthcare outcomes and costs. Through targeted campaigns such as these, patients with diabetes or CVD may find access to services to better manage their conditions.

Board 106

Tobacco use interventions among Texas healthcare centers providing behavioral health care for sexual and gender minority patients

Le, Kathy; Taing, Matthew; Britton, Maggie; Chen, Tzu-An; Parent, Michael C; Tami-Maury, Irene; Martinez Leal, Isabel; Rogova, Anastasia; Kyburz, Bryce; Reitzel, Lorraine R

Purpose: This study evaluated the use of evidence-based practices (EBPs) to address tobacco use within healthcare centers providing behavioral health (eg, mental health/substance use) care to patient populations that include individuals identifying as sexual and/or gender minorities (SGMs). Individuals with behavioral health needs disproportionately use tobacco products, as do individuals who identify as SGMs. This double-disadvantage accentuates the need for tobacco-related EBP use within these healthcare settings.

Methods: Care providers from 75 SGM-serving healthcare centers across Texas were surveyed on their use of EBPs: a tobacco-free workplace policy that disallowed use indoors and out and the regular provision of tobacco screening and cessation interventions for patients.

Results: About half (n=36) of centers had a comprehensive tobacco-free workplace policy, 80.82% had regular screening and documentation of tobacco use at intake, and 57.53%

5:30 pm – 6:30 pm

provided a template to help providers perform tobacco screenings. Overall, 70.67% of respondents regularly asked patients about smoking status, 69.33% advised patients to quit, 64.00% assessed patients' interest in quitting, 58.67% assisted patients with quit attempts, and 36.00% arranged follow-up. Among participating centers, 30.67% employed ≥ 1 tobacco treatment specialist/s and 73.91% employed ≥ 1 prescriber/s onsite. Care providers rated their perceived ability to tailor interventions for special populations, which included SGMs, at 4.63 ± 2.59 (0=very low; 10=very high).

Conclusions: While EBPs are provided to some extent at healthcare centers serving SGMs with behavioral health needs, there remains room for improvement in the implementation of tobacco-free workplace policies, standardization of tobacco screenings through template use, provision rates of the 5A's (particularly for assisting and arranging), usage of tobacco treatment specialists, and improving the ability of centers to tailor EBPs for SGMs to mitigate tobacco use and disease disparities. National guidelines recommend integration of tobacco control EBPs within healthcare centers; initiatives to increase tobacco use disorder screening/intervention are needed in many settings.

Board 107

Primary Care Physicians' Rhetorical Strategies for Addressing COVID-19 Vaccine Hesitancy

Tasmiah Nuzhath

Objective: To explore the strategies that primary care physicians use to address patient COVID-19 vaccine hesitancy.

Method: We administered an online survey to 625 primary care physicians from May 14 to May 25, 2021, to assess the messages that primary care physicians use to convince hesitant patients to get vaccinated against COVID-19. 589 physicians from the total pool of 625 provided open-ended responses. We conducted thematic analysis on the responses based on previous research and themes identified within the data. The survey was administered online using the survey research firm Dynata.

Results: Eleven primary themes emerged from our analysis, which included: (1) physicians addressing specific concerns about vaccine safety (including costs versus benefits), (2) physicians helping patients understand what it means to remain unvaccinated, or (3) whether physicians try to connect emotionally through the use of guilt, or personal experience, (4) whether physicians use derisive language to communicate with unvaccinated patients. In addition, a small number of physicians indicated they would not attempt to persuade someone who is vaccine hesitant.

Conclusions: Our study shows that while some of the physicians used different strategies to address vaccine hesitancy, some of the physicians used harsh language or did not make any effort to reduce COVID-19 related vaccine hesitancy among their patients. Focused advocacy and training are needed to increase physician engagement in vaccine-related dialogues with their patients. Such efforts will ensure that critical opportunities for patient education and awareness-building are not missed and ensure high levels of vaccination uptake.

Board 108

5:30 pm – 6:30 pm

Systematic Examination of Methodological Inconsistency in Operationalizing Cognitive Reserve and the Relationship Between Operationalization and Cognitive Decline

Howard, Kerry, A; Griffin, Sarah, F; Rennert, Lior

Background

Cognitive decline (CD) is a growing public health concern. The cognitive reserve (CR) hypothesis offers an avenue for prevention, proposing that behaviors throughout the lifecourse produce varying levels of protection against CD symptoms. However, inconsistency in the operationalization of CR limits researchers' ability to make conclusions about behaviors that build CR. The purpose of this project was to explore the behaviors used to operationalize CR and the consequences of inconsistency.

Methods

Using data from 1366 participants in the Memory and Aging Project, we assessed life experiences corresponding to behaviors that have been used as CR proxies in the published literature. Spearman correlations examined the relationship between proxies. Generalized linear mixed effects models (GLMM) examined the relationship between proxies and global cognition from participant's annual tests.

Results

Of 27 proxies in the literature, the most frequent behaviors were educational and occupational attainment and leisure activities. Few proxies were strongly correlated: effect size $>.3$ for 25 of 351 correlations. For example, different behaviors within the leisure activities category (music and art lessons, volunteering, and traveling) showed negligible association with one another. GLMM showed that the relationship between CR and CD varied based on operationalization. Twenty of the proxies showed significant associations with CD to varying degrees, ranging from 0.51 points higher cognitive score ($p=.007$) for an increase in frequency of social activities to 2.29 points higher score ($p<.001$) for an increase in years of education.

Conclusion

There is variation in the behaviors hypothesized to build CR. We demonstrated that inability to uncover and disseminate important life behaviors stems from such inconsistency. Given lack of association between proxies, it follows that results depend on operationalization, which was supported by our analysis of relationships between CR and CD. Consistent methodology is necessary to improve the study of relevant behaviors and aid CD prevention.

Board 109

Support for a Comprehensive Indicator of Lifecourse Experiences as Alternative Methodology for Predicting Cognitive Decline

Howard, Kerry, A; Griffin, Sarah, F; Rennert, Lior

Background

The cognitive reserve (CR) hypothesis theorizes that lifecourse behaviors and experiences build to produce CR, with higher CR protecting against cognitive decline (CD) symptoms. The definition asserts multiple lifecourse experiences; however, most research operationalizes CR

5:30 pm – 6:30 pm

as single measures. The purpose of this project was to contrast the performance of lifecourse CR indicator (LCRI) to common individual operationalizations of CR in predicting CD.

Methods

We extracted 53 measures in the literature used to operationalize CR from 1366 participants of the Memory and Aging Project. Through confirmatory factor analysis, we created a LCRI incorporating the best-fitting variables for a latent CR construct. Each participant was assigned a score from retained variables and weighted by factor loadings. Generalized linear mixed effect models examined the relationship between the most common individual experiences (education, occupation, leisure activities, cognitive activities, IQ, bilingualism, physical activities, SES, physical function, and social activities) and the LCRI with CD. CD outcomes were domain scores from participants' annual tests: episodic, semantic, and working memory; and perceptual orientation and speed.

Results

The factor analysis narrowed 53 measures to 23 with sufficient fit (CFI=.905, RMSEA=.044). LCRI, leisure activities, and IQ were among the most influential CR operationalizations for all cognitive domains. Education was among the most influential for four, and occupation and cognitive activities for three. A standard deviation LCRI increase was associated with higher episodic memory (Est=2.20), semantic memory (Est=1.13), working memory (Est=2.78), orientation (Est=3.92), and speed (Est=2.32), p 's<.001.

Conclusion

A lifecourse CR indicator was more consistent in its association with higher cognitive domain scores than eight of 10 CR operationalizations from published literature. A thorough LCRI offers alternative methodology for examining the utility of CR as CD prevention. A lifecourse approach, considering the multitude of experiences that occur, may be the most faithful and comprehensive representation of the CR hypothesis.

Board 110

Impact of a self-measured blood pressure monitoring program in a free clinic setting

Raman, Shivani; Burton, William; Gimpel, Nora; Umana, Laura; Hurt, Marcus

Purpose: The purpose of this study is to assess the impact of a program combining patient education and self-measured blood pressure (SMBP) monitoring on BP control and knowledge and self-efficacy with respect to disease management in patients with elevated BP or HTN.

Methods: Adults >18 years old with elevated BP or HTN at a free clinic in north Texas were enrolled in a 3-month program in which they were provided a BP monitor, instructed to log their BP daily, and received education on HTN risk factors and management strategies. Participants were administered two surveys pre- and post-intervention: assessment of knowledge about HTN (score range 1-2; 1 = incorrect answer, 2 = correct answer) and assessment of self-efficacy for managing chronic disease (SEMCD; score range 1-10). BP logs were scanned into the electronic medical record at 1 month and 3 months. Outcome measures include knowledge assessment score, SEMCD score, mean systolic BP (SBP) and mean diastolic BP (DBP) pre- and post-intervention.

Results: Participants (n = 38) had a mean knowledge score of 1.08 (SD = 0.12) pre-intervention and 1.68 (SD = 0.33) post-intervention ($p < 0.0001$) and a mean SEMCD score of 7.80 (SD = 1.54) pre-intervention and 8.96 (SD = 1.25) post-intervention ($p = 0.0003$). Participants who completed ≥ 1 month of SMBP (n = 25) had a mean SBP of 140 mmHg (SD = 10 mmHg) at baseline and 131 mmHg (SD = 11 mmHg) post-intervention ($p = 0.0016$) and a mean DBP of 88 mmHg (SD = 7 mmHg) at baseline and 82 mmHg (SD = 8 mmHg) post-intervention ($p < 0.0001$). Data collection is ongoing.

Conclusions: Preliminary results suggest that interventions combining patient education and SMBP monitoring may be effective for improving BP control and knowledge and self-efficacy with respect to HTN management in a free clinic setting.

Board 111

Documenting online recruitment and enrollment for social media intervention research to strengthen data quality and transparency

Murray, Regan M; Chiang, Shawn; Hill, Larry; Manganello, Jennifer; Leader, Amy; Klassen, Ann; Lo, Wen-Juo; Massey, Philip

Background: Advances in technology have greatly increased the ability and ease of engaging with diverse online communities. This creates unique online recruitment and enrollment challenges, particularly related to authenticating an online user's identity and eligibility.

Purpose: To explore multiple strategies for participant recruitment and enrollment for a vaccine education program on Twitter.

Methods: Eligible participants were subject to three quality checks, including a review of contact information, eligibility and cohort data, and a Twitter vetting process. A coding structure was developed to verify participant Twitter accounts met study thresholds and passed standard bot-detection software prior to enrollment.

Results: To date, 623 Twitter accounts completed the eligibility screener. Of those, 438 accounts (70.3%) were deemed eligible. Additional quality checks resulted in the removal of an additional 304 accounts. The 304 ineligible Twitter accounts included 134 (44.1%) scammers/robots, 55 (18.1%) duplicate accounts, 55 (18.1%) nonexistent accounts, 30 (9.9%) non-U.S. accounts, 14 (4.6%) suspended accounts, 13 (4.3%) private accounts, 2 (0.7%) inactive accounts, and 1 (0.3%) blocked the study account. To date, 92 accounts have been invited to enroll in the study. Of those invited to enroll, 52 (56.5%) completed the baseline and 39 (42.4%) followed the study twitter account across 12 monthly cohorts.

Conclusions: It is imperative for health researchers to remain adaptable in pursuit of online recruitment and enrollment goals. Vetting has proved a valuable methodology for assessing the credibility of online participants. In future, participants recruited via online means should pass through numerous quality checks to ensure eligibility. For studies that rely on online recruitment and screening, failing to take additional quality checks may result in a large amount of poor-quality data. When online recruitment and screening takes place, we recommend including an enrollment and eligibility diagram to support data quality and transparency.

Board 112

Pregnancy intention and contraception method use among women aged 15-49 years in the United States: 2017-2019 National Survey of Family Growth

Akpan, Idara, N; Yockey, Andrew, R; Galvin, Annalynn, M; Thompson, Erika, L

Board 113

Modifications to evidenced-based intervention designs: Towards translational approaches that allow for flexibility

Fernandez, Sofia B.; Wilson, Courtney; Pinzon Iregui, Claudia, M.; Maldonado, Maria, D.; Perez, Katherine; Clarke, Rachel; Fleites, Caleigh; Martin, Nicholas; Howard, Melissa; Huang, Hui

Purpose: Florida Department of Health's Office of Minority Health and Health Equity provides funding to community-based organizations (CBOs) through the "Closing the Gap" initiative to implement evidence-based interventions (EBIs) that focus on local health disparity priorities (e.g., HIV, diabetes, and cardiovascular disease). As a part of an external evaluation, the purpose of this study was to assess EBI fidelity and challenges in delivering programs, as designed.

Methods: We conducted semi-structured interviews with representatives from 19 CBOs. Representatives were asked about their experiences with monitoring fidelity and program implementation. A team of coders used a consensual analysis approach to analyze the data.

Results: CBOs described challenges in delivering their program as designed. Responses included limited time with participants and the burden of data collection on participants and staff. CBOs described difficulties with changing health behaviors, lack of resources (e.g., qualified staff, funding, access to complete EBI manuals, incentives), recruitment and retention issues, competing needs of participants, and lack of community buy-in. Modifications to programs included: reducing duration or frequency of the program; changing the modality to virtual platforms; and making modifications to culture, language, or content of program materials to be more relevant and inclusive.

Conclusions: Consistency of EBI implementation is important for fidelity and evaluation efforts. CBOs expressed challenges to EBI fidelity that, in some cases, resulted in modifications. Training around appropriate tailoring of EBIs for unique populations, geographic locations, and population needs is warranted to preserve the utility of programs while also allowing for flexibility to serve unique needs.

Board 114

A systematic review of behavioral interventions to improve maternal health in pregnant people at high risk for cardiovascular complications

Satish, Nakita; Whipps, Mackenzie, D.M.; Price, Candice; Ketchersid, Audriana; D'Souza, Indira; Ebong, Imo; Van Nord, Megan, G; Taiwo, Tanya; Hedriana, Herman; Simmons, Leigh Ann

Purpose: Cardiovascular (CV) related complications of pregnancy are increasing in the United States and are a major cause of maternal morbidity and mortality. Despite this, few behavioral interventions have been designed specifically for people at high risk for developing CV pregnancy complications.

Methods: We conducted a systematic review of randomized controlled trials (RCTs) of behavioral interventions designed for pregnant people in the United States at high risk for CV complications that were published after 2005. Each article was reviewed by two of six reviewers, and disagreements were refereed by an independent reviewer.

Results: Overall, 2,521 articles were screened at the title/abstract level, 197 were screened at the full text level, and 53 RCTs (9,045 participants), were selected for data extraction. Commonly targeted risk factors included: prepregnancy overweight and obesity (N=29), diabetes (preexisting or gestational) (N=18), and hypertension (preexisting or pregnancy-related, e.g., preeclampsia) (N=4). Intervention targets included diet (N=17), physical activity (N=12), mindfulness (N=1), or a combination (N=23). Less than half (N=21) reported significant improvements in maternal health outcomes. Only 22 trials (6,914 participants) reported race/ethnicity (67% White, 10% African American/Black, 18% Asian/Pacific Islander, and 5% other; less than 25% were Hispanic). Most participants were recruited in-person; most interventions were conducted in-person.

Conclusion: Since 2005, 21 RCTs of perinatal behavioral interventions have reported improved maternal outcomes for people at high risk of CV-pregnancy complications; yet, rates of CV complications continue to rise in the United States. Additionally, research shows that heart-healthy diets, increased physical activity, and reduced stress/improved mood are all associated with better CV health. Gaps identified in this review include how to improve these health behaviors prenatally with: 1) increased representation of historically marginalized participants and providers, 2) virtual options for recruitment and participation, and 3) culturally tailored interventions that address issues of structural determinants of health.

Board 115

Theory-Based Literature Review of the Effectiveness of Internet-based Interventions in the Management of Cardiovascular Diseases

Elijah, Odunayo, A; Mumba, Mercy, N; Naher, Shabnam

Purpose: Recent advancements in technology including the increase in affordability of information and communication technologies (ICTs) and digital storage, as well as higher computer performance and new high-speed bandwidth choices, proffers tremendous opportunities to employ Internet-based solutions to improve health outcomes. The goal of this study was to conduct a comprehensive evaluation of the efficacy of internet-based interventions in the management of cardiovascular diseases.

Methods: Three databases were searched for literature. The inclusion criteria include interventions aimed at CVD management, behavioral modification toward CVD risk factors, randomized controlled trials, theory- or construct-based interventions, and internet- or web-based interventions. A total of ten studies were included in this review.

Results: Some of the interventions operationalized theoretical frameworks – the health action process approach theory (n = 2), the social cognitive theory (n = 2), the transtheoretical model (n = 1), and the self-regulation theory (n = 1). The other four interventions utilized one or more constructs in their approach with the self-efficacy construct being measured in seven interventions. Self-efficacy for physical activity and healthy eating was improved in all these studies. Improvements were reported in physical activity (n = 6), healthy eating (n = 3), quality of life (n = 3), and weight loss (n = 2) when compared to control/baseline. Other improved outcomes include program and medication adherence and reduced admission rates.

Conclusion: Internet-based interventions are effective in managing cardiovascular diseases and can provide cost-effective options to reach marginalized CVD patients. The incorporation of theory-based behavior change education and physical activities can greatly improve the efficacy of Internet-based interventions. It is suggested that patients may need ongoing care and support to mitigate the associated long-term complications because long-term benefits from the effects of the intervention are not yet understood and may necessitate internet-based booster sessions.

Board 116

Adverse childhood experiences, everyday discrimination, social concern, and tobacco and cannabis product use among young adults

Pasillas-Pablo, Daniel; Jacobs, Wura; Leventhal, Adam

Background: Developmental and psychosocial stressors such as adverse childhood experiences (ACEs), everyday discrimination, and concern for increasing hostility in the society are increasingly common. This study examined whether these stressors are associated with use of different tobacco and cannabis products similarly among racial/ethnic minority young adults and their white counterparts.

Methods: Cross-sectional data were from young adults in the Happiness and Health Study, a cohort study of students from public high schools in LA. Participants indicated their race/ethnicity, which was used to classify them as racial/ethnic minority (RM) or not (NRM). They self-reported their past 6-month cigarette, e-cigarette (with and without nicotine), and cannabis (smoked and vaped) use and completed the ACEs, everyday discrimination (ED), and social concern (SC) scales. Stratified multivariate regression models were used to estimate association of ACEs, ED, and SC with use of different tobacco and cannabis products among RM and NRM young adults. All analyses adjusted for age, sex, and socioeconomic context.

Results: 2207 participants were included in the analysis, mean age was 21.84 years (SD=0.4), 60.3% were female. Among RM young adults, experience of everyday discrimination increased the odds of cigarette use (OR=1.42, 95% CI 1.03, 1.95) while social concern increased odds of cannabis vaping (OR=1.14, 95% CI 1.01, 1.29). Among NRM young adults, ACEs increased the odds of cigarette smoking (OR=1.22, 95% CI 1.11, 1.33), e-cigarette use (OR=1.01, 95% CI 1.02, 1.18), cannabis smoking (OR=1.13, 95% CI 1.06, 1.20), and cannabis vaping (OR=1.10, 95% CI 1.03, 1.17). Everyday discrimination increased the odds of e-cigarette use (OR=1.41, 95% CI 1.08, 1.83) while social concern increased the odds of cannabis smoking (OR=1.27, 95% CI 1.13, 1.43) and vaping (OR=1.19, 95% CI 1.06, 1.34).

Conclusion: Tobacco and cannabis use prevention efforts that acknowledge childhood trauma and are socially and culturally responsive would be beneficial and effective.

Board 117

Young Adults' Sexual and Reproductive Health Needs Related to Alcohol Use: The Perspectives of Community Stakeholders

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Purpose: Young adults aged 18-25 are more likely than the broader population to engage in sexual activity while consuming alcohol, which may result in negative sexual health outcomes such as sexually transmitted infections (STIs). Eliciting community stakeholder perspectives

5:30 pm – 6:30 pm

related to alcohol and sexual health needs can provide contextual information to guide the future development of programming to address these needs. Therefore, the purpose of this study was to explore the alcohol prevention and sexual health needs from the perspectives of community stakeholders in North Texas who serve young adults.

Methods: Local community stakeholders (n=12; individuals at organizations addressing alcohol use or sexual health among young adults) were recruited via convenience sampling to participate in 30-minute interviews. Participants were asked about their local young adults' needs related to alcohol use and sexual health needs with the questions: "What are the alcohol prevention needs in your community?" and "What are the sexual and reproductive health needs in your community?". Interviews were audio-recorded, transcribed, and thematically coded by two coders in MAXQDA software.

Results: Participants were college representatives, counselors, and nonprofit organizers who discussed education about sexual health and alcohol prevention as one of the biggest needs for young adults in their communities. Participants described gaps in alcohol education around "standard" drink sizes, alcohol use moderation, and how the college context may create opportunities for increased alcohol consumption. Gaps in sexual health education included setting boundaries, consuming alcohol before sex, and education on condom and contraception use.

Conclusions: Findings indicate that community stakeholders perceived gaps in young adults' awareness of the consequences of alcohol-related sex and about methods to prevent STIs and unintended pregnancies. Numerous evidence-based interventions exist to address these gaps, suggesting a need to better disseminate these options to community partners and assist with implementation into their settings.

Board 118

Psychosocial outcomes of a culturally tailored, family-centered father-focused health promotion program for Mexican-heritage families: ¡Haz Espacio para Papi! (Make Room for Daddy)

Umstadd Meyer, M Renée; Wende, Marilyn, E; Prochnow, Tyler; Ylitalo, Kelly, R; Delgado, Haley; Johnson, Cassandra, M; Gómez, Luis; Sharkey, Joseph, R

Purpose: Mexican-heritage families living along the Texas-Mexico border report less physical activity (PA) and are at greater risk for chronic disease than the U.S. population. According to social cognitive and family systems theories, family-centered PA programs that engage Mexican-heritage fathers can improve individual psychosocial outcomes related to PA. The purpose of this study was to report the impact of a culturally-tailored, father-focused, and family-centered lifestyle program, ¡Haz Espacio para Papi!, on child PA self-efficacy, skill competency, father social support (for child PA) and parenting strategies for Mexican-heritage families along the Texas-Mexico border.

Methods: Using a step-wedge cluster randomized design, participating families (n=43), consisting of children (M age: 10.1[SD=0.9]) and fathers (M age: 39.9[SD=8.2]), were randomized into five groups. Child's PA self-efficacy (0-2 scale) was measured using an adapted PlaySelf Physical Literacy Assessment for Youth and skill competency (0-3 scale) was measured using an adapted Canadian Assessment of Physical Literacy questionnaire. Father social support for child PA was measured using the Activity Support Scale for Multiple Groups (0-2 scale), and parenting strategies using an adapted measure by Lario et al. 2009 (0-2 scale).

Linear mixed models assessed program effects on child and father psychosocial outcomes (PROC MIXED, SAS-v.9.2).

Results: The program had no association with child self-efficacy ($p=0.66$) or skill competency ($p=0.96$). However, for fathers, the program was associated with a significant increase in social support for child PA ($p<0.01$) and no changes in parenting strategies ($p=0.08$). On average, the program resulted in a .08 unit increase in father's social support for child PA. Models adjusted for program dose were consistent with unadjusted models.

Conclusions: This culturally-tailored program resulted in significantly increased fathers' social support for child PA. Public health practitioners should apply family systems and social cognitive theory in future interventions to encourage fathers' involvement and support for child PA.

Board 119

Cannabis Use Behavior: The Effects of Social Support and Adverse Childhood Experiences

Crockett-Barbera, Erica, K.; Moyers, Susette, A.; Chiaf, Ashleigh, L.; Appleseth, Hannah; Croff, Julie, M.

Introduction: Exposure to adverse childhood experiences (ACEs) have been associated with cannabis use. This study examined the moderating effect of three subtypes of social support (appraisal, belongingness, and tangible) on the relationship between ACEs and the prospective frequency and intensity of cannabis use among young women.

Methods: Females ($n=165$) between the ages of 15-24 were engaged in a one month prospective study. They completed a 6-item ACEs scale, the shortened Interpersonal Support Evaluation List (ISEL-12), and demographic questions. Participants attended weekly appointments and completed time-line follow back of their daily cannabis use frequency and intensity.

Results: ACEs were a significant predictor of the number of days of cannabis use over the month ($\beta = .959$, $p < .01$). Each type of social support significantly moderated the effect of ACEs on days of cannabis use without covariates, but only appraisal ($\beta = -.037$, $p < .05$) and tangible support ($\beta = -.098$, $p = .001$) were significant with covariates. ACEs were predictive of cannabis use intensity when covariates were included ($\beta = 1.971$, $p < .001$). When examining the interactions for cannabis use intensity between ACEs and the 3 types of social support, the interaction between ACEs and tangible forms of social support was significant with and without covariates ($\beta = -.065$, $p < .05$; $\beta = -.104$, $p < .001$, respectively).

Conclusions: Young women's adverse childhood experiences predict cannabis use frequency and intensity over a month, and that relationship is moderated by current perceived tangible social support. Programming that targets increasing perceived tangible social support in females with ACEs may be a preventative strategy to reduce the health behavior of cannabis use.

Board 120

Testing the Effectiveness of Pictorial Waterpipe-specific Health Warning Labels Compared with The FDA Text-only Labels: An Online Factorial Experimental Study

Asfar, Taghrif; Oluwale, Olusanya, J.; Casas, Alejandra; Friedman, Lily

Purpose: This study aims to examine the effect of the 24 Waterpipe (WP) Pictorial Health warning labels (PHWLs) compared to the FDA text-only label and 2) compare the effect of PHWLs between the 6 themes.

Methods: A 2x7 between/within-subject online factorial experimental study was conducted among a national sample of 300 (50% current WP smokers; 50% nonsmokers) US adults (females 71.1%; mean age of 31.1±3.41 years) in March 2022. Participants were randomized to view and rate seven labels: 1 FDA label and 6 PHWLs, one from each theme presented in random order. Brands were rated on attention, reaction, perceived effectiveness, intentions to quit WP (WP smokers), and intention to not initiate WP (nonsmokers). Means and SDs of outcomes were calculated. Planned comparisons using the Friedman test followed by a pairwise Wilcoxon signed-rank test for multiple comparisons were used to examine distributional differences of outcomes between the HWL type and themes.

Results: Most participants (74.4 %) were non-Hispanic Whites, 68.4% had college degrees, and 41.5% were in poverty. Compared with the FDA text label, PWLs elicited greater attention ($p<0.0001$), fear ($p<0.0001$), harm perception ($p<0.0003$), perceived effectiveness ($p<0.0001$), and intentions to quit ($p=0.0014$) and not initiate WP smoking ($p<0.0003$). PHWLs in theme 3, “harm to others,” rated the highest in attention (4.14 ± 1), believability (4.15 ± 0.95), overall perceived effectiveness (7.60 ± 2.35), harm perception (7.53 ± 2.43), and intentions to quit (7.35 ± 2.57). PHWLs in theme 2, “WP harm compared to cigarettes,” rated the highest in discouraging WP initiation (7.32 ± 2.54).

Conclusions: PHWLs were superior to the FDA text-only for several communication outcomes. PHWLs related to WP harm to others and WP harm compared to cigarettes are promising. These findings provide strong evidence for the potential implementation of WP-specific PHWLs.

Board 121

Supporting Mental Health and Goal Achievement: A Qualitative Study of the Strengths of a Virtual Peer Mentoring Program as Perceived by the Mentees

Yuan, Shuhan; Gillespie, Delaney; Lin, Hsien-Chang; Chow, Angela

Purpose: As universities switch to online education due to the COVID-19 pandemic, feeling isolated and less motivated to schoolwork has become common among many students. A 4-week virtual peer mentoring program, Connect and Thrive (C&T), was developed and conducted in a Midwestern university to connect students with peers and to support their goal achievement and mental health. This study aimed to explore the perceived strengths of this program as perceived by the mentees who completed the program.

Methods: A total of 41 C&T mentees participated in this study. Data were collected by semi-structured in-depth interviews conducted immediately after the participants completed the C&T program in Spring 2021. Adopting an exploratory qualitative design, a hybrid inductive-deductive thematic approach was employed to analyze the interview transcriptions. Roddy’s Four-Pillars Model for online student programs was utilized to create the initiate set of codes; additional codes emerged as the two analysts conducted the thematic analysis.

Results: Aligning with Roddy’s model, four themes were emerged regarding the perceived strengths of C&T among the mentees, including (1) mental health promotion: mentees reported that C&T provided a non-judgmental environment for self-reflection to voice out their pressure during the pandemic; (2) goal achievements support: C&T served as a reminder for mentees to

5:30 pm – 6:30 pm

track their academic goal setting and enhanced the mindfulness of their progress; (3) increased sense of community: the weekly online interaction and real-time information exchange supported mentees' connections with campus resources during the pandemic; (4) mobile technology utilization: the app-based platform utilized by C&T allowed the mentees to engage in the program activities easily at anywhere.

Conclusions: This study has provided preliminary qualitative evidence on the strengths of C&T as perceived by its mentee participants. Further studies which examine its effectiveness using quantitative methods, its scalability, and transferability to other educational settings are warranted.

Board 122

Motivational factors influencing readiness to use youth friendly services among secondary school students in East Belesa district, Ethiopia, using the Theory of Planned Behavior, 2022

Tsegaw Menen; Kassie Ayenew; Alemnew Walleign

Background: The reproductive health of youth has become a major public health concern. The utilization of youth friendly services is low among Ethiopian youths. Intention is the best predictor of behavior. However, there is no study done on the area which assesses the intention of the school youths to use youth friendly services.

Objectives: This study was aimed to assess intention to use youth friendly services and its factors among secondary school students in East Belesa district, using the Theory of Planned Behavior, 2022.

Methods: An institution based cross-sectional study was conducted from May 23 to June 12, 2022 in East Belesa district. Stratified random sampling technique was used. Data was entered using EpiData and analyzed using STATA version 14. Standardized β and R² values were used to interpret effects and variability with intention to use youth friendly services respectively. Simple and Multiple linear regression analysis were performed. Statistical significance was declared at a p-value of <0.05 with 95% confidence interval.

Results: A total of 511 respondents participated in the study giving a response rate of 99.8%. Around half of the participants were males (52.8%). The mean score of intention to use youth friendly services was 3.39 ± 1.14 . Direct perceived behavioral control ($\beta = 0.25$, 95%CI: 0.05, 0.45), subjective norm ($\beta = 0.28$; 95%CI: 0.09, 0.47), attitude ($\beta = 0.20$; CI: 0.03, 0.36), educated mothers ($\beta = 1.65$, 95%CI: 0.21, 3.09) and female sex ($\beta = -1.77$; 95% CI: -3.10, -0.44) were significant predictors of intention to use youth friendly services.

Conclusion: the magnitude of intention to use youth friendly services was low. Perceived behavioral control, attitude, subjective norm, educated mothers and sex were the predictors of intention to use youth friendly services. The theory of planned behavior could be applied to predict intention of youths to use youth friendly services.

Board 124

Cigarette Smoking Behaviors and Nicotine Dependence at the Intersection of Sexual Identity and Sex: Findings from the National Survey on Drug Use and Health, 2015-2019

Ganz, Ollie; Schulz, Jonathan A.; Ehlke, Sarah J.; Villanti, Andrea C.

Purpose: To examine cigarette smoking characteristics among adults by sexual identity and sex using data from the National Survey on Drug Use and Health (NSDUH).

Methods: Using pooled data from 2015-2019 (N=210,392), we examined former cigarette smoking (>100 lifetime cigarettes, no smoking in previous year), lifetime cigarette smoking (>100 lifetime cigarettes), past-month cigarette smoking, past-month daily cigarette smoking, and nicotine dependence (Fagerström Test of Nicotine Dependence among past-month cigarette smokers), by sex (female, male) and sexual identity (heterosexual, gay/lesbian, bisexual). We estimated the prevalence of each outcome by sexual identity, overall and stratified by sex and examined associations between sexual identity and smoking outcomes, stratified by sex. Models controlled for demographics, past-year psychological distress, year, and survey weighting.

Results: Bisexual females had the highest prevalence of past-month smoking (31.2%) and the lowest prevalence of former smoking (25.1%). Past-month daily smoking and nicotine dependence were highest for gay/lesbian females (16.2% and 13.1%) and bisexual females (18.7% and 15.2%); the prevalence of former smoking was highest for heterosexual males (48.8%) and females (49.9%). Adjusted logistic regression models showed that among females, gay/lesbian (aOR: 1.92 [1.63, 2.27]) and bisexual (aOR: 1.87 [1.72, 2.03]) adults reported greater odds of being a current smoker compared with heterosexual adults. Among males, gay (aOR: 1.28 [1.10, 1.50]) adults, but not bisexual (aOR: 1.07 [0.92, 1.24]) adults, reported greater odds of being a current smoker compared with heterosexual adults. Gay (aOR: 0.61 [0.48, 0.79]) and bisexual (aOR: 0.73 [0.57, 0.92]) males reported lower odds of being a former smoker compared with heterosexual males.

Conclusions: Differences persist in the prevalence of smoking behaviors by sex and sexual identity, particularly among gay/lesbian and bisexual women. Findings highlight the need for smoking cessation interventions that do not treat sexual minority adults as a monolith.

Board 125

Transforming Front Line Health Workers and Law Enforcement Personnel with Mindfulness-Based Resilience Training (MBRT)

Zullig, Keith, J.; Canady, Brittany, E.; Brumage, Michael, R.; Goerling, Richard; Smith, Stephanie; Gardner, Madelin; Vangilder, Vanessa; Lilly, Christa, L.

Purpose: MBRT is an emergent intervention to address acute and chronic stressors inherent to first responder occupations and may be especially helpful in rural areas where first responders and healthcare workers report high exposure to traumatic events and face barriers to accessing mental health treatment. This study presents preliminary data from an MBRT intervention among a community of front line health workers and law enforcement personnel in West Virginia.

Methods: A total of 214 participants were recruited into 10 regionally-based cohort MBRT two-day trainings from February-June 2022 followed by four weekly online synchronous training sessions. Of the 214 registered participants, 162 (14% law enforcement) completed the optional surveys. The mean age of the sample was approximately 42 (SD=13.2) and 71% identified as female and 92% as White. Pretest, posttest, and 30 day post-intervention data are reported on mindfulness, emotional intelligence, emotion regulation, and life satisfaction. Descriptive analysis was followed by independent sample t-tests on select demographic

5:30 pm – 6:30 pm

variables for the four outcomes at baseline. Repeated measures linear mixed models (LMM) were conducted to detect differences across all time points.

Results: Males reported significantly higher emotional regulation ($p=0.009$) and mindfulness ($p=0.002$) compared to females at baseline. Married participants also reported significantly higher emotional regulation ($p<0.0001$), and mindfulness ($p<0.01$) and life satisfaction ($p<0.0001$) compared to unmarried participants at baseline. LMM results suggest mindfulness (Estimate = 3.83, $p < 0.0001$), emotional intelligence (Estimate = 3.01, $p = 0.002$), emotion regulation (Estimate = -5.82, $p < 0.0001$), and life satisfaction (Estimate = 1.26, $p = 0.0017$) all improved significantly from baseline to the 30 day post-intervention assessment.

Conclusions: Six month post-intervention data collection is still underway. However, preliminary results suggest MBRT enhanced participants' reported mindfulness, emotional intelligence, emotion regulation, and life satisfaction, which is transforming this community of front line health workers and law enforcement personnel.

Board 126

Reasons for Cannabis Use and Risk of Cannabis Use Disorder Among Young Adults

Merianos, Ashley, L; Leventhal, Adam L

Background: Frequency and social contexts of cannabis use are known predictors of cannabis use disorders (CUD) among young adults. Little is known about reasons of use and their associations with CUD. This study examined the association between reasons for cannabis use and risk for CUD among young adult cannabis users.

Methods: Data were from graduates of public high schools in Los Angeles, California ($n=954$) who self-reported any past 6-month cannabis use via blunts and other routes of smoking, vaping, dabbing, and eating were included in the analysis. The following reasons for cannabis use were assessed: sleep, emotional stress, and physical distress. Responses to the 6-item Cannabis Abuse Screening Test (CAST) scale were summed and then categorized as follows to determine CUD risk level: low (0-3 score), moderate (4-6 score), and high (≥ 7). Multivariate multinomial models were used to estimate the associations between reasons for use and CAST scores. Analyses adjusted for participants' age, sex, race, and socioeconomic context.

Results: The majority of participants (64%) were female; mean age was 21.82 years ($SD=0.38$). Compared to participants who did not use cannabis due to physical distress, those who did had a higher risk for moderate (adjusted relative risk ratio (ARR)=2.24, 95%CI=1.40-3.58) and high (ARR=4.88, 95%CI=3.23-7.39) CAST scores. Compared to those who did not use cannabis for emotional stress, those who did had a higher risk for high CAST scores (ARR=2.80, 95%CI=1.79-4.38). Compared to those who did not use cannabis for sleep, those who did had a higher risk for moderate (ARR=2.71, 95%CI=1.73-4.24) and high (ARR=2.28, 95%CI=1.52-3.41) CAST scores.

Conclusion: Young adult cannabis users who used for reasons of physical distress, emotional stress, and sleep were at risk for having high CAST scores indicative of CUD. Public health and clinical interventions to provide alternative methods for addressing these physical and emotional health issues.

Board 127

5:30 pm – 6:30 pm

Capturing Differential Effects of In-Person and Online Connections on Mental Health and Resilience using a Revised Lubben Social Network Scale Among College Students

Chow, Angela; Lin, Hsien-Chang

Purpose: Understanding how online and in-person connections are associated with mental health and resilience is important, particularly since the COVID-19 pandemic. However, there is a lack of well-established tools that separately measure online and in-person connections. The study aimed to develop and examine the psychometric properties of a scale to measure in-person and online social connections.

Method: Data were collected from 180 undergraduate students from a Midwestern university in Fall 2022. A 12-item scale to measure social connections was developed based on Lubben Social Network Scale-6, including four sub-scales: (1) number of family members connected in person or (2) online; and (3) number of friends connected in person or (4) online. Internal consistency reliability for each sub-scale was assessed by Cronbach's alpha. Criterion validity was assessed by its correlations with loneliness, depressive symptoms, social connectedness, and resilience, all measured by validated scales. Multiple regression models were conducted to estimate the net effects of each sub-scale on loneliness, depressive symptoms, social connectedness, and resilience.

Results: Cronbach's alphas of the four subscales indicated a good reliability (alphas ranged 0.74-0.86). All sub-scales were negatively correlated with loneliness and depressive symptoms and positively correlated with social connectedness and resilience, indicating a good validity. Regression models indicated that Friends Connected in Person was significantly associated with loneliness ($\beta = -.57, p < .01$), depressive symptoms ($\beta = -.61, p < .05$), social connectedness ($\beta = .44, p < .01$), and resilience ($\beta = -.35, p < .05$); Friends Connected online was significantly associated with depressive symptoms ($\beta = .32, p < .05$).

Conclusions: This study provided preliminary evidence on the reliability and validity of a new scale to measure in-person and online social connections. The findings indicated the differential effects of four types of social connections, with connection to friends in-person being the most impactful to young people. Further research that tests the scale with larger samples or among other age populations is warranted.

Board 128

The impact of childhood trauma on the relationship between social media use and internet addiction

Shanazari, Eric; Rogers, Christopher J.; Unger, Jennifer B.; Benjamin, Stephanie; Forster, Myriam

Adverse childhood experiences (ACE) have been associated with maladaptive behaviors in young adults, including internet addiction. Along with maladaptive behaviors, social media use has been linked with internet addiction; however, research has also proposed that social media may enhance social support. The present study assessed ACE, social media use, and internet addiction to explore whether students with a history of ACE who use social media are more vulnerable to internet addiction than their peers.

Data are college student responses (N=1,166) from a large, ethnically diverse, public university in Southern California. Results of linear regression models suggest that higher ACE (Beta=1.43, 95%CI=0.91-1.96) and more weekly hours of social media use (Beta=0.21, 95%CI=0.17-0.25)

were significantly associated with higher internet addiction scores, while controlling for social support, SES, sex, age, race, and other online behaviors. Models assessing differences in the social media-internet addiction relationship across ACE indicate students with no ACE, and at high levels of social media use, are at lower risk internet addiction; however, students with a history of ACE and high social media use were at much higher risk for internet addiction than their peers with no ACE.

Results highlight that ACE can exacerbate the relationship between hours of social media use and internet addiction and may partly explain some variability seen across studies. Young adults' online presence may continue to grow as internet technologies proliferate, but for individuals with a history of ACE, heavy use of online media, despite potential social support benefits, can enhance risk for internet addiction.

Board 129

Training substance use treatment center providers on tobacco use treatments is associated with increased provision of counseling and pharmacotherapy to tobacco-using patients

Carter, Brian, J; Britton, Maggie; Chen, Tzuan, A; Siddiqi, Ammar, D; Martinez Leal, Isabel; Correa-Fernández, Virmarie; Rogova, Anastasia; Kyburz, Bryce; Williams, Teresa; Casey, Kathleen; Reitzel, Lorraine , R

Purpose: Substance use treatment centers (SUTCs) do not commonly address patients' disproportionately high tobacco use. The Theoretical Domains Framework (TDF) suggests that increasing knowledge within healthcare settings is a key pathway to improve their providers' provision of evidence-based care to patients. Consequently, a multi-component tobacco-free workplace program implemented within 15 SUTCs in Texas included provider training on treating tobacco use with counseling and pharmacotherapy. Herein, the effectiveness of the program in shifting TDF-informed constructs is assessed.

Methods: Providers completed surveys, before and after a ~11-month program implementation period (pre N=259; post N=194), assessing (1) lack of knowledge on using counseling or pharmacotherapy, respectively, as a barrier to treating patients; (2) receipt of past-year training on treating tobacco use with counseling or pharmacotherapy (incl. referral therefor), respectively; and (3) providers' self-reported use of counseling or pharmacotherapy, respectively, with tobacco-using patients. Generalized linear mixed models explored associations between knowledge barriers, training receipt, and intervention practices over time. Whether low versus high shifts in SUTC-level knowledge barriers over time moderated changes in training and intervention practices was assessed with interaction terms.

Results: Significant pre- to post-program implementation changes were as follows: receipt of counseling training (32.00% versus 70.21% of providers); receipt of pharmacotherapy training (20.46% versus 71.88%); delivery of tobacco cessation counseling (19.31% versus 28.87%); and pharmacotherapy use/referral for cessation (31.66% versus 55.15%). Relative to their counterparts, SUTCs wherein providers experienced greater knowledge-barrier reductions in pharmacotherapy treatment/referral also exhibited greater gains in associated training receipt and intervention provision over time.

Conclusion: Consistent with the TDF, results suggest the importance of SUTCs' participation in training on treating patients' tobacco use with counseling and pharmacotherapy to improve patient

5:30 pm – 6:30 pm

care provision. Strategies to enhance the uptake of training within SUTCs are needed to maximize its benefits, such as reducing provider-perceived barriers to tobacco treatment.

Board 130

Associations between e-cigarette use and sleep health among adults in the US, NHANES 2015-2018

Wang, Shanshan; Nandy, Rajesh, R; Rossheim, Matthew, E

Background: Growing evidence suggests that e-cigarette use is associated with adverse health outcomes. However, little is known about the associations between e-cigarette use and sleep. The study aims to examine the associations of e-cigarette use and dual (e-cigarette + combustible cigarette) use with short sleep duration and trouble sleeping among US adults.

Methods: We used data from the National Health and Nutrition Examination Survey (NHANES) 2015-2018 (n = 11,659). E-cigarette use and dual use were categorized as current, former, and never use. Short sleep duration was defined as sleep duration \leq 6 hours. Trouble sleeping was self-reported. Logistic regression analyses were performed using appropriate sample weights to generate nationally representative estimates.

Results: The weighted percentages of current and former e-cigarette use, current and former dual use were 6.02%, 15.80%, 3.25%, and 13.33%, respectively. Compared to never e-cigarette use, current e-cigarette use was associated with significantly greater odds of short sleep duration (OR=1.69, 95% CI: 1.11-2.58) and trouble sleeping (OR=2.54, 95% CI: 1.79-3.59) after adjusting for age, sex, race/ethnicity, alcohol consumption, BMI, diabetes, hypertension, and socioeconomic status variables. Significant associations were also observed for former e-cigarette use versus never use, with short sleep duration (OR=1.29, 95% CI: 1.01-1.64) and trouble sleeping (OR=1.79, 95% CI: 1.41-2.26) after adjustment. Additionally, the adjusted ORs for short sleep duration and trouble sleeping were 1.64 (95% CI: 1.06-2.54) and 2.14 (95% CI: 1.34-3.42) among those with current dual use, and 1.46 (95% CI: 1.17-1.81) and 2.11 (95% CI: 1.66-2.67) among those with former dual use, compared to those without dual use.

Conclusions: This study demonstrates that current or former e-cigarette use or dual use is associated with higher odds of short sleep duration and trouble sleeping among US adults. Future studies are warranted to confirm the findings.

Board 131

Understanding the Menstrual Health Needs of People Experiencing Homelessness during the COVID-19 Pandemic in Lafayette, Indiana

Martinez, Rebecca, G; Frank, Jaclyn; Schnolis, Emma; Otten, Emily; Arora, Anukriti; DeMaria, Andrea; Cromer, Risa; Ruiz, Yumary; Rodriguez, Natalia

BACKGROUND: Period poverty occurs in all countries where access to menstruation products and other resources is limited. These conditions are amplified for menstruators who face significant barriers to supplies, spaces, and services. This project gathered information from people experiencing homelessness and professionals that serve this community to inform programming efforts aimed at addressing menstrual management needs to help improve the sexual and reproductive health of this vulnerable group.

5:30 pm – 6:30 pm

OBJECTIVE: This study's focus was to understand what people experiencing homelessness know and experience when menstruating. A secondary purpose was to identify ways the COVID-19 pandemic impacted menstruation management for people experiencing homelessness and how service providers support their needs.

METHODS: In-depth interviews were conducted with 1) menstruators experiencing homelessness (n=12) and 2) community healthcare and social service providers (e.g., case managers, shelter directors, community health workers, nurses, n=12). Thematic analysis techniques were used for data analysis.

RESULTS: Menstruators experiencing homelessness navigated restrictive community resources with limited access to products, services, and spaces. While community healthcare and service providers offered some health education and connection to care, menstruators experienced complex interactions with providers and the healthcare system, exacerbated by social stigma, limited healthcare access, and underlying chronic health conditions. The COVID-19 pandemic further magnified healthcare access disparities for this group as public spaces closed, economic conditions deteriorated, and health outcomes were poor.

Board 132

The Association between Inflammatory Diet and Infection-Related Cancers in Adults: A Systematic Review

Laily, Alfu; Reed, Jason, B; Powers, Madeline, Q; Giuliano, Anna; Kasting, Monica

Purpose: To synthesize the existing evidence of the association between inflammatory diet and infection-related cancers in the adult population.

Methods: We reviewed the literature from January 1, 2007-March 8, 2022 using PUBMED, Web of Science: Core Collection, Cochrane Library and CINAHL. We included studies that were original research, available in English, and examined the association between infection-related cancers (e.g., liver, cervical, penile, lymphoma, etc.) and inflammatory diet. Using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol, two authors reviewed the studies by title and abstract, and any discrepancies were resolved by a third reviewer. Relevant studies were examined as full-text articles.

Results: 3,633 studies were screened, with 47 of them processed into a full text review; 19 articles met the criteria for this study. Based on preliminary results, 17 of the 19 studies reported that pro-inflammatory diet indicated by high Dietary Inflammatory Index (DII) scores was associated with an elevated risk of infection-related cancers, including gastric cancer (ORs= 1.63-3.59), cervical cancer (ORs= 1.98-3.14), and liver cancer (ORs= 2.43-3.22). This pattern seems to be more consistent with infection-related cancers that manifest at the same anatomic site as the infection (e.g., cervix, liver, and gastric) as opposed to non-localized site infection-related cancers (e.g., lymphoma). Furthermore, there were some differences by sex, and three studies found that there was a stronger association between diet and infection-related cancer diagnoses for males compared to females.

Conclusion: Pro-inflammatory diet is positively associated with risk of infection-related cancers. This may be due to persistent infection caused by chronic inflammation. These findings suggest DII can be used as a tool to measure dietary patterns to support healthier diets. Future interventions should focus on translating these findings to behavioral modification strategies that encourage anti-inflammatory diets to reduce the risk of infection-related cancers.

Board 133

Sexual racism on geosocial networking applications and perceived social support among sexual minority men in the U.S.

Ma, Junye; Paltin, Dafna; Black, Ashley; Baker, Jason, V; Horvath, Keith, J

Background: The use of geosocial networking (GSN) applications for relationship seeking is prevalent among young sexual minority men (YSMM). However, YSMM of color may be vulnerable on GSN apps, given the intersectionality of multiple marginalized identities. Although research has examined psychological correlates of sexual racism (i.e., discrimination of partner selection based on race/ethnicity) on GSN applications, little is known about how sexual racism relates to YSMM of color's perceived social support, which is the focus of this study.

Methods: 80 YSMM, recruited through social media (M_{age}=25.1 years, 53.7% racial/ethnic minority), participated in a 6-month mHealth intervention to improve PrEP adherence. Data from this study were drawn from the baseline survey and included questions of YSMM's demographics, experiences of sexual racism online, and perceived social support. Chi-squared tests examined the association between sexual racism and outness to family. Wilcoxon rank sum tests examined differences in YSMM's perceived instrumental support and social isolation by experiences of sexual racism.

Results: Overall, 32.1% of the sample experienced sexual racism on GSN applications. Analyses showed racial/ethnic differences in experiences of sexual racism: Black (54%), Asian (50%), Hispanic (43%), White (11%), $p=0.003$. A significantly lower percentage of YSMM who experienced sexual racism were out to more than half of their family (19.3% vs 60.9%), $p < .001$. Instrumental support was significantly higher for YSMM who never experienced sexual racism (M_d=16) than those who did (M_d=12), $p=0.02$. Social isolation was significantly higher among YSMM who experienced sexual racism (M_d=12) than those who had not (M_d=10), $p=0.002$.

Implications: Our findings underscored the association between sexual racism and YSMM's social lives, warranting the development of psychosocial interventions to foster social connectedness and to cope with sexual racism for YSMM of color. Findings of this study also called for GSN apps to update community guidelines regarding sexual racism.

Board 134

The health effects of familial incarceration from adolescence through early adulthood

Guevara Galicia, Maria, G; Shanazari, Eric; Becerra, Lizbeth; Nuñez, Velia; Robles, Cynthia; Forster, Myriam; Unger, Jennifer

Background: Over 2.5 million youth in the US, especially youth living in underserved communities of color, have an incarcerated family member. According to recent data in California, across all populations, Hispanics have experienced the highest increase in felony convictions. Despite considerable research on the effect of criminal justice involvement on incarcerated adults, less is known about the impact on their children. This study examines the long-term mental health effects of familial incarceration from adolescence to early adulthood.

Methods: Data are from a longitudinal health study of Hispanic youth in Southern California ($n=1,094$). The first wave of data collection occurred when students were in high school (age 15) and the last wave while in early adulthood (age 25). Generalized linear models assessed

the association between familial incarcerated during adolescence and participants' depression and perceived stress at age 15 and age 25, adjusting for gender, country of birth, parent education, cultural identity, and income in young adulthood.

Results: Over half of the respondents were female (61%) and 25% reported having an incarcerated family member prior to age 18. At age 15, students with at least one family member incarcerated had 1.76 times odds of depression [CI: 1.24—2.48] and significantly higher perceived stress scores ($\beta=0.65$, $SE=0.44$) than students who did not have an incarcerated family member. Ten years later, the young adults who experienced familial incarceration prior to age 18 continued to be at greater risk for depression [OR: 1.58, CI: 1.08—2.31] and higher perceived stress ($\beta=0.69$, $SE=0.31$) than their peers.

Conclusion: Nationally, there are few school-based support programs tailored to this youth populations and none have been evaluated. Future public health research needs to consider the stressors associated with familial incarceration and develop evidence based programs that facilitate resilience and thriving among vulnerable youth.

Board 135

Cross-sectional national survey of Compliance Behaviour, Knowledge and Attitudes among Cases and Close Contacts during COVID-19 Pandemic

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Purpose: The initial global response to the COVID-19 pandemic depended on public health interventions including quarantine. In Ireland, a national contact management programme was established to notify cases, identify contacts, arrange testing for contacts and provide public health guidance to cases and contacts. The aim of this study is to identify predictors of compliance behaviour and explore knowledge and attitudes to inform the global public health preparedness and response.

Methods: Secondary data analysis of anonymised cross-sectional survey data. The sampling frame was the national COVID-19 contact management programme. A target sample of 1,000 cases and 1,000 contacts was calculated to estimate true compliance within error margin of 3% with 95% confidence. The telephone survey, administered by trained interviewers, was developed based on guidelines and evidence, and included socio-demographics, compliance behaviours, knowledge, and attitudes to COVID-19. Chi-squared statistics were used to compare characteristics. Multivariable logistic regression assessed overall compliance.

Results: Among symptomatic cases, 82.8% (n=444) complied with self-isolation while waiting for the test. Reasons for non-compliance included work (45.7%), shopping (22.8%), exercise (13.2%), and a medical appointment (10.9%). Amongst all cases (n=1027), >95% complied with similar characteristics in compliers and non-compliers (all $p>0.05$). In the multivariable model, only age was significant. Reasons for non-compliance included exercise (55.9%), medical appointment (17.6%) and work (5.9%). Of the 1078 contacts, 86.6% complied with similarly high levels in men and women, all ages and regions. Reasons for non-compliance included exercise (42.9%), shopping (28.6%) and work (22.9%). Cases and contacts reported understanding COVID-19 and satisfaction with information provided.

Conclusion: Ireland implemented unprecedented public health measures to contain COVID-19 and mitigate its impact on society and these measures were widely adopted by the population.

Maintaining compliance requires political leadership, policy changes and practical solutions including statutory sick pay, home working support and wide availability of testing.

Board 136

Smoking Prevalence is Overestimated by Employees at Substance Use Treatment Centers, Both Before and After Education Provided During the Implementation of a Comprehensive Tobacco-Free Workplace Program

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Purpose: Adults with non-nicotine substance use disorders smoke cigarettes at elevated rates relative to the general population ($\leq 35\%$ vs. 13%), but their smoking is not routinely treated where they receive care. Barriers to nicotine dependency treatment provision in substance use treatment centers include high rates of employee smoking and permissive attitudes and behaviors toward patients' tobacco use. Informed by Social Norms and Institutional Theories, tobacco-free workplace programs aim to change organizational policies and practices regarding smoking, in part, by de-normalizing it. This study examined changes in one assessment of smoking de-normalization, the accuracy of employees' knowledge about the U.S. smoking prevalence, from pre- to post-implementation of a multi-component tobacco-free workplace program.

Methods: Participants were 423 employees from 13 substance use treatment centers in Texas that implemented the program between 2018-2020. Employees completed an anonymous e-survey before and after implementation wherein the U.S. smoking rate was queried. During the 10.52 (+/-3.45) month program implementation, all employees were encouraged to attend an education session wherein the U.S. smoking prevalence cited was 13.7%-15.5% and discussed in juxtaposition to that of the patients they serve. Linear mixed models assessed changes in employees' perceived U.S. smoking rate over time, controlling for training attendance.

Results: Employees' estimates of the U.S. smoking prevalence declined over time ($p < 0.0001$) but were overestimated as 49.29% (+/-23.57) at pre-implementation and 35.41% (+/-24.06%) at post-implementation, with no differences by employee smoking status.

Conclusions: Overestimation of the U.S. smoking prevalence remained resilient at substance use treatment centers, despite participation in a tobacco-free workplace program that disseminated accurate information. According to informing theories, this overestimation suggests program adoption challenges that may ultimately hamper the intended individual and organizational changes to better address patients' smoking. Results suggest that additional implementation strategies are needed to correct employees' misperceptions and reinforce accurate smoking norms within these settings.

Board 137

Disparities in Tobacco Use among Veterans Enrolled in Medicaid or Veterans Affairs

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Purpose: This study aimed to understand whether veterans enrolled in Medicaid or Veterans Affairs (VA) were more likely to use tobacco.

Methods: Data for this cross-sectional study of military veterans ($n = 1,640$) were acquired from the 2016-2019 waves of the United States (US) National Survey on Drug Use and Health. Veterans who responded that they were enrolled in Medicaid were also eligible for VA health care; however, we assumed that a veteran didn't use VA as their provider if they answered in the affirmative to the question about Medicaid enrollment and in the negative to the question about VA coverage (and vice versa). We created a variable to distinguish between the two insurance types: exclusive Medicaid use or exclusive VA use. Tobacco use was measured with three items. Participants were asked if they used cigarettes, cigars, or smokeless tobacco in the past year. We regressed past year use of any tobacco (yes/no) on insurance type in a multivariable logistic regression model, and controlled for age, race, sex, educational attainment, annual income, chronic disease multi-morbidity, rural/urban status, criminal behavior, religiosity, and depression.

Results: Tobacco use was less prevalent among veterans who exclusively used the VA [29.90% (95% CI = 28.87-30.84)] compared to those who exclusively used Medicaid [50.80% (95% CI = 42.76-55.73)], and the difference was statistically significant after adjustment for covariates [aOR = 0.69 (95% CI = 0.48, 0.98)].

Conclusions: This is the first study since 2009 to examine disparities in tobacco use prevalence among veterans according to insurance type. Variables that may be responsible for the observed differences in tobacco use may be the assessment and treatment of tobacco use that are used at the VA. If these observed differences can be addressed with assessment and treatment, Medicaid could reduce expenditures on tobacco-related illnesses.

Board 138

Examining Musculoskeletal Disorders among Academicians: A Cross-Sectional Survey Design

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Purpose: The purpose of this study was to examine if work-related musculoskeletal disorder (MSD) patterns exist and what are the associated impacts on quality of life among higher education academicians.

Methods: We sent out an online survey to faculty at the School of Health Professions and School of Nursing at the University of Texas Medical Branch. We combined the Nordic Musculoskeletal Questionnaire – Extended version (NMQ-E) and the Dutch Musculoskeletal Questionnaire (DMQ) shortened version to examine the prevalence of MSDs for various parts of the body. Both the NMQ-E and DMQ had shown to be consistent for collecting self-reported information about the onset, prevalence, consequences of musculoskeletal pain, musculoskeletal workload, and related symptoms. The designed survey also included the SF-12, a valid and reliable assessment to gather quality of life (QOL) information.

Results: Twenty-seven academicians completed the survey. The majority was 45+ years old (59.3%), female (81.5%), worked 5 days/week (63.0%) and commuted 31-60 minutes daily (59.3%). The average height among participants was 62.9 (SD=13.1) inches and the average weight was 158.4 (SD=57.1) lbs. Participants' mean employment length was 9.5 (SD=7.9) years and overall, they worked 44.5 hours (SD=6.7) per week. The most common work-related musculoskeletal problems reported by academicians were in the low back (81.5%), neck (70.4%), shoulder (70.4%) and wrist/hand (63.0%) regions. Musculoskeletal problems in knees

had the highest correlation with SF-12 physical QOL ($r=-.73$) while musculoskeletal problems in low back had the highest correlation with SF-12 mental health QOL ($r=-.48$).

Conclusions: We found MSD was prevalent among higher education academicians. MSD was also associated with physical and mental health QOL. Academic faculty could benefit from wellness programs that target the prevention of MSDs and promotion of healthy work habits, particularly in body regions of low back, neck, shoulder, and wrist/hand.