

COLLABORATIVE
PERSPECTIVES on
ADDICTION



Poster Abstracts

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Providence, RI

***Addictive Behaviors Across
Diverse Populations:
Innovations in Science
and Practice***



HOTEL
PROVIDENCE

Poster Abstracts

Poster Session 1: Thursday April 4th 5:30 – 6:30 pm

- 1. HYBRID RECOVERY COMMUNITY ORGANIZATIONS: PEER-BASED SYRINGE EXCHANGE, HARM REDUCTION, AND RECOVERY.** Recovery from substance use disorder (SUD) is often considered at odds with harm reduction strategies. More recently, harm reduction has been categorized as both a pathway to recovery and a series of services to reduce the harmful consequences of substance use. Peer recovery support services (PRSS) are effective in improving SUD outcomes, as well as improving the engagement and effectiveness of harm reduction programs. This pilot study provides an initial exploration of a hybrid recovery community organization providing PRSS as well as peer-based harm reduction services via a syringe exchange program. Data were analyzed using Pearson chi-square tests and Monte Carlo method chi-square tests. Intravenous substance using participants (N = 417) had an average of 2.14 engagements (SD = 2.59) with the program. Over the evaluation period, a range of 5,345 - 8,995 sterile syringes were provided, with a range of 600-1530 used syringes collected. Participant housing status, criminal justice status, and previous health diagnosis were all significantly related to whether they had multiple engagements. Results suggest that recovery community organizations are well situated and staffed to also provide harm reduction services, such as syringe exchange programs. Additional recommendations include additional naloxone distribution and educational outreach for justice-involved individuals, LatinX individuals, and LGBTQ+ identifying individuals. **Robert D. Ashford MSW, Austin Brown MSW, Aaron Laxton MSW Candidate**
- 2. AVAILABILITY OF RECREATIONAL MARIJUANA IN OREGON COUNTIES AND ADOLESCENTS' MARIJUANA USE AND BELIEFS.** Objective. We investigated whether legalization of recreational marijuana sales in Oregon counties and outlet densities were associated with increased marijuana use and favorable beliefs among adolescents. Method. Biennial data for 6th, 8th and 11th graders from the Student Wellness Survey in 36 Oregon counties from 2010 to 2016 (N=191,543) were analyzed to assess changes in past-30-day marijuana use and marijuana-related beliefs in counties that allowed recreational sales beginning in 2015 compared to counties that did not. We examined whether these associations could be accounted for by perceived availability, risk, and parents' approval. Results. Higher rates of marijuana use and more favorable beliefs were observed in counties allowing recreational marijuana sales. Marijuana use declined from 2010 to 2014, but increased following legalization both in counties that allowed and did not allow sales. There were parallel increases in perceived availability and parent approval and declines in perceived risk. Associations between allowing recreational marijuana sales and adolescents' marijuana use could be accounted for by density of licensed outlets and marijuana-related beliefs. Conclusions. There was a statewide increase in the prevalence of marijuana use and in beliefs favorable to marijuana use after legalization. Increased retail availability of marijuana may increase marijuana use among adolescents. **Joel W. Grube PhD, Mallie J. Paschall PhD**
- 3. TEMPORAL PRECEDENCE OF THE RELATIONS BETWEEN DEPRESSION, SELF-REGULATION, AND ALCOHOL PROBLEMS.** Cross-sectional research has established robust associations between depressive symptoms, alcohol misuse, and self-regulation. However, studies examining these three variables simultaneously are limited, and the direction of their relationships remain unclear. The purpose of these analyses was to examine the temporal associations among depressive symptoms, self-regulation, and alcohol misuse over time. We used an autoregressive cross-lagged model to

assess the prospective relations between depressive symptoms (Depression, Anxiety, and Stress Scale), self-regulation (Short Self-Regulation Questionnaire), and alcohol problems (Young Adult Alcohol Consequences Questionnaire) among heavy drinking college students (N = 393) using 5 timepoints over a 16-month span. Depressive symptoms, lower self-regulation, and higher alcohol problems prospectively predicted higher depressive symptoms. Lower self-regulation and higher alcohol problems prospectively predicted higher alcohol problems. Only higher self-regulation prospectively predicted higher self-regulation. Findings were consistent across multiple time points, indicating temporal stability for the trait of self-regulation. These results suggest that low self-regulation may serve as a precursor to both alcohol problems and depressive symptomatology. Future research should rule out extraneous factors (e.g., general executive functioning deficits, other comorbid conditions, adverse childhood events) that may also explain these longitudinal associations. **Samuel F. Acuff MS, Brian Borsari PhD, Matthew P. Martens PhD, Katie Witkiewitz PhD, Ashley A. Dennhardt PhD, James G. Murphy PhD**

4. **OUTCOMES OF AN ONLINE ALCOHOL INTERVENTION FOR VETERANS WITH VS WITHOUT PARALLEL IN-PERSON TREATMENT.** In this study, we report results from a nationwide implementation study of an online intervention for veterans engaged in high-risk drinking. Among a sample of heavy drinking veterans (n=222), 43.2% had not received mental health treatment in the 3 months prior to enrollment in the online intervention. This highlights the intervention's reach and provides an opportunity to examine intervention outcomes as they relate to concurrent in-person treatment engagement. To this end, we examined trends in weekly alcohol use among veterans who engaged versus did not engage with the online intervention, and who sought versus did not seek concurrent in-person treatment over 6 months. Using generalized mixed modeling, we found that all veterans demonstrated positive changes in alcohol use; however, those using the online intervention without concurrent in-person care demonstrated the largest reductions in alcohol use. Conversely, being in treatment was associated with less improvement overall, which appears to be driven by higher baseline levels of drinking among treatment-seeking veterans. These results suggest that online alcohol interventions can be effective for veterans engaged in high-risk drinking, either as self-management interventions or supplements to their care. Implications and benefits of integrating online and in-person interventions for heavier drinkers will be addressed. **Nicholas Livingston PhD, Victoria Ameral PhD, Justin Enggasser PhD, Deborah Brief PhD, Amy Rubin PhD, Eric Helmuth MA, Scott Litwack PhD, Monica Roy PhD, Marika Solhan PhD, Terence Keane PhD**
5. **IMPULSIVITY AND LINKAGE TO CARE AMONG SUBSTANCE USERS IN ST PETERSBURG RUSSIA.** This study evaluated the association between impulsivity and linkage to HIV-care with substance use as a mediator. Linking Infectious and Narcology Care (LINC) study cohort participants who completed the Barratt Impulsivity Scale (BIS) at 6 months were included in these analyses. Substance use was defined as heroin, opioid, amphetamine, cocaine or injection drug use in past 30 day at 12-month assessment. Linkage to HIV-care was modeled using multiple logistic regression and adjusted for potential confounders: gender, depression, age and CD4 count. Participants (N= 227) were adults with a mean age of 34 years (SD=5), majority male (74%), 51% who endorsed substance use at 12-months. Among this sample we observed lower odds of linkage to HIV care for those with higher impulsivity but the results were not statistically significant (AOR= 0.73, 95%CI =0.39-1.37, p=.33). In secondary analyses that additionally controlled for substance use, the association between impulsivity and linkage to HIV remained similar (AOR= 0.77, 95%CI =0.41-1.45, p=.42) and the association between substance use and linkage to HIV-care was not statistically significant (AOR=0.62, 95%CI = 0.35-1.11, p=0.11). This may be due to the fact that impulsivity was measured as a global-construct and recent evidence suggests it may be a two-dimensional construct. **Nicole**

Ennis PhD, Debbie Cheng PhD, Elena Blokhina MD PhD, Anita Raj PhD, Alexander Y. Walley MD MSc, Emily Sisson MPH, Sally Bendiks MPH, Tibor Palfai PhD, Eugene Dunne PhD, Robert Cook MD, Evgeny Krupitsky PhD, Jeffrey Samet MD MA MPH

6. **RACIAL/ETHNIC DIFFERENCES IN PRESCRIPTION STIMULANT MISUSE, ITS CORRELATES, AND ADHD-RELATED STIGMA.** Epidemiological studies and literature reviews have shown that college students who identify as racial or ethnic minorities typically report lower rates of non-medical prescription stimulant use (NMUPS) compared to Caucasian students. Only recently has research identified which factors might motivate racial/ethnic differences in this behavior, which may help to inform the development of more tailored prevention efforts. In the current study, we examined NMUPS in a diverse sample of college students (N=1521; 57% Caucasian) and examined racial/ethnic differences in prescription stimulant expectancies, perceived harm of NMUPS, ADHD symptoms, and perceptions of stigma around the diagnosis and treatment of ADHD. Consistent with previous research, Caucasian students reported higher rates of NMUPS and positive expectancies compared to African American students. African American students perceived NMUPS to be more harmful than Asian American students; African Americans also perceived a higher level of stigma associated with ADHD and its treatment compared to Latino and Caucasian students. Results suggest that prevention efforts might focus on expectancy challenge interventions and perceived harm for Caucasian students, but alternate targets such as negative expectancies might be more fruitful for African American students. We also discuss the paradoxical protective nature of perceived stigma around the diagnosis and treatment of ADHD. **Laura Holt PhD, Ty Schepis PhD, Alison Looby PhD, Eliza Marsh BS, Paige Marut BS**
7. **I DRINK TO FIT IN: EFFECTS OF CONFORMITY MOTIVES AND SELF-ESTEEM ON FEMALE COLLEGE STUDENT DRINKING.** Background: College student alcohol use represents a public health concern given the high levels of consumption. Trends in alcohol consumption have shifted over time where females are drinking at comparable rates to males. Little is known about factors that may be playing a role in the relationship between drinking motives and alcohol consumption for female college students, in particular. The aim of this study was to examine how self-esteem impacts this relationship. Methods: Participants included 262 female undergraduates (Mage=19.5 years, 84.7% white). Participants completed an online questionnaire, including questions regarding self-esteem, conformity drinking motives, and past month alcohol use. Results: No significant main effects were detected for either conformity drinking motives or self-esteem. The interaction between conformity drinking motives and self-esteem was significant, $b=-.17$, $SE=.08$, $t=-2.11$, $p=.04$, $95\%CI[-.32, .01]$. Analysis of simple slopes revealed that the relationship was significant when individuals reported low levels of self-esteem, $b=1.37$, $SE=.45$, $t=3.04$, $p=.003$, $95\%CI[.48, 2.26]$, but not moderate or high levels. Conclusion: Findings suggest that self-esteem plays an important role in the relationship between conformity drinking motives and alcohol consumption in female college students. **Jenna D. Monteiro, Melissa R. Schick BS, Nichea S. Spillane PhD**
8. **CRAVING MEDIATES THE STRESS-DRINKING LINK IN TREATMENT-SEEKING INDIVIDUALS WITH ALCOHOL USE DISORDER.** Stress may contribute to relapse by increasing craving to alleviate negative feelings. However, the extent to which craving mediates the association between stress and drinking in the real world has been unexplored. Participants completed daily diaries each evening in two studies to investigate if craving mediates the link between stress and drinking. We used data from 85 treatment-seeking individuals with AUD prior to reaching full dose in a medication trial in Study 1 and an ongoing 8-week study with 28 individuals in Study 2. Drinking variables were lagged so that stress and craving predicted next-day drinking. A Multilevel Structural

Equation Model (Mplus v8.1) with Bayesian estimation was used to investigate the associations at the person and daily levels. In both studies, daily craving mediated the association between stress exposure earlier that day and next-day drinking, but stress did not independently predict drinking. A similar pattern played out at the person level. Individuals who were exposed to more stress tended to be higher cravers, and higher cravers tended to drink more. Our results extend previous laboratory-based findings that stress-induced craving is directly related to relapse. The delivery of just-in-time interventions that directly target stress-induced craving could decrease the potential for relapse. **Stephanie Wemm PhD, Chloe Larkin BA, Nia Fogelman PhD, Rachel Hart MS, Howard Tennen PhD, Gretchen Hermes MD, Rajita Sinha PhD**

9. **SELF-REGULATION AND IN-SESSION CHANGE LANGUAGE: A SURPRISING SUPPRESSOR EFFECT FOR BINGE DRINKING.** Self-regulation (SR) is the ability to delay short-term gratification in order to achieve desired goals and future gratification. Motivational Interviewing (MI) is designed to explore and resolve ambivalence to change. This study explored the impact of SR on in-session client language. The Motivational Interviewing Skills Code (MISC 2.0; Miller et al., 2003) was used to code MI sessions from a randomized clinical trial (N=92) with mandated college students (Carey et al., 2009). Participants completed the Short Self-Regulation Questionnaire (SSRQ; Carey et al., 2004) before the MI session. Multiple regression analyses tested whether predicted in-session language subtypes mediated associations between baseline SR (impulse-control and goal-setting subscales) and alcohol outcomes 1-month later. A suppressor effect of sustain talk relating to one's perceived ability to change (A-S; ability-sustain) was observed. Specifically, greater impulse-control predicted less A-S talk ($t=-2.34$, $p=.022$), but more A-S talk was associated with less binge drinking ($t=-2.78$, $p=.007$). When accounting for in-session A-S talk, the positive association between impulse-control and binge outcomes ($t=-2.37$, $p=.020$) became significantly stronger (95% CI: [0.020, 0.504]). Thus, low self-regulation (operationalized as both impulse-control and goal-setting) may influence the relationship between in-session mechanisms of change and risk for high quantity drinking. **L.B. Hopkins PhD, B. Borsari PhD, B.O. Ladd PhD, J. Norona PhD, K.E. Soltis MS, K.B. Carey PhD**
10. **INTERACTIVE EFFECTS OF AGE AND ACUTE MODERATE ALCOHOL CONSUMPTION ON P3 AMPLITUDE.** P3 amplitudes are typically reduced with age and alcohol use. Despite attention toward effects of moderate drinking lifestyles, relatively little is known about the neurocognitive effects of acute consumption in older adults. Here we examined the interaction of age and acute alcohol on P3 amplitude using two moderate doses (0.04% and 0.065% BrAC) in younger (25-35 years; $n=98$) and older (55-70; $n=87$) adults using a directed attend/ ignore task. Amplitudes derived from both relevant (attend) and irrelevant (ignore) conditions were extracted. We expected older adults receiving alcohol would display lower amplitudes in the relevant and greater amplitudes in the irrelevant condition, relative to other groups. Contrary to expectations, no age or interaction effects were found. However, amplitudes to relevant stimuli were lower with higher alcohol doses. Follow-up analysis revealed greater P3 amplitudes at placebo, relative to both the 0.04 ($t = 2.18$, $p = 0.03$) and 0.065 ($t = 3.31$, $p = 0.00$) doses supporting the extensive body of literature concluding that alcohol administration reduces P3 amplitudes. Although age related differences were not observed as hypothesized, these data suggest that acute alcohol consumption negatively affects P3 amplitudes in both older and younger adults. **Christian C. Garcia MS, Ben Lewis PhD, Jeff Boissoneault PhD, Sara Jo Nixon PhD**
11. **DRINKING NORMS AND ALCOHOL USE AMONG YOUNG BISEXUAL WOMEN: THE ROLE OF POSITIVE BISEXUAL IDENTITY.** Bisexual women report greater alcohol use and drinking norms for bisexual women, as compared to lesbian and heterosexual women. One potentially relevant factor is how

strongly they identify with the normative reference group. The current study examined if positive bisexual identity strengthened the association between drinking norms and alcohol use among bisexual women. Participants were 225 young bisexual women (M age=22.77 years, SD=3.45) that completed an online survey about their typical alcohol use in the past 30 days (Daily Drinking Questionnaire), descriptive drinking norms of bisexual women, and positive bisexual identity (Bisexual Identity Inventory). Positive bisexual identity moderated the association between drinking norm frequency and alcohol use frequency ($p < .001$). Specifically, the association between drinking norm frequency and alcohol use frequency was stronger for women with higher positive bisexual identity ($f^2 = .47$, $p < .001$) than lower positive bisexual identity ($f^2 = .17$, $p = .031$). Positive bisexual identity did not moderate the association between drinking norms and alcohol quantity. Bisexual women with a higher positive bisexual identity may be the most likely to conform to normative behaviors, such as drinking. Although all bisexual women could potentially benefit from normative interventions to reduce drinking, women with higher positive bisexual identity may experience the strongest benefits. **Sarah Ehlike MA, Amy Stamates, MS, Michelle Kelley PhD, Abby Braitman PhD, Mallorie Carroll, MA**

12. **EFFECTS OF ALCOHOL ON COGNITION, PERCEPTION, AND RISKY DRINKING: A TEST OF ALCOHOL MYOPIA THEORY.** Alcohol consumption is associated with failure in self-regulation, which can result in risk-taking behaviors. Alcohol myopia theory (AMT) proposes that engagement in unusually (for an individual) risky behavior is due to alcohol's effect on cognition and perception. However, these two proposed mediators are operationalized poorly in AMT and have not been tested in the same model using a behavioral risk task that accounts for social contextual factors. The aim of this experiment was to test whether working memory (WM) and risk and reward reactivity mediate the association between acute alcohol consumption and risky drinking behavior. The participants were 90 moderate or heavy drinkers, ages 21 to 28. Participants were randomized into one of three beverage conditions: control, placebo, or alcohol (BAC = .08%). Path analysis revealed that the alcohol consumption group performed significantly worse on a measure of WM, but displayed no differences in risk and reward reactivity or willingness to consume alcohol when compared to the control or placebo beverage conditions. The findings suggest empirical validation of AMT is still necessary and that improved measures of the proposed AMT mediators are needed. **Suzanne Spinola PhD, Stephen A. Maisto PhD, Dezarie Moskal MS, Aesoon Park PhD**
13. **MINDFULNESS-BASED RELAPSE PREVENTION DECREASES NEURAL RESPONSES TO ALCOHOL CUES.** Numerous theories of addiction posit that heightened craving among individuals with Alcohol Use Disorder (AUD) is the product of a hypersensitivity for alcohol cues in neural attentional and reward networks. Recent reports have shown that active mindfulness training helps improve attentional neural systems. In the current study, we examined rolling group mindfulness-based relapse prevention (MBRP) among treatment seeking individuals with AUD in order to disrupt this alcohol cue-related hypersensitivity. In the study, participants viewed a series of negative, neutral, and alcohol picture cues. Following cue presentation, participants were asked to rate their level of craving. During the task, electroencephalogram was also recorded in order to capture an event related component shown to relate to emotionally salient stimuli, the late positive potential. Participants performed the task a second time following 8 sessions of MBRP. We found that craving ratings significantly decreased only in the alcohol cue condition, and that the magnitude of craving reduction correlated with the number of MBRP group sessions attended. Interestingly, we saw decreases in the LPP only for alcohol cues. Taken together, these results suggest disruption of drug-cue hypersensitivity in people with AUD may be a mechanism of MBRP. **Darin R Brown MA, Trevor C**

Jackson, Charles S. Robinson, Elena Stein, Victoria Votaw, Adam Wilson, Emma Brandt, Violet Fratzke, Eric Claus PhD, Vincent P. Clark PhD, Katie Witkiewitz PhD

14. IN-SESSION EXPRESSED COMPETITIVENESS INFLUENCES CHANGE LANGUAGE IN MANDATED MALE COLLEGE ATHLETES. This study examined expressed competitiveness (EC), defined as the desire to engage in interpersonal situations with the potential for winning, during a brief motivational interview (BMI) designed to reduce risky alcohol use. Using BMI session recordings of mandated college students previously coded for sustain talk (ST), or reasons to continue alcohol use, and change talk, or reasons to reduce alcohol use, we examined (a) expressed competitiveness during session; (b) whether EC differed by athlete status, and (c) the relationship of EC on client language. We hypothesized that (a) athletes would express higher levels of EC during discussions of drinking behavior than nonathletes and (b) greater EC would result in greater levels of in-session ST. We coded competitiveness on a seven-point Likert scale, from no competitiveness (1) to extremely competitive (7). Coders were blind to athlete status. Athletes expressed higher levels of EC than nonathletes, $t(50) = 2.98, p = .004$. Results suggested a positive relationship between EC and ST that approached statistical significance, $B = .92, SE = .47, p = .057$. Findings suggest that compared to nonathletes, athletes express different drinking language during BMIs. Examining EC may help to identify in-session risk factors for some college drinker subgroups. **Sierra Baca-Zeff BS, Benjamin O. Ladd PhD, Brian Borsari PhD**

15. PARENT-ADOLESCENT RELATIONSHIP CHARACTERISTICS AND ADOLESCENT CANNABIS USE: A GROWTH CURVE ANALYSIS. Cannabis use (CU) in adolescence is associated with serious consequences, including poor academic functioning and disrupted brain development. Moreover, about 17% of individuals who initiate CU during adolescence become addicted. Characteristics of the parent-adolescent relationship, including parenting style, warmth, and monitoring, have been linked to adolescent substance use, both as risk and protective factors. Adolescent externalizing behavior, like substance use, may affect this relationship over time via parents increasing their control, which increases conflict, negatively impacting relationship quality. In the context of an adolescent substance use treatment study conducted in a relatively diverse community clinic ($n=77$; average age=15.8 years), we investigated the time-varying associations between adolescent-reports of weekly CU (number of days used) and parent-reports of relationship qualities including relational frustration, discipline, and attachment at baseline, 3-month, 6-month, and 12-month follow-up. Results indicated an overall significant increase in weekly CU across time. Relational frustration was associated with greater CU at 3- and 6-months follow-up. At 12-months, lower parental attachment was associated with greater CU. Discipline had no effect on CU. Initiating CU in adolescence confers vulnerability to addiction; therefore, investigating factors related to CU, like family processes, may enable more effective, targeted treatments, to be developed. **Sarah Thomas PhD, Leslie Brick PhD, Lauren Micalizzi PhD, Anthony Spirito PhD**

16. A MODERATION ANALYSIS OF DESCRIPTIVE NORMS, BELONGINGNESS, AND ALCOHOL USE IN YOUNG ADULTS. Problem alcohol use among young adults is a significant public health concern. Numerous investigations have identified a strong effect of normative perceptions (i.e. descriptive norms) on drinking. Many of these findings have been based on samples of college freshman. Moreover, accumulating research suggests that this relationship may be more nuanced than previously believed. The current study examined the moderating roles of age (<21 years, >21 years) and perceived belongingness to a social community on the relationship between descriptive norms and drinking. Specifically, we analyzed the independent and interactive influences of descriptive norms, perceived belongingness, and age on typical alcohol use behaviors in a sample of 81 young

adults ages 18-29 years ($M = 21.49$, $SD = 3.25$) who endorsed weekly alcohol use. Main effects were exhibited for descriptive norms, age, and belongingness on typical drinking. Age did not significantly moderate the relationship between descriptive norms and drinking behavior, though belongingness did ($F(1, N = 81) = 9.54$, $p = .002$). Descriptive norms were more strongly predictive of alcohol use behaviors among individuals who endorsed low belongingness, compared to individuals who endorsed high belongingness. These findings highlight the importance of considering individual and contextual factors in substance use research and intervention. **Lia S. Bishop MA, Vladi Highland BA, Korine Cabrera BS, Kathleen M. Palm Reed PhD**

17. **A COLLABORATIVE ANALYSIS OF QUIT SMOKING PATTERNS IN THE BREATHEASY TRIAL: A MIXED METHODS APPROACH.** Objective: Breatheasy is a randomized clinical trial designed to examine the effects of yoga as a complementary therapy for quitting smoking. This mixed methods analysis examines patterns of quitting behavior during this smoking cessation trial. Methods: Analyses using latent class modeling (LCM) identified 4 distinct patterns of quitting behavior over time. To further understand differences among the patterns, a qualitative analysis of focus group data used pattern assignment to explore differences in participant comments about their quitting experiences. Results: Our sample included 227 participants randomized to Yoga ($N=113$) or Wellness ($N=114$). LCMs supported 4 patterns of quit behavior: Quit-date Quitters (16%); Non-Quitters (71%); Slow Quitters (5%); and Relapsers (8%). Significant differences between patterns were found in both confidence and readiness to quit at baseline with highest readiness scores among Relapsers and highest confidence scores among Quit-date Quitters. Differences were also found in mindfulness, impulsiveness, withdrawal symptoms and outcome expectations for yoga ($p's < .05$). Qualitative analysis of focus group data supports and illustrates the differences among the 4 patterns. Conclusions: This mixed methods approach may help researchers develop highly-tailored treatments for specific subsets of smokers which could ultimately improve the delivery of smoking cessation interventions and increase cessation success rates. **Ernestine G. Jennings PhD, Ryan Lantini MA, Rochelle K. Rosen PhD, Shira I. Dunsiger PhD, Beth C. Bock PhD**
18. **MEDICATION-ASSISTED TREATMENT AND INDIGENOUS PEOPLES: A SYSTEMATIC REVIEW.** Though Indigenous Peoples have been resilient in the face of colonial violence and ongoing systematic discrimination, many Indigenous communities face high rates of substance use problems, with few evidence-based treatment options available. Some Indigenous treatment facilities have begun implementing medication-assisted treatment (MAT) for alcohol and opioid use disorders (i.e., recovery assisted through pharmacological interventions such as methadone, buprenorphine, naltrexone, and disulfiram). However, there are many barriers for this implementation, including important cultural and social justice concerns about the desirability and efficacy of long-term reliance on Western medications for behavioral problems. This systematic review will explore the current scope of research documenting (a) Indigenous perspectives on Western medicine for behavioral problems generally, and (b) MAT adoption, implementation, and integration among Indigenous communities and individuals. The scope of the review will include peer-reviewed journal articles indexed through various search engines (e.g. PsycINFO, Scopus, PubMed) and will be inclusive of Indigenous Peoples in the United States, Canada, New Zealand, and Australia. Results are expected to inform ongoing research and practice efforts to integrate MAT with culturally-relevant, holistic services and community approaches. **Payton Bernett BA, Dan Parker BA, Dennis C. Wendt PhD**

19. WORLD ASSUMPTIONS AS A MEDIATOR BETWEEN INTERPERSONAL TRAUMA HISTORY AND DRINKING IN PROJECT MATCH. Trauma histories and problematic substance use frequently co-occur in the community and high-risk populations. However, little is known about specific mechanisms linking these phenomena, and treatment for comorbid posttraumatic stress disorder and substance use disorder is underdeveloped. This study proposed that one such mechanism and treatment target is world assumptions, or negative cognitions about the self and others that often develop in the aftermath of trauma and theoretically may encourage self-medication via substance use. It was hypothesized that, among adults seeking treatment for alcohol use disorder (AUD), world assumptions would mediate the association between interpersonal trauma history and alcohol consumption. Structural equation modeling was conducted using data from Project MATCH (N = 1,726), with latent variables constructed to represent interpersonal trauma history and world assumptions as assessed at baseline. Percent days abstinent (PDA) was measured at baseline, the end of treatment (EOT), and 12 months post-treatment (12MPT). Results indicated that world assumptions had good measurement model fit and significantly mediated the association between interpersonal trauma history and PDA at baseline and EOT but not 12MPT, controlling for demographics. Results provided preliminary support for world assumptions as a potential mechanism and treatment target for individuals with co-occurring trauma histories and AUD.
Kathryn Fokas MS, Charles S. Robinson PhD, Katie Witkiewitz PhD, Barbara S. McCrady PhD, Elizabeth A. Yeater PhD

20. CHILDHOOD SEXUAL ABUSE AND PAIN INTERACT TO INCREASE OPIOID USE IN ADULTS TREATED FOR SUBSTANCE USE. Background: Child abuse increases risk for negative outcomes including substance misuse, and substance use risk factors such as pain interference. In patients with substance use disorders (SUDs), little is known about the childhood trauma experiences influencing primary substance of abuse. Methods: Adults with chronic pain (N=160) seeking treatment for alcohol or opioid use disorder completed validated surveys assessing childhood trauma, pain interference, and substance use. Hierarchical logistic regression was used to model these measures predicting alcohol use disorder vs. opioid use disorder. Results: As levels of pain interference increase, the odds of having a primary diagnosis of opioid use disorder increase in patients with higher levels of childhood sexual abuse (CSA), whereas the odds of having a primary diagnosis of alcohol use disorder increase in patients with lower levels of CSA. This interaction effect ($z=-2.18$, $p=.029$) is present even when controlling for severity of childhood physical abuse ($z=2.26$, $p=.024$), substance use risk factors ($z=-4.78$, $p<.001$), substance use prior to treatment ($z=5.72$, $p<.001$), and anxiety sensitivity ($z=4.02$, $p<.001$). Conclusions: In adults seeking treatment for SUDs, CSA may biologically or behaviorally prime individuals to self-medicate with opioids over alcohol as pain interference increases. Study limitations and directions for future research are discussed.
Christopher D. King EdM, Christopher D. King EdM, Blake T. Hilton PsyD, Margaret L. Griffin PhD, R. Kathryn McHugh PhD, Elizabeth Kneeland PhD, Scott Provost MM MSW, Nadine R. Taghian BS, Roger D. Weiss MD, Kerry J. Ressler MD PhD

21. OPTIMAL ASSESSMENT OF PROTECTIVE BEHAVIORAL STRATEGIES AMONG COLLEGE DRINKERS: AN IRT ANALYSIS. The use of protective behavioral strategies (PBS; cognitive and behavioral strategies used while drinking to reduce use and negative consequences) appear to reduce alcohol use and negative consequences among college students (Pearson, 2013). At least six measures of PBS exist, making generalizability across studies difficult (Prince et al., 2013). Future research would benefit from measurement of PBS using one comprehensive set of items that function equivalently across college men and women of diverse races. The purpose of this study was to use item response theory to analyze 68 items from six PBS measures in order to: a) compare two distinct response anchors, b)

examine differential item functioning (DIF) based on sex and race, and c) develop a short measure of the best functioning PBS items. Results indicated that among a sample of 503 undergraduate students the text-based response anchors (i.e., “sometimes”) functioned better than the numeric response anchor (i.e., “2-3”). Twenty-eight items were discarded for exhibiting DIF with respect to gender and/or race. An optimal set of 20 PBS items was selected based on the remaining items’ psychometric properties and content. Implications regarding the most effective and efficient measurement of PBS and its use for prevention programs are discussed. **Jessica L Martin PhD, Kimberly F. Colvin PhD, Michael B. Madson PhD, Byron L. Zamboanga PhD, Rena Pazienza MS**

22. **SEX DIFFERENCES IN THE EFFECTS OF NEUROSTEROIDS ON COGNITIVE PERFORMANCE IN COCAINE DEPENDENCE.** Background: Cognitive deficits have been observed in cocaine dependence, and may play an important role in the progression, maintenance and risk for relapse of the disease. Therefore, interventions that improve cognition may prove clinically relevant in treatment seeking cocaine dependent individuals. Here, we tested the role of the progesterone-derived neuroactive steroid allopregnanolone (ALLO) on cognitive performance in cocaine dependent men and women in early abstinence who were part of a larger study examining the effects of progesterone. Methods: Thirty cocaine dependent individuals (10F/20M) received progesterone (400mg) vs. placebo for 7 days. On day 5, levels of ALLO were measured and cognitive tasks completed. Participants were grouped by high or low ALLO and cognitive performance compared between ALLO groups. Results: Women in the high ALLO group displayed significantly higher verbal fluency than low ALLO women, and increased emotional reactivity in the Paced Auditory Serial Addition Test (PASAT), increased inhibition in GoNOGo task, and reduced errors in Rey Auditory Verbal Learning Test (RAVLT) compared to women in the low ALLO group and men overall. Conclusions: The GABAergic neuroactive steroid ALLO showed sex-specific effects on cognitive performance, suggesting that a targeted manipulation of neuroactive steroids may be most beneficial in cocaine dependent women. **Verica Milivojevic PhD, Chloe Larkin BS, Stephanie Wemm PhD, Nia Fogelman PhD, Rajita Sinha PhD, Helen C. Fox PhD**
23. **THE IMPACT OF GENDER AND SEXUAL MINORITY IDENTITY ON HELP-SEEKING FOR SUBSTANCE USE PROBLEMS.** Qualitative responses were reviewed from (N = 54) gender and sexual minority (GSM) individuals who had participated in a larger mixed-methods study. The aim was to explore how stigma related to GSM identity impacts treatment-seeking behavior for problematic substance use. While 60% of participants noted that GSM stigma has not impacted their behavior, 41% indicated stigma influenced their decisions regarding treatment-seeking. Among this 41% (N = 22), thematic analyses revealed a prominent influence is fear of being stigmatized in a healthcare setting, which was endorsed by 59% (n = 13) of participants. This theme manifested in anxiety about judgement from healthcare professionals (50%; n = 11), distress around their GSM identity being treated as the presenting problem (27%; n = 6), and fear of receiving lesser quality care because of their GSM identity (18%; n = 4). Other highly endorsed themes involve the impact of hate and discrimination related to society at large (41%; n = 9). Findings suggest it is necessary for practitioners to examine their own biases related to gender and sexual identity, as well as continue to educate themselves on understanding minority-related stress and the best ways to provide non-judgmental substance use treatment. **Madeline Benz MS, Kathleen Palm Reed PhD, Korine Cabrera BS**

24. **YOU DON'T KNOW UNTIL YOU TRY: TOBACCO APPEAL & RISK PERCEPTIONS ARE INFLUENCED BY PRODUCT USE.** It is important to evaluate perceptions and attitudes regarding e-cigarettes (EC) and very low nicotine content cigarettes (VLNCs) in order to assess the impact that they may have on public health. Prior research has often relied on samples with no experience with such products. We hypothesize that experience with these products enables greater understanding and context in which to evaluate the appeal and perceived harms of these products. This pilot study evaluated health risk and product perceptions of EC (0 mg/ml, 18 mg/ml; administered single-blind) and VLNC cigarettes (0.4 mg/g). We recruited smokers with minimal EC/VLNC experience (n=15). We assessed acceptability and perceived health risks prior to and following use of products. After sampling, participants viewed 18 mg/g EC as being more acceptable (p=0.010) and would be more comfortable using the product in public (p=0.012). Perceived risk of asthma (p=0.029) and respiratory infections (p=0.022) associated with use of 0 mg/ml EC decreased after sampling. After sampling, participants' perceptions of VLNC cigarettes effectively aiding cessation increased (p=0.040). Existing studies that assess perceptions of EC and VLNC among never users likely underestimate the appeal and overestimate the perceived risk. **Lauren Pacek PhD, Maggie M. Sweitzer PhD, Jason A. Oliver PhD, Joseph McClernon PhD**
25. **MALADAPTIVE DRINKING AND PERFECTIONISM IN GRADUATE STUDENTS.** Perfectionism has been associated with increased anxiety and negative affect, as well as high personal standards and strivings, reflecting both maladaptive and adaptive components. High achieving groups, like graduate students, are arguably comprised of high concentrations of perfectionistic individuals. Graduate students are also likely to experience fluctuating periods of stress corresponding to the academic term. This study explored perfectionism, stress, negative affect, and coping, including maladaptive drinking (average of Drinking Motives Questionnaire coping subscale and Brief Young Adult Alcohol Consequences Questionnaire; $rT1 = .49$; $rT2 = .41$), in a sample of graduate students at a Midwestern university. Participants completed questionnaires (online) at the start (T1, N = 150) and end of an academic semester (T2, N = 104; alcohol consumption < 30 days n = 74). We found that, after controlling for drinking and stress at T1, higher levels of socially prescribed perfectionism (characterized by external expectations of perfection placed on an individual) but not self-oriented perfectionism (holding an internal expectation of perfection) predicted increased maladaptive drinking at T2, $F(5, 57) = 35.51$, $p < .001$, $R^2 = .74$. These findings suggest socially prescribed perfectionists are at greater risk than self-oriented perfectionists of having maladaptive coping strategies, and the inherent risks that may stem from them. **Jamie L Page BS, Angela D Staples PhD**
26. **INDIGENOUS EXPERIENCES AND PERSPECTIVES ON THE IMPACT OF CANNABIS USE AND LEGALIZATION: A REVIEW.** In light of recreational cannabis legalization that has occurred in nine U.S. states and all of Canada, it is imperative to better understand the impact of marijuana use and legalization on vulnerable populations. Indigenous Nations, in particular, have expressed concerns about these impacts, in light of high substance use disparities of youth in some Indigenous communities, within the context of long-term cultural oppression. Therefore, it is imperative to understand Indigenous perspectives concerning the use and regulation of cannabis. More specifically, this literature review will include available epidemiological data of cannabis use, perceptions of cannabis's harms, the impact of cannabis on mental health, its potential healing benefits, its relationship to various negative outcomes, and perspectives on cannabis legalization and regulation among Indigenous Peoples in the U.S. and Canada. The scope of the review will include peer-reviewed journals indexed through various search engines (e.g., PsycINFO, Scopus, and PubMed) and will include search strings pertaining to both Indigenous Peoples and cannabis use/legalization. In addition, due to rapid changes in marijuana decriminalization (particularly in

Canada) the review will be contextualized with news articles and policy statements pertaining to perspectives of cannabis legalization and regulation among Indigenous communities. **Daysi Zentner MA, Stephanie Coronado-Montoya MSc, Basile Favel, Dennis Charles Wendt PhD**

27. **THE ROLE OF BETWEEN AND WITHIN PERSON SELF-CONTROL ON CANNABIS AND ALCOHOL USE IN ADOLESCENTS.** Theoretical models have implicated the role of self-control in the escalation of substance use. Individuals with better self-control may be better able to regulate emotional states, may use effective coping strategies, and may be able to successfully navigate problem situations. The current study aimed to examine longitudinal associations between self-control and cannabis use (CU) or alcohol use (AU) in a relatively diverse sample of adolescents enrolled in a community clinic treatment study (N=108). Self-control practices for CU/AU were disaggregated into between- and within-person effects. Multilevel growth models were fit to determine change in CU/AU throughout the study (3-, 6-, and 12-month follow-up assessments) and disaggregated self-control was entered as between and within-person predictors of past week use. Results indicated that, for both CU/AU, when adolescents reported higher levels of self-control than they usually experience, they also reported lower weekly use. Further, adolescents who reported higher levels of self-control than others reported lower weekly use for CU, but not for AU. Thus, findings highlight the importance of assessing specific within-person changes in self-control for substance use. Indeed, a within-person focus may be especially important for AU, given that between-persons comparisons of self-control of AU did not correspond to reductions in use. **Leslie Ann D Brick PhD, Leslie Ann Brick PhD, Sarah A. Thomas PhD, Lauren Micalizzi PhD, Jennifer Wolff PhD, Christianne Esposito-Smythers PhD, Anthony Spirito PhD**
28. **RESPONDING TO THE CHALLENGE: DEVELOPMENT OF A TRAINING PROGRAM IN THE ADDICTIONS.** The United States is facing a public health crisis related to substance use disorders (SUD), with escalating use of opiates, alcohol, and marijuana. Across the nation, and relative to great need, there are few mental health providers who specialize in the Addictions. This poster will describe the development of an Addictions training program in the context of a master's training program in mental health counseling. The aim of the program is threefold: (1) to train addiction counselors using a scientist-practitioner framework; (2) to embed data collection procedures to assess client outcomes; and (3) and to measure the acquisition of skills among trainees. Curricular and practice training is grounded in the science of addiction including, epidemiology, models for understanding addiction, and empirically-supported treatments for the addictions. The options for clinical training include opportunities in the in-house training clinic as well as placements in the community. Within the training clinic, specialty practica are Cognitive Behavioral Treatment (CBT) for mild to moderate SUD and Psychoeducation and CBT for Spanish-speaking clients. The university and local communities have several entities that deliver addictions services across different levels of care and utilizing individual and group treatment modalities that employ Motivational Interviewing, CBT, and 12-step facilitated treatment. **Ellen Vaughan PhD, Lauren E. Adams MA, Mary Waldron PhD, Lynn Gilman PhD, Kyle W. Kennedy MEd**
29. **NEGATIVE AFFECT, TENSION REDUCTION EXPECTANCIES, AND ALCOHOL USE: A LONGITUDINAL TEST OF 3 MODELS.** Social Learning Theory (SLT), Outcome Expectancy Theory (OET), and Behavioral Choice Theory (BCT) suggest negative affect and tension reduction expectancies may increase drinking risk among young adults. Yet, no single study has directly compared these models, and it is unclear whether drinking risk is best explained by a single theory, or a combination of models throughout one's college years. A clearer delineation of these relationships could inform prevention and intervention efforts. The present study used a longitudinal design to compare these three

models. 346 young adults (57.8% female; Mage= 18.09 (SD=0.44)) completed an electronic survey once a year over 4 years of college and 1-year post-college. Alcohol use, negative affect, and tension reduction expectancies were self-reported. Three cross-lagged path models (SLT, OET, BCT) were specified for each year. Preliminary results showed significant interactions at years 2-4 between negative affect and tension reduction expectancies (all p 's between .03 and .001), with the strongest effect for high levels of negative affect. Fit indices supported the BCT for years 2-4. No model demonstrated adequate fit for years 1 (i.e., entering college) or 5 (1-year post-college), suggesting the college environment may be important for understanding how affect and tension reduction expectancies influence drinking risk. **Lauren Rodriguez MA, Jennifer P. Read PhD**

- 30. BEHAVIORAL ECONOMIC PREDICTORS OF DRINKING AND CONSEQUENCES IN COMMUNITY-DWELLING EMERGING ADULTS.** Elevated alcohol reward value and steeper delay discounting are associated with drinking practices and problems among college students. However, young adults not attending college are understudied. This research evaluated behavioral economic (BE) predictors of drinking practices and problems in this neglected group. Peer-to-peer recruitment via digital Respondent Driven Sampling (RDS) enrolled community-dwelling young adult drinkers (N = 140, 59.7% female, M age = 24.7 years, median income < \$20K/year) for an online survey. The survey assessed past month drinking days, drinks/drinking day, past 3-month negative consequences (Young Adult Alcohol Consequences Questionnaire [YAACQ-B]), and four BE measures associated with alcohol-related risk: Kirby Monetary Choice Questionnaire (delay discounting); Alcohol Purchase Task (APT), Activity Level Questionnaire (ALQ; proportion of alcohol-involved activities), and Relative Discretionary Expenditures on Alcohol (RDEA). In regression analyses, APT intensity (consumption when drinks are free) was positively associated with drinking frequency, quantity, and consequences ($ps < .05$). RDEA was positively associated with drinking frequency and consequences ($ps < .001$), and ALQ was positively associated with consequences ($p < .044$). BE-drinking associations largely replicated findings obtained with college drinkers, thereby generalizing BE risk characteristics to community-dwelling young adults. Digital RDS has potential for reach and scalability with this target population. **JeeWon Cheong PhD, Katie Lindstrom MA, Susan Chandler MPH MA, Jack Lin, Jalie Tucker PhD MPH**

- 31. NEURAL AND BEHAVIORAL ASSOCIATIONS OF DRINKING AND EMPATHIC PROCESSING.** The lack of treatment seeking among individuals with Alcohol Use Disorder (AUD) may suggest a lack of empathy, as characterized by diminished self-awareness and insight into the seriousness of AUD related problems. Lack of empathy may be due to alcohol-induced neural atrophy in brain regions associated with empathy. The current study examined the association between structural neural correlates of self-reported empathy and heavy drinking among non-treatment seeking heavy drinkers with AUD (N = 136). We hypothesized lower gray matter volume among non-treatment seekers with AUD would be associated with lower empathy. Results showed higher scores on the Interpersonal Reactivity Index (IRI) Empathic Concern scale were associated with fewer percent heavy drinking days and scores on the Perspective Taking (PT) scale were inversely associated with temporoparietal and frontotemporal gray matter volume. An interaction between IRI PT and sex was associated with alcohol craving, such that higher PT scores were associated with less craving for men. This replicated previous research finding sex differences on empathy within an AUD sample (Robinson et al., 2018) and suggests that sampling with regard to sex must be considered when examining empathy within AUD samples. **Charles Robinson PhD, Elena Stein MS, Kathryn Fokas MS ABD, Vince Calhoun PhD, Vincent P. Clark PhD, Eric D. Claus PhD, Katie Witkiewitz PhD**

32. IMPACT OF PHARMACOTHERAPY ON QUALITY OF LIFE IN DRUG TREATMENT COURT

PARTICIPANTS. Pharmacotherapy for Opioid Use Disorders (OUD) is associated with improved health-related quality of life (QOL) (1,2) - patient's perceived health in physical, psychological, and social domains (3). QOL is a strong predictor of morbidity, mortality, and retention in treatment (4). Yet, no research to date has examined QOL in justice-involved populations receiving addictions treatment. Drug Treatment Courts (DTC), specialty courts which mandate addictions treatment, are effective in reducing substance abuse, drug relapses, and criminal activity (5-7). However, attrition from DTCs can be up to 75% (7). Understanding what QOL looks like in DTC participants, with and without pharmacotherapy, can help inform DTCs and providers about which individuals are at high risk for attrition. Here, we will 1) compare QOL (as measured by SF-8) for DTC participants with similarly situated populations and 2) examine differences in QOL between individuals with and without pharmacotherapy in DTCs. To date, we recruited 45 (expected n=65 by 03/19) participants, of whom n=16 (35%) are receiving pharmacotherapy. Findings from a pilot study suggest that DTC participants had lower mental health-related QOL than same-aged peers, but similar physical health-related QOL. The discussion will address impact of QOL on enrollment and retention in DTCs and addictions treatment more broadly. **Bailey Pridgen BA, Rachel Serafini MA, Mary Maddox BA, Danielle Beam BA, Ekaterina Pivovarova PhD**

33. MENTAL HEALTH VULNERABILITIES PREDICT FUTURE CANNABIS USE PROBLEMS IN COMMUNITY

ADULTS. Individuals with mental health vulnerabilities (MHV) may be at greater risk of developing cannabis use problems than users without MHV. We hypothesized that self-reported MHV reported at baseline would contribute to increased cannabis use problems as measured by the Cannabis Use Problems Identification Test-Problems Subscale (CUPIT; Bashford et al., 2010) after accounting for the independent contribution of cannabis use frequency. The CUPIT was administered at baseline, 3, 6, and 9 months. MHV were conceptualized as self-reported anxiety, depression, and schizotypy, which have been associated with cannabis use (Buckner et al., 2008; Cohen et al., 2011; Shi 2014). Participants were 366 partnered adults (Mage = 24.6, SD = 3.1, 77.9% European-American; see Testa et al., 2018). After controlling for cannabis use frequency, anxiety and depression were positively associated with concurrent and future cannabis use problems, up to 9 months later. Interestingly, only the disorganization features of schizotypy were significantly associated with future (but not concurrent) cannabis use problems. Results support the importance of mental health as well as frequency of use as key predictors of cannabis problems up to one year later. **Whitney C Brown PhD, Kenneth Leonard PhD, Paul Stasiewicz PhD, Maria Testa PhD**

34. TOBACCO USE PROFILES AMONG YOUNG ADULT CANNABIS USERS: PATTERNS OF USE AND DEMOGRAPHIC CORRELATES.

This study describes prevalence, patterns, and demographic correlates of tobacco use among young adult cannabis users who completed Wave 3 of the Population Assessment of Tobacco and Health survey. Of the 8453 participants aged 18-25 considered for analysis, 25.1% (n=2119) endorsed past-month cannabis use, and 71.5% of this subgroup endorsed past-month use of at least one nicotine/tobacco product. Rates of past-month use for specific nicotine/tobacco products were 50.8% for cigarettes, 30.2% for electronic nicotine delivery systems (ENDS), 28.9% for cigarillos, 15.0% for hookah, and 11.5% for cigars. Further, 35.2% reported past-month use of cigarillos as blunts, while 35.6% and 40.3% endorsed ever-use of hookah and ENDS, respectively, to consume cannabis. Lesbian/gay/bisexual sexual orientation, minority race/ethnicity, lower income, and lower education were each associated with use of at least one of these tobacco products (OR's = 1.362-10.533, p's < .05) or with using tobacco products/devices to consume cannabis (OR's = 1.527-2.463, p's < .05). These results suggest that recent policy changes and increasing social acceptance may unintentionally promote concurrent use of cannabis and

nicotine/tobacco products among young adults. This is despite concurrent use of these substances potentially having synergistic negative health effects, especially among health disparity populations.

John B. Correa PhD, David R. Strong PhD, Neal Doran PhD, Mark G. Myers PhD

35. **COMPARING AMBULATORY ASSESSMENT AND TIMELINE FOLLOWBACK REPORTS OF ALCOHOL IMPAIRED DRIVING.** This study compares characteristics of alcohol consumption and alcohol impaired driving (AID) in natural drinking environments using ambulatory assessment (AA) and timeline followback (TLFB). Participants (N = 46) reported on drinking and AID events on a smartphone for two weeks before completing the TLFB for the same period. We compared characteristics of drinking and AID events reported in AA period versus the TLFB to assess for discrepancies between the methodologies. Participants reported a higher percentage of drinking days on the TLFB (36.8%) than the AA assessments (29.3%), $t(45) = 2.70, p = .010$. Participants also reported consuming greater quantities on drinking days on the TLFB ($M = 3.96, SD = 3.0$) than the AA assessment ($M = 3.10, SD = 2.1$), $t(127) = 2.16, p = .033$, although the reports across measures were strongly correlated, $r(126) = .768, p < .001$. Participants also reported AID on a higher proportion of drinking days on the TLFB (.30) versus the AA assessments (.15), $t(45) = 3.34, p = .002$, with a modest correlation between data from the methodologies, $r(45) = .466, p = .004$. Further research is necessary to identify causes of discrepancies between retrospective and real-time reports of AID. **Laura E. Hatz MA, Kayleigh N. McCarty MA, Christiana J. Prestigiacomio BA, Edgar C. Merkle PhD, Timothy J. Trull PhD, Denis M. McCarthy PhD**

36. **A BEHAVIORAL ECONOMIC PERSPECTIVE ON PTSD SYMPTOMS AND PROBLEMATIC DRINKING AMONG HEAVY DRINKING YOUNG ADULTS.** PTSD and alcohol misuse often co-occur among young adults. One explanation is PTSD-related avoidance diminishes engagement in substance-free environmental rewards. Alcohol, which is positively reinforcing (i.e., pleasurable) and negatively reinforcing (i.e., temporarily alleviates PTSD symptoms), is an immediately available reinforcer that may replace engagement in rewarding substance-free activities, resulting in more problematic use. We sought to replicate the mediating role of environmental rewards on the relationship between PTSD and alcohol-related problems in a diverse sample of heavy drinking young adults recruited from the community. Participants ($n=478$, $Mage=22.6$, 58.4% female, 39.8% African-American) completed measures of PTSD symptoms (PTSD Checklist for DSM-5), alcohol-related consequences (Young Adults Alcohol Consequences Questionnaire), alcohol consumption (Daily Drinking Questionnaire; $M=17.3, SD=15.0$), and reward value and access (Reward Probability Index). Consistent with previous research, access to environmental rewards partially mediated the relationship between PTSD ($M=17.6, SD=17.4$) and alcohol-related problems. Additionally, ability to experience reward also served as a partial mediator. Results were consistent across education level and race. These results suggest that both access to environmental rewards and ability to experience pleasure play critical roles in the relationship between PTSD and alcohol-related problems, and more research is warranted to further analyze the role of rewards on this relationship. **Madeline Voss BS, Samuel F. Acuff MS, Matthew T. Luciano MS, Kathryn E. Soltis MS, Keanan J. Joyner MS, Meghan E. McDevitt-Murphy PhD, Michael Amlung PhD, Allison L. Wallace MS, Ashley A. Dennhardt PhD, James MacKillop PhD, James G. Murphy PhD**

Poster Session 2: Friday April 5th 8:30 – 9:30 am

- 1. EXPANDING EMERGENCY DEPARTMENT PEER-BASED WARM HANDOFF PROGRAMS.** The current opioid crisis has necessitated innovative, grassroots social entrepreneurship from stakeholders involved in the substance use disorder and recovery fields. One such innovation involves the use of peer recovery support services in acute settings where points of contact are made with high-risk, substance using populations. These programs have emerged organically in emergency department settings across the country, typically for patients having experiencing an overdose or for opioid misuse. However, the use of peers to engaging patients with any substance use disorder may have higher potential impact. This exploratory study evaluates the Georgia Council on Substance Abuse Northeast Georgia Community Connections Program, a peer recovery support services program that uses Certified Addiction Recovery Empowerment Specialists (CARES) in rural emergency departments in Georgia for patients with any substance use disorder. Initial data was captured at three rural emergency departments. Patients (N=236) met DSM-5 criteria for substance use disorder. This study demonstrates that peer interventions can be beneficial for all types of drug use, not just for individuals who experience accidental opioid drug poisoning (i.e., overdose). Additionally, results suggest that both clinical and community-based supports can be utilized for referrals to appropriate levels of care. These findings also highlight the utility of innovative and adaptive peer recovery support programs in rural emergency department settings across the United States. **Robert D. Ashford MSW, Austin Brown MSW, Brenda Curtis PHD**
- 2. DAILY EXPOSURE TO TOBACCO OUTLETS IN ACTIVITY SPACES AND SMOKING: ARE SOME YOUTHS MORE SUSCEPTIBLE?** We examined (a) associations between youths' daily exposures to tobacco outlets within their activity spaces and cigarette smoking and (b) whether sex, age, race/ethnicity, and SES moderated these associations. Geographical Ecological Momentary Assessment data were collected from youths aged 16-20 (N=101) in 8 California cities for 14 days (1,483 assessments). Participants reported daily via GPS-enabled smartphones whether they smoked any cigarettes and the number of cigarettes smoked. Participants' location coordinates were obtained at one-minute intervals each day to determine activity spaces. Tobacco outlet addresses were geocoded. No associations were found between daily exposures to tobacco outlets in activity spaces and likelihood of any cigarette smoking. Multilevel mixed effects regression models, however, showed positive associations between number of cigarettes smoked each day and number of outlets within 100m of participants' activity spaces ($b=0.02$, $p<0.001$) and amount of time within 100m of tobacco outlets ($b=0.002$, $p<0.01$). Significant interactions indicated that daily exposure to tobacco outlets was more strongly associated with smoking among older participants ($b=-0.04$, $p<0.001$) and participants of lower socioeconomic status ($b=-0.01$, $p<0.05$). Daily exposure to tobacco outlets within activity spaces may increase youths' risk for heavier smoking. Older youths and youths of lower socioeconomic status may be at greater risk. **Joel W. Grube PhD, Sharon Lipperman-Kreda PhD, Laura J. Finan PhD, Emily Kaner BS, Anna Balassone BA, Andrew Gaidus MEM, Melissa Abadi PhD**
- 3. A "RELATIONAL AGENT" TO REDUCE ALCOHOL USE AND INCREASE REFERRAL TO TREATMENT FROM PRIMARY CARE.** The quality and frequency with which Screening, Brief Intervention and Referral to Treatment (SBIRT) is implemented in VA primary care varies greatly. One option to improve care is to use brief computerized interventions for alcohol use within primary care. In the current study, we developed and implemented an interactive, computerized "relational agent" (RA) intervention programmed to perform SBIRT within a VA primary care clinic. We randomized 178 veterans into treatment as usual (TAU; standard primary care clinician screening, brief intervention,

referral to treatment) or to RA plus TAU. According to generalized multilevel mixed modeling results, RA plus TAU patients reported greater reductions in average weekly drinks over time ($B = -.12, p = .02$); no differences emerged with respect to number of days abstinent or percentage of heavy drinking days. Further, primary care clinicians referred 1 patient and RA referred 26 patients for follow up treatment. Thus, the RA intervention produced superior outcomes regarding average weekly drinks and rates of referral to alcohol use treatment following primary care visits. The RA intervention may provide added benefit to primary care clinics by offering brief intervention and referral support while also reducing clinician burden. **Nicholas Livingston PhD, Molly Sawdy BA, Kate Yeksigian MPH, Timothy Bickmore PhD, Shuo Zhou MS, Steven Simon MD, Richard Saitz MD MPH, Nancy Kressin PhD, Amy Rubin PhD**

4. **PHENOMENOLOGICAL QUALITATIVE RESEARCH METHODS: RIGOROUSLY TELLING THEIR STORY.** What confuses us as researchers, doctors, psychiatrists, psychologists, family members and friends about persons who suffer with one or more substance use disorder (SUD)? Why can the person who wants to “quit” not quit? Perhaps the answer lies not within the inquiries we set upon participants but in the responses we record. Do we reduce participants’ experiences to fit our own ideas and analysis? We must be careful our research does not subtly invalidate and ignore claims not causal/mechanically “sensible” to us. How do we offer participants in research an opportunity to work with us to find and tell us what they believe works best for them? I found following phenomenological qualitative methods of research described by Husserl, Giorgi, and Wertz and applied in settings similar to Fischer’s work can be used to help us listen and create real solutions for those who suffer. Their methods of research are not to be tweaked by reduction but enhanced by deconstructing, bracketing and validating the subjects’ experiences as described. These methods may help to improve research and quality applicable outreach. I will present the thoughts, represented by a qualitative examination of recorded experiences of 25 women who have “quit” chemical abuse over three years. **Corri Johanson MA**

5. **REDUCTIONS IN OPIOID, CANNABIS, AND STIMULANT USE AFTER PSYCHEDELIC USE IN NON-LABORATORY SETTINGS.** The present study sought to examine factors associated with psychedelic-occasioned reductions in drug use to better understand possible mechanisms through which psychedelic use may exert such effects. Respondents ($n=444$; White=82%, male=79%, US resident=67%; cannabis users=37%; opioid users=35%; stimulant users=28%) self-identified as experiencing a reduction in drug use following a psychedelic experience and completed an anonymous online survey. The average reduction in drug consumption score on the Drug Use Disorders Identification Test - Consumption (before and after the referent psychedelic experience) was -5.4 ($SD=3.2$). A path analysis revealed that, while controlling for age, greater substance consumption before the psychedelic experience was related to greater reduction in substance use after the experience. Higher dose of the psychedelic substance was related to higher intensity of acute mystical and insightful experiences during the psychedelic session, both of which were related to greater personal meaning of the experience. Greater personal meaning was related to greater substance use reduction. These findings suggest the acute qualities of a psychedelic experience and their associated meaning are potential mechanisms underlying psychedelic-occasioned drug use reduction. These factors should be investigated in laboratory studies testing the efficacy of psychedelics in addiction treatment. **Alan Kooi Davis PhD, Roland Griffiths, Albert Garcia-Romeu, Matthew Johnson**

- 6. SUBSTANCE USE IN SEXUAL OFFENDING.** Research shows a strong association between substance use and incidents of sexual assault. Yet, there is a dearth of research examining ways in which substances may play a role in different types of assault (e.g., adult sexual assault [ASA], child molestation). The present study aims to fill this gap through an examination of substance use involvement (alcohol or other drugs), offender intoxication, and supplying substances to the victims during the offenses of convicted ASA and child molestation offenders (incest vs. non-incest). Data was analyzed using six binary logistic regressions. Results revealed that substance use involvement was more likely in ASA than child molestation ($p < .001$, $OR = 2.33$). Among child molestation offenses, substance use was less likely to occur in incest compared to non-incest offenses ($p = .03$, $OR = .75$), while offender intoxication was more likely in incest offenses ($p = .03$, $OR = 3.05$), and supplying substances to victims was less likely in incest offenses ($p < .001$, $OR = .22$). These findings highlight the importance of continuing to investigate substance use related factors during sexual offenses, as research has found that substance use and sex offender treatment reduce the likelihood of recidivism. Understanding the ways in which substances are used in sexual offenses will likely improve prevention and intervention strategies. **Katelyn T. Kirk MA, Nichea S. Spillane PhD, Elizabeth L. Jeglic PhD, Cynthia Calkins PhD**
- 7. INTERACTIVE EFFECTS OF NATURALISTIC DRINKING CONTEXT AND ALCOHOL SENSITIVITY ON NEURAL ALCOHOL CUE-REACTIVITY RESPONSES.** Low alcohol sensitivity (LS) is known to confer increased risk for alcoholism and alcohol use disorder. Recent work has shown that LS, assessed using retrospective self-report measures, is associated with enhanced alcohol cue-reactivity (ACR) in the amplitude of the P3 event-related potential (ACR-P3). The current study tested whether alcohol cues presented in naturalistic drinking contexts would modulate the association between LS and ACR-P3, and further tested whether the effect of LS on ACR-P3 varies according to sub-components of the LS phenotype. Eighty emerging adults (M age = 19.15 years) completed a picture-viewing oddball task in which pictures of alcoholic beverages (alone or in naturalistic drinking contexts), nonalcoholic beverages, and neutral control images were presented while EEG was recorded. Results replicated previous research showing that LS is associated with enhanced ACR-P3 amplitude and extended previous work by showing that this association is driven by differences in sensitivity to the more severe, heavier-dose, sedating effects of alcohol. In contrast to our predictions, however, we failed to find any evidence suggesting that the effect of LS on ACR-P3 was potentiated by presenting cues in naturalistic drinking contexts. Implications of the findings for broadening understanding of LS-related AUD risk will be discussed. **Jorge Martins MA, Bruce D. Bartholow PhD**
- 8. PATTERNS OF YOUTH SUBSTANCE USE AND SYMPTOMS OF MENTAL DISORDERS: A LATENT PROFILE ANALYSIS.** Adolescence is the peak time of onset for mental illnesses and substance use, and these concerns commonly co-occur. Few studies have captured patterns in youth substance use and existing studies do not use symptoms of mental disorders to identify these patterns. Research on substance use patterns simultaneously incorporating mental disorders is needed. Using two large representative samples, including the Ontario Child Health Study ($n = 4,428$) and the School Mental Health Survey ($n = 10,554$), using Latent Profile Analysis we will identify distinct profiles of adolescents who vary with respect to the severity and co-occurrence of symptoms of mental disorders (including internalizing and externalizing disorders) and substance use (including alcohol, tobacco, cannabis, and other illicit substance use), and test for equivalence across sex, age, and socioeconomic status. We will then determine the association between identified profiles and any mental health service use by using service utilization as an external predictor of class membership. The results of this study will help identify particular high-risk groups of youth and help target

interventions for improving help seeking among particular groups of youth. **Jillian Halladay MSc, Michael Amlung PhD, James Mackillop PhD, Catharine Munn MD, Katholiki Georgiades PhD**

- 9. PAIN CATASTROPHIZING IN ADULTS WITH SUBSTANCE USE DISORDERS AND CO-OCCURRING CHRONIC PAIN.** Pain catastrophizing is a cognitive response that is characterized by the interpretation of pain as harmful or intolerable. Higher pain catastrophizing is associated with greater pain reactivity, pain disability, and emotional distress in patients seeking treatment for chronic pain. The current study characterized pain catastrophizing and its demographic and clinical correlates in a sample of individuals receiving inpatient substance use disorder treatment who also endorsed current chronic pain (N=244, 67.6% female). In a series of regression models, we tested the associations between pain catastrophizing and functioning, specifically pain-related phenomena, substance use severity, and mental health variables. Higher pain catastrophizing was associated with greater pain interference ($\hat{\eta}^2 = 0.10$, SE = 0.01, $p < .001$), higher levels of craving ($\hat{\eta}^2 = 0.04$, SE = 0.01, $p = .009$), and greater mood and anxiety symptoms ($\hat{\eta}^2 = 0.20$, SE = 0.05, $p < .001$ and $\hat{\eta}^2 = 0.11$, SE = 0.02, $p < .001$). These relationships remained significant when pain severity was included in the statistical models. Elucidating how pain catastrophizing relates to pain interference, substance use, and mental health among individuals with a current substance use disorder is important because pain catastrophizing could be targeted therapeutically to improve treatment outcomes. **Elizabeth T. Kneeland PhD, Margaret L. Griffin PhD, Nadine Taghian BA, Roger D. Weiss MD, R. Kathryn McHugh PhD**
- 10. THE ROLE OF EMOTIONALITY IN ATTENDING TO AND IGNORING FACIAL STIMULI IN ALCOHOL USE DISORDER.** Individuals with alcohol use disorder (AUD) display neurocognitive alterations that include aspects of working memory and emotional processing. The current study integrates these functions by evaluating the role of emotionality when attending to and ignoring facial stimuli in a working memory task. Sixty-three controls (34 women) and 58 treatment-seekers with AUD (14 women) completed two conditions of a working memory task - Remember Faces/Ignore Scenes (i.e. attend) and Ignore Faces/Remember Scenes (i.e. ignore). Facial stimuli were either happy, neutral, or fearful. We conducted a sex X group X emotion analysis on task accuracy when faces were to be attended to and ignored separately. Women with AUD were less accurate than control women and AUD men in both conditions (p 's < .02). There was no effect of emotion in the attend condition. In the ignore condition, women with AUD only showed deficits relative to female controls and male AUD participants when the to-be-ignored faces were neutral (p 's < .005). These findings suggest a greater role of emotionality in ignoring rather than attending. Interestingly, women with AUD display greater deficits in ignoring emotionally ambiguous stimuli than higher intensity expressions. These data further explain the relationship between emotional and cognitive deficits in individuals with AUD. **Julianne Price MS, Ben Lewis PhD, Christian Garcia MS, Ian Frazier MA, Sara Jo Nixon PhD**
- 11. OVERDOSE AND SUICIDAL MOTIVATION IN ADULTS WITH OPIOID USE DISORDER.** In 2017, over 11 million Americans misused an opioid and more than 49,000 individuals died by opioid overdose. Suicide and overdose are both common among people with opioid use disorder (OUD); however, little is known about the role of suicidal motivation in overdose. Our aims are to characterize correlates of opioid overdose and the frequency of suicidal motivation prior to overdose in people with OUD. Treatment-seeking adults with OUD completed a battery of self-report measures, including a question about degree of desire to die (i.e. suicidal motivation) prior to their last overdose (rated from 0-10). Among the total sample, 45% (54/120) of individuals had overdosed at least once. Those who had overdosed were more likely to have co-occurring psychiatric disorders

(72% vs. 50%) and endorsed higher levels of craving. On average, participants endorsed a low to moderate desire to die (mean= 3.79, SD = 4.1) before their most recent overdose. At least some (minimum of 1) desire to die was reported by 58% of participants and 36% reported a high desire to die (7 or greater). Suicidal motivation is common prior to opioid overdose and may be an important target for treatments to reduce this risk. **Nadine Taghian BS, Hilary S. Connery MD PhD, Margaret L. Griffin PhD, R. Kathryn McHugh PhD, Roger D. Weiss MD**

12. **INVESTIGATING DELAY DISCOUNTING AND IMPULSIVITY IN A SAMPLE WITH TRAUMA AND SUBSTANCE USE.** The relationship between trauma and substance use have recently emerged as two of the most frequent, co-occurring disorders (Flanagan et al., 2017). Very little research has examined trauma and substance use in relation to behavioural measures such as delay discounting and impulsivity even though impulsivity and decisions making are two of the most predictive and informative variables to examine when considering one's mental health and well being (Richardson, 2008). A small sample of studies have found that facets of impulsivity are predictive of trauma and PTSD symptoms (Contractor et al., 2015), while another study found that mono-, dual-, and tri-substance users all discount more steeply, and exhibit greater impulsivity, than controls (Moody et al., 2016). The goal of the current study was to investigate the understudied relationship between trauma, substance use, decisions making, and impulsivity, in a large-scale, general population sample. Preliminary findings show that higher trauma scores positively predict delay discounting at \$10 and \$100, and that higher trauma scores positively correlate with our measure of impulsivity. All results were significant after controlling for age, sex, education, income, race, depression and anxiety. Next steps will be to include substance use variables into the analyses. **Vanessa Morris BA, Katherine Naish PhD, Margaret McKinnon PhD CPsych, Michael Amlung PhD**
13. **SLEEP, EXERCISE, AND PERCEIVED STRESS PATTERNS AMONG MARIJUANA-SMOKING AND ALCOHOL-DEPENDENT GROUPS.** High stress, insufficient exercise, and poor sleep are commonly reported by young adults, but the relationship of these health behaviors to alcohol and marijuana use is not well understood. We examined perceived stress (PSS), average exercise session length, and sleep duration and quality in three young adult groups (18-25 years): (1) Met criteria for alcohol dependence (AD) and reported limited past month marijuana use (n=23); (2) Did not meet criteria for AD and reported marijuana use $\hat{\approx}$ once per week (n=12); (3) Did not meet criteria for AD and reported limited past month marijuana use (n=33). General linear models suggested a differential pattern in perceived stress between the groups at the level of a trend (p=.060) that accounted for 8.3% PSS variance. There were no significant group differences in the average length of exercise sessions and sleep. However, distinct patterns of a binary sleep quality variable were observed across groups wherein 0% of marijuana, but 35% of the AD group reported poor sleep quality. The research adds to current understanding of the relationship between stress, exercise, sleep, and substance use. Future research is needed, particularly related to marijuana use, to better understand the efficacy of marijuana as self-medication for sleep. **Rutu Patel BA, Laura M. Lesnewich MS, Jennifer F. Buckman PhD, Marsha E. Bates PhD**
14. **ALCOHOL-RELATED JEALOUSY: A CLOSER LOOK AT THE GREEN EYED MONSTER IN THE BOTTLE.** Volumes of research have examined a variety of factors that influence people's experiences of romantic jealousy. However, very little work has examined how alcohol-related contexts impact the experience of romantic jealousy or an individual's feelings of jealousy specific to partner's alcohol use while they were not present. Across three studies, the current research aimed to examine the extent to which individuals have differential feelings of jealousy in the presence or absence of alcohol-related contexts (Studies 1 & 2) and how feelings of jealousy specific to partner drinking

impacted relationship outcomes (Study 3). Participants included heterosexual undergraduate students across the three studies who reported being in a committed romantic relationship lasting at least 3 months. The results of Study 1 and 2 indicated that participants reported more jealousy in response to an alcohol-related context (i.e., bar), relative to a non-alcohol-related context (i.e., library). Study 3 revealed the importance of actor and partner effects of alcohol-related situational jealousy suggesting that relationship quality is lower in the context of higher alcohol-related jealousy and higher alcohol consumption. Our results provide support for future consideration of the contextual factors that impact the experience of jealousy, with a specific focus on alcohol-related contexts and consumption. **Micaela Zebroski, Angelo M. DiBello PhD, Camilla S. Øverup PhD, Lindsey M. Rodriguez PhD**

15. **SOCIAL DETERMINANTS OF ALCOHOL & TOBACCO USE BY RACE/ETHNICITY: CAN WE IGNORE MEASUREMENT ISSUES?** Psychometric critiques of cross-cultural research emphasize testing whether assessment instruments measure the same construct across race/ethnicity. Multi-group structural equation modeling was applied to a sample balanced across race/ethnicity (794 African-American, 786 Latino, 796 White participants; age = 43 [SD=12]; 58% female) to test the measurement invariance of SES (education, employment, income, SES-Ladder), perceived discrimination, alcohol (frequency, quantity, heavy drinking), and tobacco involvement (frequency, quantity, time-to-first-cigarette). No measurement bias was observed for discrimination or alcohol involvement. Systematic inaccuracy of measurement was observed in factor loadings for SES and tobacco involvement; however, regardless of race/ethnicity, the same factor patterns emerged, and all factor loadings were significant/substantial. Inaccuracy of measurement was statistically modeled when making inferences. Results suggest that higher levels of discrimination predict more alcohol involvement across race/ethnicity. Discrimination was unrelated to tobacco in African-American participants, though it was negatively predictive for Latino, and positively predictive for White participants. Higher SES predicted lower alcohol involvement in the Latino group only. Higher SES was associated with more tobacco involvement in the African-American group, whereas it was associated with less tobacco involvement in the White group. Results support psychometric critiques, and inform how social determinants of drug use are similar and different across race/ethnicity. **Hector Lopez-Vergara PhD, Robert Rosales PhD, Taneisha S. Scheuermann PhD, Nikki L. Nollen PhD, & Jasjit S. Ahluwalia MD**
16. **INDIGENOUS TRADITIONAL HEALING PRACTICES TO ADDRESS SUBSTANCE USE PROBLEMS: A LITERATURE REVIEW.** Indigenous Peoples have passed on traditional knowledge and healing practices for generations. In the context of European colonialism and its ongoing ills, a resurgence of traditional healing has emerged in order to reclaim ruptured cultural practices while simultaneously addressing behavioral health disparities, particularly for substance use problems. Increasingly, traditional healing practices, consisting of a wide range of religious or spiritual practices to promote individual and community health and wellness, have emerged alongside behavioral health services for Indigenous communities. This literature review aims to document the variety of ways in which Indigenous communities in the U.S. and Canada have implemented traditional healing practices within health and community organizations in order to address substance use problems. A wide search of peer-reviewed articles, chapters, books, and dissertations will be included in this review, using a variety of databases (e.g., Google Scholar, PsycINFO, PubMed, and Scopus) and search strings pertaining to each of the following three categories: Indigenous Peoples, substance use, and traditional healing. This review will provide insight into challenges and benefits of organizational provision of traditional healing practices as part of a larger movement of cultural revitalization via

Indigenous health and community organizations. **Daniel Parker BA, Payton Bennett BA, Basile Favel, Dennis C. Wendt PhD**

17. TESTING THE EFFECTS OF YOUTH ETHNICITY IN GROUP MI ON INTERVENTIONIST BEHAVIORS AND OUTCOMES. Work evaluating individual motivational interviewing (MI) with adolescents indicates that youth from Hispanic backgrounds may receive lower-quality therapy. We evaluated this potential effect in group MI by examining a causal chain relating interventionist speech, client speech, and outcomes to determine whether group racial/ethnic composition moderated this causal chain. We examined existing coding and outcome data from 110 participants (mean age=16.75 years (SD 1.02), 65.5% male, 39.1% Hispanic). We tested mediation and moderated mediation examining whether client change and sustain talk mediated the relationship between interventionist behavior and outcomes, moderated by group composition. The mediation model was supported for past month heavy drinking ($ab=-.028$, 95% CI=[-.059,-.004]), past month alcohol use ($ab=-.083$, CI=[-.247,-.001]), motivation to change ($ab=-.024$, CI=[-.056,-.003]), and positive marijuana expectancies ($ab=.292$, CI=[.039,.584]). Although youth in groups with higher Hispanic composition reported better outcomes, we did not find significant moderating effects of group Hispanic composition on the mediated effect. Despite concerns about quality of MI-based psychotherapy provided to Hispanic youth, in our group session data, Hispanic composition did not affect MI's causal chain. Our results suggest that while interventionists should remain vigilant to any potential bias, group MI may be resilient to this potential disparity. **Jon M. Houck PhD, Feifei Ye PhD, Anthony Rodriguez PhD, Elizabeth J. D'Amico PhD**

18. A LIFESPAN PERSPECTIVE ON PRESCRIPTION OPIOID MISUSE MOTIVES ACROSS THE US POPULATION. Prescription opioid misuse (POM) significantly contributes to drug-related overdose deaths in the United States. A key factor in POM engagement may be the underlying motives for such misuse, and recent evidence suggests that motives can identify POM-engaged subgroups with differential risk profiles. A lifespan perspective on motives is missing from the literature, and data on POM motives by age could inform clinicians about factors promoting POM that vary by age. This work used nationally representative data from the 2015-16 National Survey on Drug Use and Health to examine opioid motives by age group. Weighted cross-tabulations and post hoc logistic models were used, with logistic models adjusted for sociodemographics. POM for pain relief increased over the lifespan, from 56.1% of adolescent misuse cases to 85.7% of those 65 and older. POM to get high or to relax peaked in young adults (18-25 years, 32.5% for each) and decreased with aging (65 and older: 1.5% and 13.2%, respectively). Given that POM to get high is associated with greater concurrent substance use than POM for pain relief, it appears that young adults are a particularly vulnerable subgroup for POM. Older adults, conversely, may need more adequate pain relief, using non-opioid interventions. **Ty Schepis PhD, Jason A. Ford PhD, Sean Esteban McCabe PhD**

19. PSYCHOSTIMULANTS EFFECTS OF APATHY IN OLDER ADULTS WITH DEMENTIA. Introduction: The intention of this systematic literature review aims to establish a linkage between taking psychostimulants and an increase of apathy among older adults with dementia. Dementia is a decline in mental ability that can interfere with daily life which can cause a decrease in apathy. This review aims to shed light on the prevalence within the 65 and older adult population with dementia who have an increase of apathy due to the consumption of psychostimulants. Ultimately, this review intends to determine if increase apathy may be connected to positive treatment outcomes. Method: Article inclusion criteria focused on systematic reviews, retrospective cohorts, randomized control trials as well as qualitative studies in order to gain comprehensive information about the effects of psychostimulants on apathy in older adults with dementia. Studies included in this systematic

review involved peer-reviewed journal articles that focused on the effects and prevalence of apathy increase among older adults due to the use of psychostimulants which were published within the past ten years and conducted in the United States. The search methodology for this literature review was conducted using articles selected from the following databases: PubMed, MEDLINE, Science Direct, and CINAHL Search terms consisted of psychostimulants effects of apathy in older adults with dementia; psychostimulants use among older adults; and psychostimulants effects. Initial searches yielded a total of 40 studies of which 10 met the inclusion criteria after a thorough synthesis and assessment. The other 30 articles were rejected due to insufficient evidence and comorbid diagnose. Moreover, 10 articles were included because they met the criteria for being peer-reviewed, randomized controlled trials, cohort, and systematic reviews. Results: The findings of 8 studies suggested that psychostimulants use effects apathy in older adults with dementia depending on age and stage of dementia. Two studies emphasized that most older patients with dementia already had no problem with apathy prior to taking psychostimulants. These studies provided evidence to support the notion that psychostimulants do have an effect on apathy among older adults with dementia. Conclusion: These reviews suggest overall, there is a correlation between psychostimulants use and increase apathy in older adults with dementia. Based on a review of these articles, there seems to be a relationship between apathy increase among older adults with dementia that use psychostimulants. In general, psychostimulants are generally associated with treating people with depression. Although some people are prescribed psychostimulants for attention deficit hyperactivity disorder (ADHD). Further studies focusing on the investigation of the apathy complications related to use of psychostimulants are needed. There is also a necessity for research studies which examine the history of dementia and the rationale for treatment to improve functioning and quality of life. Furthermore, future studies exploring risk factors related to the use of psychostimulants and the progression of dementia would be useful.

Vernette Spence MS

20. **LOWER PAIN SENSITIVITY IS ASSOCIATED WITH GREATER ALCOHOL CONSUMPTION AND ALCOHOL-RELATED PROBLEMS.** Evidence suggests that low punishment sensitivity, a concept from Reinforcement Sensitivity Theory (RST) relating to one's sensitivity to aversive stimuli, is related to greater alcohol use. Although these findings have relevance for physical pain sensitivity (pain is inherently aversive), studies examining this relation tend to assess self-report measures of sensitivity to punishment. Secondary data analyses were conducted to examine the direct associations between pain sensitivity and alcohol use and alcohol-related problems, and the indirect associations between pain sensitivity and alcohol-related problems via alcohol consumption. Hazardous drinking undergraduates (N=67) completed an experimental assessment of pain sensitivity (i.e., threshold, tolerance, and suprathreshold), and measures of alcohol use patterns and alcohol-related problems. Results of linear regression analyses indicated that all pain sensitivity measures were positively associated with alcohol use patterns. Threshold and tolerance were positively associated with alcohol-related problems. Suprathreshold was not significantly associated with alcohol-related problems. Additionally, all pain sensitivity variables were indirectly associated with alcohol-related problems via alcohol consumption. That is, individuals with less pain sensitivity were more likely to report greater alcohol consumption, which in turn, was associated with more alcohol-related problems. Consistent with RST, lower punishment sensitivity may be an important predictive factor for both alcohol consumption and problems. **Dezarie Moskal MS, Martin J. De Vita MS, Katherine A. Buckheit MS, Stephen A. Maisto PhD**

21. **MARIJUANA USE AND C-REACTIVE PROTEIN LEVELS: IS MARIJUANA USE ASSOCIATED WITH LOWER INFLAMMATION?** Some research suggests that marijuana use facilitates an anti-inflammatory response, yet the relationship between marijuana use and C-reactive protein (CRP) remains poorly understood. The present study examined the association between recency of marijuana use and CRP in a nationally representative sample of adults. Data from Waves III and IV (N=13,166) of the National Longitudinal Study of Adolescent to Adult Health was utilized. Past 30 day marijuana use was assessed in Waves III and IV, and past year marijuana use was also assessed in Wave IV. CRP was dichotomized with a cutpoint of 3 mg/L at Wave IV. Logistic regression analyses examined the association between marijuana use and CRP levels. 23.5% and 17.7% of participants reported past 30 day marijuana use at Wave III and Wave IV respectively, and 23.6% of participants reported past year marijuana use during Wave IV. Marijuana use was associated with lower CRP levels (<3 mg/L) in bivariate analyses. However, these associations attenuated after adjusting for relevant covariates, particularly gender, BMI, and anti-inflammatory medication use. Given implications for those using marijuana to provide relief from inflammation, continued research is needed to further elucidate the effect of marijuana use on inflammation and subsequent risk of developing chronic disease. **Erin Ferguson BA, Zachary Mannes MS, Nicole Ennis PhD**
22. **THE EMOTIONAL IMPACT OF THE OPIOID CRISIS ON EMERGENCY PERSONNEL IN NEW HAMPSHIRE.** Background: Drug overdoses are the leading cause of death in the United States for those under age 50, and New Hampshire (NH) has been disproportionately impacted, resulting in increased encounters with the emergency response system. The ensuing emotional burden on emergency personnel has received little attention. Methods: Thirty-six first responders and emergency department providers in six NH counties were interviewed about their experiences responding to overdoses. Directed content analysis was used to identify themes in the transcribed, semi-structured interviews. The results were reviewed for consensus. Results: Emergency personnel emphasized three notable themes: (1) cumulative negative effects of responding to overdoses (“it grinds you down”), especially when overdose reversals are unsuccessful and children are present; (2) opioid users’ negative reactions to reversals (“neither were remotely appreciative; that we had just saved their lives”); and (3) for some, increased compassion through repeated interactions with families affected by opioid use (“every single one of them; is somebody’s child”). Conclusions: The NH opioid crisis is negatively impacting many emergency personnel. Support for these personnel (e.g., through training on self-care strategies and the availability and encouraged use of mental health resources) is critical for their well-being and their ability to effectively care for opioid users. **Stephen Metcalf MPhil, Elizabeth C. Saunders MS, Olivia Walsh BA, Sarah K. Moore PhD, Andrea Meier MS, Bethany McLeman BA, Samantha Auty MS, Sarah Bessen MPH, Lisa A. Marsch PhD**
23. **PROTECTIVE STRATEGIES AS A BUFFERING MODERATOR BETWEEN PEER NORMS AND HIGH RISK DRINKING INDICATORS.** Heavy drinking is associated with more alcohol-related problems. High intensity drinking (HID), defined as engaging in double or even triple traditional cutoffs for binge drinking (4+/5+ drinks), is associated with experiencing more alcohol-related problems. Perceived peer drinking norms and Greek life involvement are associated with heavier drinking. Protective behavioral strategy (PBS) use has been shown to reduce associations between norms and typical alcohol use. The current study examined N=534 young adult college drinkers who reported Greek life status, perceived norms, and past two week PBS use and high risk alcohol consumption (i.e., days intoxicated, number of binge episodes, days passing out or getting sick, peak number of drinks, and HID [n=139, 24.2%]). Higher perceived norms and Greek life status were positively associated with all drinking indicators. Significant moderation was observed between norms and PBS for: days intoxicated, and frequency of passing out or getting sick, with a trend ($p < .10$) for HID. The

significant, positive influence of norms with high risk drinking behaviors was weakened for those who use more PBS. However, PBS did not moderate the associations between Greek life status and drinking. This suggests college drinking interventions encouraging PBS use could potentially mitigate the negative effects of heightened norms. **Abby L Braitman PhD, Melissa R. Colangelo BS, Sarah J. Ehlke MA**

24. EXAMINING TOPIC SALIENCE AS A MECHANISM OF CHANGE IN A DUAL-TARGET BRIEF

MOTIVATIONAL INTERVENTION. Process research seeks to improve interventions by identifying potent active ingredients underlying change. Using process data from a dual-target motivational intervention (MI) targeting alcohol use and risky sex, we tested the hypothesis that topic salience, defined as the within-session percentage of change talk related to alcohol or sex, would differ across treatment outcome groups. Within a larger RCT, emergency department patients were screened for heavy drinking and sexual risk. Of 372 enrolled, 184 received MI, and 164 (89%) of those sessions were transcribed and independently rated using the MISC system. Using baseline and 3-month follow-up data, four outcome groups were constructed: those who made a 50% reduction in drinks per week ($n=25$) or condomless sex events ($n=34$); those who made a 50% reduction in both ($n=30$), and those who did not make a 50% reduction ($n=75$). Group-level analyses show that those who changed alcohol use only or both behaviors had significantly higher baseline drinking ($p<.001$). However, the within-session pattern of topic salience did not differ across outcome groups. Results suggest that the efficacy of our dual-target MI is not accounted for by topic-specific change talk, and support future research examining alcohol use severity as a moderator of brief intervention outcomes. **Mark A. Celio PhD, Molly Magill PhD, Justin Walthers, Timothy Souza, Christopher Kahler PhD, Don Operario PhD, Peter Monti PhD**

25. RELATIONS BETWEEN CHOICE IMPULSIVITY AND ACUTE ALCOHOL RESPONSES AMONG YOUNG

ADULT HEAVY DRINKERS. Delay discounting (proclivity for smaller, sooner rather than larger, later rewards) is a facet of impulsivity associated with negative alcohol outcomes. However, mechanisms linking facets of impulsivity to negative outcomes remain inconclusive. Like impulsivity, subjective response (SR), or individual differences in acute alcohol response, is also related to negative alcohol outcomes. Theory and recent research suggests that facets of impulsivity are related to SR. This secondary analysis examined relations between delay discounting and SR among young adult heavy drinkers. Participants ($N=82$; 51.7% female) completed a group alcohol self-administration session. Delay discounting was assessed pre-drinking and SR (stimulation and sedation) was assessed post-drinking. Using multiple regression, SR was predicted by delay discounting and covariates. We hypothesized that greater delay discounting would relate to heightened stimulation and dampened sedation. Greater delay discounting was associated with dampened alcohol sedation, but not heightened stimulation. More drinks self-administered during the session was associated with heightened alcohol stimulation and sedation. Young adult heavy drinkers exhibiting greater delay discounting experienced diminished sedative response from alcohol, which may help to explain why impulsivity confers risk for negative alcohol outcomes. Moving forward, longitudinal research should examine trajectories of multiple impulsivity facets and alcohol response among heavy and light drinkers. **Benjamin Berey BA, Denis Schulz BA, Meredith Berry PhD, Robert Leeman PhD**

26. RELATIONS BETWEEN BASELINE AUD SYMPTOMS AND LONGITUDINAL CHANGES IN REWARD

AVAILABILITY IN HEAVY-DRINKING YOUNG ADULTS: IMPACT OF THE SUBSTANCE-FREE ACTIVITY SESSION (SFAS). Reward availability is associated with substance abuse. However, it is not clear how reward availability impacts alcohol use disorder (AUD) symptoms among young adults. The current study aimed to assess changes in reward availability over time in 392 young adults part of a brief

alcohol intervention trial. Participants were randomly assigned to a control, relaxation, or substance-free activity session (SFAS) condition. Participants completed assessments for alcohol use disorder (AUD) criteria from the DSM-5 and the environmental suppressor subscale of the Reward Probability Index (RPI) to examine reward availability at baseline, 1, 6, 12, and 16 months. Latent growth curve analysis revealed that AUD severity was predictive of reward availability at baseline, and individuals with moderate/severe AUD (baseline mean = 23.91) at baseline continued to demonstrate lower reward availability compared to individuals with none/mild AUD (baseline mean = 27.94) across all time points. Multigroup growth model (MGGM) analysis revealed that individuals with none/mild AUD remained stable over time. This was not moderated by treatment condition. Individuals with moderate/severe AUD in the SFAS condition significantly increased over time, while individuals in the control or relaxation group remained stable. Interventions that increase reward availability may help individuals with greater levels of AUD symptomology. **Kevin W. Campbell MA, Kinsey Pebley MA, Ashley A. Dennhardt PhD, Matthew P. Martens PhD, Brian Borsari PhD, James G. Murphy PhD**

27. DRUG TREATMENT COURT PARTICIPANTS' VIEWS AND REASONING FOR ENROLLING. Drug Treatment Court (DTC) is a diversionary program that mandates probationers to receive addictions treatment. Completion of DTC is associated with reduced recidivism and improved SUD outcomes^{1,3,4}. Reasons why individuals chose to enroll in DTCs have not been well examined, with some research suggesting avoiding criminal prosecution and a desire to achieve sobriety². Here we review participants' explanations for enrolling in DTCs to better understand how to improve court mandated addictions programs. We conducted semi-structured interviews with 50 DTC participants. Qualitative coding was completed with adequate interrater reliability between coders. Preliminary findings indicate that participants had positive and negative impressions before enrolling. Many described DTC as a "set-up" because failure to comply with arduous requirements resulted in re-incarceration yet participants still enrolled. Their reasons included 1) wanting reunification with families, 2) avoiding incarceration "[with DTC] you automatically get out [of jail]" 3) seeking structure "I never had [structure] and it's something that I need to get where I wanna go." 4) fear of overdosing, "I might die, like many of my friends" and 5) wanting sobriety "this is the way to get clean". Discussion will address the impact of reasons for enrollment on retention and engagement in treatment. **Mary Emma Maddox BS, Danielle Beam BA, Bailey Pridgen BA, Rachel Serafini MA, & Ekaterina Pivovarova PhD**

28. PREVALENCE RATES OF SIMULTANEOUS ETOH AND THC USE ACROSS RACIAL/ETHNIC GROUPS IN AT-RISK YOUTH. Research suggests that concurrent and simultaneous alcohol and marijuana use (CAM and SAM, respectively) are associated with risky behaviors. However, research on the prevalence rates of CAM and SAM across racial/ethnic groups is lacking. This study investigated the prevalence rates and associated risky behaviors of CAM and SAM among Hispanic, non-Hispanic Black, and non-Hispanic White at-risk youth. A diverse sample of youth ages 9-18 (N=538) were recruited from mental health and correctional agencies in the Northeast United States. Timeline Follow-Back measured past 30-day prevalence rates of alcohol and marijuana use, and the Risks and Consequences Questionnaire measured alcohol-related risky behaviors. More Black and Hispanic youth reported SAM use than White youth (24% and 20% vs. 8%, respectively). Logistic regression analyses revealed Black youth were significantly more likely to report riding in a car with a drunk driver in the past year compared to White youth (OR = 7.86, p = .003). No other significant differences between racial/ethnic groups in likelihood of risky behaviors were found. These findings suggest that minority youth may be at higher risk for engaging in risky use patterns. More research

is needed to identify what factors may lead to these group differences. **Daniel Delaney MA, Esther Quiroz-Santos BA, Shayna S. Bassett PhD, Rosemarie A. Martin PhD, L.A.R Stein PhD**

- 29. ADOLESCENT PART-TIME JOB AND RISKY BEHAVIORS PREDICT ALCOHOL USE IN A NATIONAL LONGITUDINAL SURVEY.** Background: Given that adolescent part-time employment (PTE) is normative, understanding its dynamic relationships over time and association with individual factors is important. Specifically, PTE is associated with delinquent risky behaviors and substance use, including alcohol. The deviance proneness model proposes that adolescent substance use is a result of an interplay of internal (e.g., familial history) and external (e.g. delinquency, peers) factors. However, research on PTE is mixed, largely cross-sectional, and internal and external mechanisms underlying these relationships are under-addressed. Methods: We used the first three waves of the National Longitudinal Survey of Youth-1997 (NLSY97). PTE status between Waves 1 and 2 (e.g., PTE at both waves, at one wave, or no PTE), adolescent and peer risky behaviors, prior drinking, and demographics were tested as predictors of Wave 3 alcohol use. Results: PTE at both waves was predictive of heavy drinking, but not of any drinking. Adolescent and peer risky behaviors predicted heavy and any drinking. Discussion: These findings point to PTE status as a risk factor for heavy drinking but only when job status was consistent. These findings provide further support for the impact of peer and adolescent risky behaviors as precursors for substance use in accordance with deviance proneness. **Neo M. Gebru MPS, Maya E. Kedmi, Cassidy LoParco, JeeWon Cheong PhD, Kristina M Jackson PhD, Robert F Leeman PhD**
- 30. ASSOCIATIONS BETWEEN ANXIETY AND E-CIGARETTE USE AMONG UNDERGRADUATE STUDENTS.** Vaporized nicotine devices, otherwise known as e-cigarettes, are growing in prevalence. Among those most likely to engage in repeated use of electronic cigarettes are those with mental health conditions including but not limited to: anxiety, depression, and other mood disorders. Previous research suggests persons with mental health disorders are more likely to initially engage in e-cigarette use, repeatedly use e-cigarettes, and have lower cessation rates than others (Cummins et al, 2013). The current study was secondary data analysis examining the relationships between substance use, anxiety levels, and anxiety in response to math-based courses. The results of a linear mixed model suggested that anxiety levels predicted e-cigarette use (beta = 0.50), but math-based anxiety was not a predictor. This suggests that while anxiety-related mental health conditions may increase the likelihood of increased e-cigarette use, situational anxiety (e.g., a math class) may not. These results suggested there is a link between anxiety and e-cigarette use among a college student population, which may well lead to long-term e-cigarette use and negative health effects based on habits developed in the college years. **Katherine Packard BS, Zachary J. Kunicki PhD MS, Prabhani Kuruppumullage Don PhD**
- 31. IMPAIRED CONTROL AND PROTECTIVE BEHAVIORAL STRATEGIES.** Impaired control (IC) is defined as difficulty adhering to limits on one's drinking. IC predicts self-reported alcohol-related problems in undergraduates, yet remains understudied. Protective behavioral strategies (PBS) are cognitive behavioral steps taken to limit drinking and/or negative consequences, which is antithetical to impaired control. Though previous research supports PBS reducing drinking and consequences, relationships between PBS use and IC have rarely been addressed. PBS can be broken down into direct (e.g., avoid drinking games) and indirect (e.g., designated driver) strategies. We examined how direct and indirect PBS use predicts IC over time in the context of a web-based, brief intervention for college drinkers (N=208) with 1- and 6-month follow-ups (Leeman et al., 2016). Multilevel modeling (MLM) was used to assess within- and between-subject change. Those using more direct and indirect PBS at baseline significantly decreased IC over time. As predicted, direct ($\hat{\tau}^2=$

-1.20, SE=.24, $p < .001$) had stronger relationships to IC than indirect PBS ($\hat{\beta} = -.73$, SE=.24, $p < .001$). Higher drinking frequency predicted higher IC ($\hat{\beta} = .84$, SE= .23, $p < .001$). Enhancing PBS use (particularly direct PBS) could lead to reduced IC and in turn, less drinking and fewer consequences. Future studies should further examine relationships between direct and indirect PBS with IC over time. **Tessa Frohe BA, Robert F. Leeman PhD**

- 32. COGNITIVE PERFORMANCE PREDICTS USE OF A PACED BREATHING IPHONE APP IN WOMEN WITH SUDS.** Resonance breathing has demonstrated clinical utility across both mental and physical illnesses, but its neural and biological underpinnings are not well understood. The prefrontal cortex has been shown to be involved in executive functioning and implicated in relaxation effects of resonance breathing. To assess the relationship between this breathing manipulation and cognitive functioning, this study examined whether cognitive performance on the Digit Symbol Coding Test (DSCT) predicted the use of a paced breathing iPhone application in 56 women seeking intensive outpatient addiction treatment. As part of an ongoing randomized clinical trial, participants completed the DSCT and then were trained to use the app when feeling stressed or craving substances. Calculated relative Z-scores stratified by age indicated that 8 women were >1 standard deviation below the mean. Pre-trial DSCT performance predicted app use during the 8-week intervention. Specifically, participants with lower cognitive scores were more likely to use the app ($p < .05$). Results suggest that resonance breathing interventions may be more acceptable or valuable for individuals with reduced cognitive abilities. It may be that resonance breathing can serve as an alternative strategy that can be used during vulnerable moments, when cognitively-impaired individuals may experience difficulty employing more effortful cognitive-behavioral strategies learned in treatment. **Sarah Grace Helton BA, Sabrina M. Todaro BS, Laura Lesnewich MS, Julie Morgano MSW, Jennifer F. Buckman PhD, Marsha E. Bates PhD**
- 33. A PILOT STUDY OF AUTONOMIC NERVOUS SYSTEM FUNCTIONING AND COGNITIVE PERFORMANCE IN COLLEGE STUDENT DRINKERS.** Heavy drinking is prevalent in young adults and can lead to dangerous behavioral and health consequences. Alcohol use affects the continuous communication between the heart and brain through the autonomic nervous system (ANS), which is critical for basic regulatory processes like sleep and circadian rhythms, and is hypothesized to affect cognitive performance through modulation of attentional processes. In adults with alcohol use disorders, poorer ANS functioning (e.g., lower heart-rate variability [HRV]) is associated with greater reported craving and worse cognitive performance; however, it is unclear how ANS function relates to lower levels of drinking in young adults. We examined ANS functioning, as indexed by resting-state HRV and baroreflex sensitivity, and its relationship to alcohol use and cognitive performance on a set of neuropsychological tasks. In this pilot study, we enrolled 22 young adults with a range of drinking from non-drinkers to heavy drinkers and employed linear models to examine the relationships between drinking history, ANS function, and cognitive performance. Preliminary results indicate that drinking is negatively associated with cognitive performance and with ANS function. Future directions are to examine the potential mediating effect of ANS control on cognitive processes. **Hannah Schildmeyer, Ty Brumback PhD**
- 34. RELATIONSHIP OF ALCOHOL USE DISORDER IDENTIFICATION TEST SCORE TO DSM-5 SYMPTOM CLUSTERS OF PTSD.** Alcohol use disorder (AUD) and posttraumatic stress disorder (PTSD) frequently co-occur, though disagreement about the mechanisms by which the problems are related exists. The self-medication (Khantzian, 1985) and mutual maintenance models (Kaysen et al., 2011) have empirical support. However, studies using DSM-IV-TR symptom clusters of PTSD suggest a more nuanced model whereby specific symptoms clusters drive alcohol use (Dworkin et al., 2018).

Corresponding analyses using DSM-5 criteria have not been conducted. This study examined the relationship of AUDIT scores to clusters B, C, D, and E of the PCL-5 in veterans (n=391). In a multiple regression, cluster E (arousal/reactivity) was positively related ($b=.48$, $t(386)=5.61$, $p<.000$) to AUDIT score. Cluster B (re-experiencing; $b=-.29$, $t(386)=-2.25$, $p=.025$) and cluster D (negative thoughts/feelings; $b=-.20$, $t(386)=-2.06$, $p=.04$) were negatively related to AUDIT score. Cluster C (avoidance) was unrelated to AUDIT score. Though subject to limitations, results suggest that PTSD symptom clusters may exert differential effects on alcohol consumption. Clinicians may need to consider that PTSD and alcohol may both have positive and negative effects on each other. A more nuanced understanding of the relationship between PTSD and AUD, especially one that considers the course of both problems, is needed to inform treatment and theory. **Braden K. Linn PhD**

35. ASSOCIATIONS BETWEEN BEVERAGE-SPECIFIC ALCOHOL TAXES AND DRINKING ACROSS

RACIAL/ETHNIC SUBGROUPS. Alcohol taxation is one of the most effective methods for reducing alcohol use and related harms. However, alcohol taxes may affect demographic subgroups differently with respect to factors such as beverage preference and income. Here we examine how state-level beer- and spirits-specific taxes are related to beverage-specific drink volume across subgroups defined by gender and race/ethnicity using data from the 2000, 2005, 2010, and 2015 National Alcohol Surveys (N = 28,251). Survey-weighted fixed effects negative binomial regression was used for statistical analyses. We find that among Whites, increasing the spirits tax significantly decreases spirits consumption for men; among Blacks, increasing the beer tax significantly decreases beer, wine, spirits, and total consumption for women; and among Hispanics, increasing the spirits tax significantly decreases total consumption for both men and women. Secondary analyses show that an increased beer tax may lower the odds of AUD and alcohol-related consequences among Black women, and that allowing alcohol sales after 10pm may increase drinking for both Hispanic men and women. Thus, it appears that beverage-specific taxes and other state-level alcohol policies such as sales hours operate differently across racial/ethnic subgroups. **Meenakshi Subbaraman PhD, Nina Mulia PhD, William Kerr PhD, Thomas Greenfield PhD**

36. USABILITY TESTING OF AN INTEGRATED ALCOHOL AND SEXUAL ASSAULT PREVENTION PROGRAM

ACROSS RISK GROUPS. Sexual assault is a serious public health concern with wide-reaching consequences across the lifespan. Rates of sexual assault are alarmingly high on college campuses, and alcohol is involved in approximately half of sexual assaults. Research has demonstrated that individuals' risk for experiencing sexual assault differs drastically, with women and sexual and gender minorities being most likely to experience an assault while in college. Despite that, to date, prevention efforts often do not target alcohol and sexual assault in an integrated manner, or provide content tailored to those at highest risk. Given that, the present study explores usability feedback on intervention content from members across a variety of risk groups (cisgender men; cisgender women; sexual and gender minorities). A total of eleven (N=11) semi-structured interviews were conducted, drawn from a larger study on alcohol and sexual assault intervention among college students at a public, southern university. The interview transcripts were analyzed using qualitative methods and thematic analysis. This framework emphasized the construction of meaning and knowledge, placing emphasis on individual constructions of their experiences. The present study may pave the way for tailored intervention for sexual assault among college students. Implications for prevention programming will be discussed. **Daniel Oesterle BS, Ruschelle M. Leone MA, Lindsay M Orchowski PhD, Kelly Cue Davis PhD, Amanda K. Gilmore PhD**

37. PREDICTORS OF ENDORSING MULTIPLE ADDICTIVE BEHAVIORS WITHIN A TREATMENT SAMPLE.

Developing tools to assess multiple addictive behaviors, and understanding correlates of addiction syndrome, has important clinical implications. Patients enrolled in outpatient methadone treatment (N = 176) completed a measure of multiple addictive behaviors (RAD), which demonstrated good internal consistency ($\hat{\alpha} = .91$) and CFA demonstrated support for the factor structure, with the exception of the video-game subscale which could not be computed to very low levels of endorsement: $\chi^2 = 547.50$, $p < .001$. CFI = .991, RMSEA = .046. Participants also completed measures of demographic characteristics, impulsivity, depression, anxiety, difficulties in emotion regulation, and adverse childhood experiences. Measures significantly associated with addictive behaviors at the bivariate level were entered into a linear regression. At the multivariate level, depressive symptoms ($\hat{\beta} = .31$, $p = .006$) and negative urgency ($\hat{\beta} = .19$, $p = .046$) were related to greater problems with multiple addictive behaviors. No other predictors were significant. The results suggest that the RAD measure is a reliable tool for screening for multiple addictive behaviors in treatment settings. Patients experiencing greater levels of depressive symptoms and those more prone to acting impulsively when experiencing negative emotional states may experience greater problems with addictive behaviors. **Jennifer D. Ellis MA, Meagan M. Carr MS, Jamie Paige BA, David Ledgerwood PhD**

38. BEHAVIORAL ECONOMIC PREDICTORS OF MARIJUANA USE AND CRAVING AMONG YOUNG ADULTS.

Research has demonstrated the utility of Behavioral Economic (BE) variables in predicting alcohol use severity, but the relationship between BE and marijuana use is less established. This study investigated the prospective relationship between several BE variables and marijuana use. Participants were 132 college students (53.8% female) who participated in a brief intervention trial targeting marijuana use and reported 17.91 (SD = 8.40) past-month marijuana use days at baseline. There were significant baseline associations between behavioral economic variables - marijuana demand, proportionate reinforcement from recent substance-related activities relative to substance-free, hedonic ratings of substance-free images, and future orientation - and marijuana use, problems, and craving in the expected directions. A series of regression analyses that controlled for the baseline value of the outcome and intervention condition found the proportionate reinforcement and future orientation variables predicted increases in marijuana craving across the 6-month follow-up. These results suggest that BE variables may be a useful indicator of marijuana use severity. **Ashley A. Dennhardt PhD, James G. Murphy PhD**

39. RACIAL/ETHNIC AND SEX DIFFERENCES IN SIMULTANEOUS CANNABIS AND CIGARETTE USE AMONG COLLEGE STUDENTS.

Cannabis and tobacco are frequently used simultaneously, which is associated with higher rates of tobacco use, higher odds of nicotine dependence, and worse health and psychosocial outcomes. Studies suggest simultaneous use is higher among racial/ethnic minorities vs. Whites and males vs. females, yet few studies have examined racial/ethnic or sex differences in the prevalence and correlates of simultaneous use. We used data from 1390 full-time college students to examine racial/ethnic and sex differences in simultaneous use ("at the same time so their effects overlap") of cannabis with cigarettes (SCC; 13% of sample) and e-cigarettes (SCEC; 17%). White students were more likely to engage in SCEC compared to Asian, Hispanic, and other racial/ethnic group students but there were no racial/ethnic differences in SCC. Males were more likely to engage in SCC and SCEC than females. Among White students, there were significant positive correlations between positive affect and frequency of SCEC; this was also true for females. Among males, negative affect and anxiety were positively associated with SCC. Findings indicate that affect and anxiety may play differential roles in predicting SCC and SCEC depending on race/ethnicity

and gender and, that these risk factors need to be addressed in interventions for college students.
Lesia M. Ruglass PhD, Helene R. White PhD, Kristina M. Jackson PhD

40. **OPERATIONALIZING SIMULTANEOUS ALCOHOL AND MARIJUANA USE.** Some research on simultaneous alcohol and marijuana (SAM) use has defined SAM use as using these substances within 180 minutes of each other. Although the intention underlying this operationalization is to capture events where intoxication from alcohol and marijuana overlap, there has been no systematic examination of the predictive or clinical utility of this operationalization. The purpose of this study was to evaluate how operationalizing SAM use with different timeframes influenced the association between SAM and substance use behaviors and outcomes. A sample of 341 college students participated in two 28-day bursts of intensive longitudinal data collection, responding to multiple daily surveys assessing alcohol and marijuana use, consequences, and subjective effects. Of these participants, 280 reported using both marijuana and alcohol within at least one day. SAM use was operationalized with timeframes ranging from 1-240 minutes. We examined the effects of competing operationalizations on number of drinks, peak estimated blood alcohol content (eBAC), consequences (alcohol, marijuana, or SAM), and subjective intoxication. SAM use was associated with more daily drinks but not peak eBAC. Furthermore, SAM use was associated with increased subjective intoxication when controlling for number of drinks and marijuana use occasions. Competing operationalizations influenced the sensitivity and magnitude of effects. **Alexander Sokolovsky PhD, Helene R. White PhD, Kristina M. Jackson PhD**
41. **SIMULTANEOUS ALCOHOL AND MARIJUANA USE: A BRIEF MEASURE OF MOTIVES.** Simultaneous alcohol and marijuana (SAM) use is associated with increased odds of harm to self and others in comparison to alcohol or marijuana consumption alone. Accurate measurement of the motivations for SAM use is needed to provide clinicians with an opportunity to tailor interventions based on their clients' motivation for use. The purpose of this study was to validate an existing 26-item measure of SAM motives and to create a reliable brief scale in an effort to reduce participant burden. College students who reported past-year alcohol and marijuana use (n=1014) were assessed with an online survey twice, three months apart. Exploratory and confirmatory factor analyses were conducted to identify items for inclusion in the brief measure. The validity of the brief measure was assessed by conducting regression analyses to predict frequency and consequences of alcohol, marijuana, and SAM use. Four subscales emerged, each containing 3 items: conformity, positive effects, calm/coping, and social. Each of the factors significantly predicted frequency of use for each type of substance use and positive effects and calm/coping motives predicted consequences for each substance. Therefore, this brief 12-item measure can be used to validly assess SAM motives for research and clinical purposes. **Fiona Conway PhD, Alexander Sokolovsky PhD, Kristina M. Jackson PhD, Helene R. White PhD**

Poster Session 3: Friday April 5th 3:00 – 4:00 pm

1. **ALCOHOL, MARIJUANA, AND CO-USE IN STUDENTS AFFILIATED/NOT AFFILIATED WITH GREEK LETTER ORGANIZATIONS.** Background and Aims: Little research has examined the co-use of alcohol and marijuana among students who identify in a Greek Letter Organization (GLO). The purpose of this study was to examine whether students involved in GLO would report higher levels of binge drinking, more marijuana use days, and have a higher likelihood of being co-users (i.e., using alcohol and marijuana concurrently) compared to non-GLO involved students. Method: Participants were

812 college students who completed a survey assessing their alcohol and marijuana use behaviors. Of the 812 students, 19.5% (N = 87) endorsed being in either a fraternity or sorority. Results: Analyses indicated, controlling for sex, students in GLO reported significantly more binge drinking episodes and more days using marijuana compared to non-GLO involved students. Additionally, students in GLO were 3.27 times more likely to be co-users of alcohol and marijuana than their non-GLO involved peers. Conclusions: Consistent with prior research, college students with GLO affiliation exhibit increased levels of alcohol and marijuana use; and are more likely to engage in the co-use of these substances. GLO affiliated students may be more likely to engage in co-use behaviors placing them at increased risk for associated negative consequences. Findings highlight the utility of assessing and targeting substance use in intervention and prevention programs for student involved in GLO. **Shixiu Ricardo MS, Alexandra Fox, Ali M. Yurasek PhD**

2. **AUD SEVERITY AND EMOTION DYSREGULATION DIFFER BY SEXUAL ASSAULT AND PTSD STATUS AMONG WOMEN VETERANS.** In addition to a link with posttraumatic stress disorder (PTSD), history of sexual assault (SA) is strongly associated with alcohol use disorder (AUD) among women. Severity of alcohol misuse may vary among women veterans with or without SA, based upon PTSD status, and emotion dysregulation may differentiate severity between groups. The current study tested whether emotion dysregulation and AUD severity differ among women veterans with history of SA, SA+PTSD, and those with neither. Cross-sectional data were derived from a larger study among women veterans with alcohol misuse (but not necessarily AUD); data collection is ongoing (n=34, final n=50). Validated questionnaires assessed PTSD (yes/no), lifetime SA (yes/no), emotion dysregulation, and AUD severity. One-way ANOVAs showed greater AUD severity ($p=.005$) and emotion dysregulation ($p=.037$; $p=.019$) among women with SA+PTSD, compared to those with alcohol misuse only. Women veterans with SA+PTSD were mostly similar to women with SA only; However, women with SA+PTSD reported more impulsive behavior in the context of strong emotion than women with SA alone ($p=.024$). PTSD may help explain the association between SA and impulsive behavior when distressed among women veterans. Upon study conclusion, we will test how emotion dysregulation mediates the links between SA, SA/PTSD, and AUD severity. **Tosca D Braun MA, Cathryn Glanton Holzhauer PhD, Elizabeth Epstein PhD, David Smelson PsyD, Kristin Mattocks MPH PhD**
3. **PROMOTING DIVERSITY IN COLLEGIATE RECOVERY: PERCEPTIONS OF RECOVERY SUPPORTS AT COMMUNITY COLLEGES.** Collegiate recovery programs and communities have developed over the last 4 decades largely at 4-year institutions of higher education. Research has shown that these prototypical programs are skewed towards serving a predominantly Caucasian student population. More recently, recovery support services have emerged at community colleges, serving a much more diverse student population. As collegiate recovery communities continue to expand at 2-year institutions, more needs to be known about the recovery supports available, stakeholder perceptions and beliefs of recovery, and the potential impact of community college recovery programs. The current study surveyed students, professionals, and community members (N = 2,664) at 10 community colleges in the United States. Though participant agreement strength differed significantly with students in recovery being more likely to agree with all statements, all participant types had mean agreement scores skewing towards either agree or strongly agree. This suggests that most stakeholders on a college campus agree that community college collegiate recovery support services are needed, should receive funding, that colleges have a responsibility for that funding, and that these services are likely to help students in recovery thrive and for more students to initiate the recovery process. **Robert D. Ashford MSW, Austin Brown MSW, Kristen Harper MEd, Erin Jones MA, Chris Hart**

4. **A REVIEW OF SMARTPHONE APPS FOR CALCULATING AND MONITORING ALCOHOL CONCENTRATION LEVELS.** Numerous smartphone applications (apps) have been created to record and quantify alcohol consumption that can be utilized in alcohol research. In this study, we systematically reviewed iPhone apps using search terms “breathalyzer” (51 apps) and “blood alcohol calculator” (24 apps). We assessed app features, ease of use, personalization, and likelihood of long-term availability. We found four categories of apps and highlight two apps in each category: 1) Paired breathalyzer apps: paired with FDA- or internationally-approved breathalyzer devices, these apps track, store, and graph data received from the paired device: BACtrack, Alcofind. 2) eBAC calculator apps: use drinking diary data to create personalized eBAC curves in real-time and project down to zero eBAC: Intellidrink, Drink Keeper, although Apple recently removed many of these apps under their “Physical Harm” guidelines. 3) Dual input apps: use either breathalyzer or drinking diary data as input, with varying output features: Floome, DRIVESAFE. 4) Monitoring apps: monitor drinking in large groups of individuals (primarily in legal and employee settings) using flexible input options: Soberlink, CheckBAC. This review highlights how smartphone apps may enhance alcohol data collection methods in the field, but additional research is needed to determine their reliability, validity, and utility in research settings. **Georgia Wong, Gary Rosen PhD, Susan E Luczak PhD**

5. **COMPARING SELF-MEDICATION AND BEHAVIORAL ECONOMIC MEDIATORS OF COMORBID DEPRESSION AND MARIJUANA USE.** Marijuana is the most commonly used illicit drug among college students, and use is often accompanied by increased internalizing psychopathology, such as depression. The dominant model explaining this comorbidity is the self-medication hypothesis, which states that marijuana temporarily alleviates negative affect and therefore acts as a negative reinforcer, increasing the likelihood of continued use over time. Behavioral economic theory posits that marijuana use is the result of cost/benefit ratios, in which the reinforcement from marijuana-related activities is greater than that of alternative, substance-free activities. In the current study, we examine coping motives (Marijuana Motives Questionnaire) and proportionate substance-related reinforcement (r-ratio; Adolescent Reinforcement Survey Schedule) measured at 1-month as mediators in the relation between baseline depressive symptoms (DASS-21) and 6-month marijuana use (Marijuana Problem Index) in a sample of college students who use marijuana (n = 66). Higher depressive symptoms predicted higher r-ratio, coping motives, and marijuana problems. Higher r-ratio also predicted higher marijuana problems; however, coping motives was not associated with marijuana problems. Finally, r-ratio statistically mediated the relation between depressive symptoms and marijuana problems, while coping motives did not. Our results suggest that this comorbidity may be better explained as reinforcer pathology than as a form of self-medication. **Samuel F. Acuff MS, Sonia A. Hopkins, Khadijah O. Lawal, Ashley A. Dennhardt PhD, James G. Murphy PhD**

6. **INJUNCTIVE NORMS AS AN INTERVENTION TO INCREASE INTENTIONS TO USE PROTECTIVE BEHAVIORAL STRATEGIES D.** Drinking games are popular among college students and produce rapid alcohol consumption, resulting in negative consequences. Using protective behavioral strategies (PBS) may reduce consumption during drinking games. We sought to increase intentions to use PBS during drinking games by providing injunctive norms, conveying others’ approval of such strategies. We predicted that the intervention would increase perceived approval of PBS, in turn, increasing future intentions for using PBS during drinking games. Effects were hypothesized to be especially strong for women and underclassmen. In all, 133 participants were randomly assigned to information on approval of using PBS during drinking games or to assessment only control. Injunctive norms for and intentions to use PBS during drinking games were assessed. Results indicated that the intervention, relative to control, increased both perceptions that injunctive norms

avored using PBS during drinking games and intentions to use PBS in the future. Effects on intentions were mediated by injunctive norms. Gender did not moderate intervention effects on intentions. Class year was a marginally significant moderator; first years and seniors had greater intentions to use PBS post-intervention. These findings support injunctive norms as a potential strategy for improving use of protective behavioral strategies during drinking games. **Aleksandra N. Piibe, Clare A. Stephens, Lydia F. Venditti, Allecia E. Reid PhD**

7. **EXAMINING MOTIVATIONAL PATHWAYS FROM ADHD TO CANNABIS: RESULTS FROM A PROSPECTIVE STUDY OF VETERANS.** Adult attention deficit hyperactivity disorder (ADHD) has received recent attention in research and has been associated with increased risk for substance misuse. Evidence suggests that cannabis is the most commonly-used substance among individuals with ADHD, though research demonstrates deleterious effects of cannabis on attention and cognitive processing. To clarify this association, we examined the prospective relations between adult ADHD and cannabis use and related problems 12-months later among a sample of Veterans deployed post-9/11/2001 (N=361). Reasons for using cannabis were examined as potential mechanisms of these relations. In single mediation models, relations between baseline ADHD and 12-month cannabis use were fully mediated by using cannabis to cope (e.g., “to forget your problems”), perception of low risk (e.g., “because it is not a dangerous drug”), and for sleep (e.g., “because you are having problems sleeping”). In a multiple mediator model, sleep emerged as the only significant mediator, even after adjusting for past-month posttraumatic stress disorder and major depressive disorder diagnoses ascertained at baseline. Thus, sleep may play a unique role in the relationship between adult ADHD and cannabis use. These prospective associations have significant research and clinical implications. **Angela K. Stevens MA MPH, Rachel Gunn PhD, Kristina Jackson PhD, Brian Borsari PhD, Jane Metrik PhD**
8. **MOTIVES FOR BENZODIAZEPINE MISUSE: A MIXED METHODS ANALYSIS.** Benzodiazepine misuse is a growing public health problem, with increases in treatment admissions and overdose deaths over the past 20 years. People with SUDs are at particularly high risk for benzodiazepine misuse; however, little is known about motives for misuse in this population. We assessed motives for misuse using quantitative (N=356) and qualitative (N=10) methods in adults receiving SUD treatment. Among the 41.2% of participants who reported misuse, the most common reasons for first misuse were to relieve anxiety (44.4%), to get high (19.4%), or out of curiosity (10.4%). The most commonly reported current motive was to cope (e.g., to relax, forget worries), followed by enhancement (e.g., to get high, because it is exciting); social motives were rare. Consistent with other substances, females endorsed more coping motives than men ($t[108]=2.23, p<.05$), with no differences in other motives. Qualitative interviews identified a wide array of motives, including sleep/anxiety management, boredom, “skipping” or passing time, and facilitating criminal activity. Several substance-related motives were reported (e.g., relieving alcohol withdrawal, enhancing opioid effects, relieving cannabis-induced anxiety). Although coping is the most common reason for benzodiazepine misuse, many motives for misuse were reported, including some that may be unique to benzodiazepines. **Rachel Geyer BA, Margaret Griffin PhD, Nadine Taghian BS, Roger Weiss MD, R. Kathryn McHugh PhD**
9. **PATTERNS OF POLYSUBSTANCE USE AMONG ADULTS WITH TRANQUILIZER/SEDATIVE MISUSE.** Prescription tranquilizer/sedative (e.g., benzodiazepine) misuse is associated with poor outcomes, including suicidal behaviors, HIV/HCV infection, and risk of overdose. Yet, little is known about those with tranquilizer and/or sedative misuse. This study characterized subgroups of individuals with tranquilizer/sedative misuse, based on patterns of other substance use. Data were from the 2015-

2016 National Survey on Drug Use and Health; adult respondents with past-month tranquilizer/sedative misuse were included (N=988). Using latent class analysis, we identified two classes: (1) sedative misuse with low polysubstance use (approximately 16.7% of the sample), and (2) tranquilizer misuse with high polysubstance use (83.3%). As compared to those in the high polysubstance use class, those in the low polysubstance use class were more likely to be in an older age group (OR=2.53, 95% CI=1.34, 4.79, $p=0.004$; OR=3.56, 95% CI=1.89, 6.73, $p<0.001$; for 26-34 vs. 18-25 and 35+ vs. 18-25, respectively) and less likely to report the use of sedatives/tranquilizers without a prescription (OR=0.43, 95% CI=0.25, 0.74, $p=0.002$). These results indicate that a majority of tranquilizer misuse does not occur in isolation, but, rather, is part of a pattern of polysubstance use. This finding is concerning, given that tranquilizer misuse increases risk of overdose when combined with other substances. **Victoria Votaw BA, R. Kathryn McHugh PhD, Kevin E. Vowles PhD, Katie Witkiewitz PhD**

10. **BRIEF BREATH COUNTING TRAINING PROTECTS AGAINST STRESS-INDUCED ALCOHOL-SEEKING IN HAZARDOUS DRINKERS.** Alcohol relapse is triggered by negative affect, so current behavioural interventions train awareness of negative drinking triggers and adaptive coping strategies. This study tested whether brief breath counting training would protect hazardous drinkers from stress-induced alcohol-seeking. Participants were 85 hazardous drinkers recruited from pubs in the daytime. Baseline alcohol-seeking was measured by preferential choice to enlarge alcohol versus food related thumbnail images in a pictorial choice task. Half of participants were trained in breath counting and the other half listened to an audiobook. Alcohol choice was then measured again but during aversive noise stress induction, and the breath counting group were told to deploy the breath counting technique. Analysis revealed a significant effect of stress induction on percent alcohol choice in the control group ($p=.049$), but not the breath counting group ($p=.89$). Liking of breath counting was associated with a smaller stress induction effect on alcohol choice, $r=.48$, $p<0.01$. Breath counting participants who liked the technique showed a significant reduction in alcohol choice during stress induction, $F(1,25)=5.04$, $p=.034$, whereas non-likers and the control group showed a significant stress induction effect ($F_s>4.11$, $p_s<.04$; interaction= $F(2,82)=5.24$, $p=.007$). A briefly trained breath counting technique deployed during stress can protect hazardous drinkers from stress-induced alcohol-seeking. **Alexandra E. Bakou MSc, Chloe Shuai BSc, Lorna Hardy PhD, Lee Hogarth PhD**
11. **THE WHY OF THE HIGH: COMPARING MOTIVES FOR CANNABIS USE AMONG RECREATIONAL AND MEDICINAL USERS.** This study characterizes cannabis use motives among individuals reporting cannabis use for medicinal and recreational purposes. Participants were recruited through Amazon's Mechanical Turk (MTurk), a US-based crowdsourcing website. The study consisted of two stages of surveys. In stage one, 3230 participants were recruited to complete a battery of self-report questionnaires. Participants from this sample who reported cannabis use in the past 12 months (N = 745) were invited to participate in stage two, an additional survey on MTurk assessing medicinal/recreational use and the Comprehensive Marijuana Motives Questionnaire (CMMQ), among other variables. For the purposes of the current analyses, only data from participants who completed both stages will be utilized. Thirty-eight percent of the sample endorsed medicinal cannabis use, with 85% of medicinal users also reporting recreational cannabis use. Therefore, motives for use were compared among three groups: recreational use only, medicinal use only, and medicinal plus recreational use. Motives for use significantly differed between the three groups, with recreational only and medicinal plus recreational users showing more similar motive patterns compared to medicinal only users. This study using a large, geographically-diverse sample may

provide useful information for screening and providing care to those using cannabis medicinally.
Lana Vedelago BA, Michael Amlung PhD

- 12. ALCOHOL AND MARIJUANA USE WILLINGNESS AS A FUNCTION OF PEER REJECTION AND SOCIAL ANXIETY.** Evidence suggests that social environments impact alcohol and marijuana use; social anxiety (SA) may serve as an individual risk factor that elevates use in stressful social contexts. Unfortunately, few studies have examined this in controlled experimental settings. This study tested whether peer rejection elicits greater alcohol and marijuana use willingness to simulated offers among college students with higher SA symptoms (i.e., Social Interaction Anxiety Scale score > 34; Brown et al., 1997). 78 college students (71.3% female) endorsing lifetime alcohol and marijuana use were randomly assigned to rejection (n = 38) or neutral (n = 40) cues followed by use willingness video simulations (Anderson et al., 2014). A 2 (rejection vs. neutral) x 2 (low- vs. high-SA) ANOVA indicated a significant interaction ($F[1,76]=4.11, p=.046, \eta^2=.051$). Specifically, the greatest marijuana use willingness occurred among participants with high-SA exposed to rejection ($M=11.17$), followed by low-SA exposed to neutral ($M=9.43$), high-SA exposed to neutral ($M=8.00$), and low-SA exposed to rejection ($M=7.00$). There were no significant effects for alcohol use willingness ($p's > .05$). These findings suggest that marijuana (but not alcohol) use willingness varies across contexts for individuals with differing levels of SA. **Renee Michelle Cloutier MS, Caitlyn Carey BS, Nathan Kearns MS, Anabel Potts, Brittney Jackson, Holly Proenza, Heidemarie Blumenthal PhD**
- 13. ECOLOGICAL VALIDITY OF THE PROTOTYPE WILLINGNESS MODEL OF ADOLESCENT AND YOUNG ADULT ALCOHOL USE.** The present study aimed to assess willingness and intentions utilizing ecological momentary assessment (EMA) methodology to examine naturally occurring within-person processes between daily antecedents of willingness and intentions and the association with subsequent drinking behavior at the daily level. The present study is the first ecologically valid, daily-level test of the Prototype Willingness (PWM) that can also test within-person effects: on a day when people report more alcohol-favorable cognitions, do they also report more intentions and willingness to drink and more drinking behavior? Participants included 15-25 year olds (N = 124; 57.3% female; mean age 18.7 (SD = 2.87)) who were part of an EMA study of drinking cognitions and alcohol use reporting across three weeks. Because of the various distribution outcomes, analyses included multilevel models, mixed effects hurdle negative binomial models, and mixed effects logistic regression models. Findings supported and advanced the PWM by using real-time, real-world daily data that captured within-person variation and changes across all PWM constructs that predicted alcohol use and negative consequences among adolescents and young adults. The present findings may improve interventions by precisely informing our use of technology to bring interventions to adolescents and young adults in moments that they most need it. **Melissa A. Lewis PhD, Cassidy LoParco BS, Dana Litt PhD, Kevin M. King PhD, Anne Fairlie PhD, Christine M. Lee PhD**
- 14. AN EVALUATION OF ALCOHOL SENSITIVITY IN THE CONTEXT OF THE ACQUIRED PREPAREDNESS MODEL.** The acquired preparedness model (APM) posits that the relationship between impulsivity and alcohol use is partly mediated by the biased acquisition of positive alcohol expectancies. Additionally, laboratory studies implicate associations between impulsivity and sensitivity to acute alcohol effects. The present study assessed whether self-reported sensitivity to alcohol, as measured by the Alcohol Sensitivity Questionnaire (ASQ), would partly mediate the impulsivity-expectancy relationship and account for additional variance in drinking quantity and problems. Young adult heavy drinkers (N = 300) completed the ASQ and additional self-report measures of impulsivity (UPPS-P), alcohol expectancies (CEOA) and drinking behavior. Hypotheses were examined using path analysis. Results demonstrated that, consistent with previous studies of the

APM, there was a significant indirect effect of positive expectancies on the relationship between sensation seeking and drinking quantity. Negative expectancies had an indirect effect on the association between negative urgency and drinking problems. Alcohol sensitivity variables were unrelated to impulsivity or alcohol expectancies, but had unique associations with drinking outcomes over and above alcohol expectancies. Future research is necessary to reconcile these results with laboratory findings suggesting that impulsive traits are frequently associated with response to acute alcohol and placebo administration. **Laura M. Heath MSc MA, Jeffrey Wardell PhD, Christian S. Hendershot PhD**

15. **SUBSTANCE USE AND ALCOHOL-RELATED PROBLEMS IN MULTIRACIAL, AMERICAN INDIAN, AND WHITE YOUTH.** American Indian (AI) youth use some substances at high rates and are disproportionately likely to experience problems from alcohol use. Similarly, individuals who are more than one race generally have higher rates of substance use than those who identify with only one racial group. However, while these studies contain nationally representative samples of most racial groups, these studies have small numbers of AIs that are generally not representative. Using self-report data from a large study (N=5,774; 48% female; Mage=15.0 years, SD=1.67), with a representative sample of AI youth (n=3,498), we examined substance use rates and alcohol-related problems in multiracial, AI only, and White only youth. Multilevel analyses revealed that, after controlling for age and gender, multiracial youth were more likely to report marijuana, tobacco, and alcohol involvement, as well as alcohol-related problems and lifetime illicit substance use, as compared to White youth. Compared to multiracial youth, AIs were more likely to report high tobacco involvement, but there were no other significant differences. These results indicate that, similar to AI youth, multiracial youth experience substance use disparities and high rates of problems from alcohol use. Further research is necessary to elucidate potential mechanisms that explain the higher risk. **Tessa Nalven BS, Nichea Spillane PhD**

16. **DEVELOPMENT OF A PERSONALIZED REAL-TIME ALCOHOL INTERVENTION FOR EMERGING ADULTS IN PSYCHIATRIC CARE.** Emerging adulthood (ages 18-25) represents a common and problematic time for alcohol use and mental health issues, particularly anxiety and depression. Individuals who drink alcohol to cope with negative affect, such as anxiety and depression, report more alcohol use and more severe use-related consequences. Emerging research suggests interventions that specifically focus on drinking to cope with negative affect are promising in reducing problematic outcomes. We developed and are currently testing a 6-week ecological momentary assessment (EMA) and intervention (EMI) for emerging adults (EA) in a psychiatric partial hospitalization program who drink to cope which includes: 1) an in-person personalized feedback session to present normative information and feedback on problems and to generate relapse prevention coping skills messages to be used in the text intervention; 2) EMA to monitor affect and intention to drink after discharge; and 3) tailored text messages (EMI) based on EMA responses (i.e., individualized coping skills messages when individuals report negative affect and intention to drink). We will report results on 20 EA drinking outcomes over time (alcohol use and related problems), and mechanisms underlying the efficacy of the intervention (e.g., drinking to cope, alternate coping skills utilization). **Claire Blevins PhD, Ana Abrantes PhD, Eliza Marsh, BS**

17. **COLLEGE STUDENTS' ATTITUDES TOWARDS SECONDHAND EFFECTS OF ALCOHOL: GROUP DIFFERENCES AND PREDICTORS.** Secondhand effects of alcohol (SEA) are defined as casual or serious consequences that result from another person's drinking, such as loss of sleep/study time or sexual/physical assault, respectively. Some evidence suggests that students' attitudes towards SEA may be used in prevention/intervention efforts to reduce heavy episodic drinking among college

students (Longo, 2018). The present study examines group differences and other drinking-related factors that influence attitudes towards SEA. Participants were 426 undergraduate students aged 18-25 at a large Northeastern public university. Univariate analyses were conducted to assess for group differences in attitudes towards casual and serious SEA based on sex, race, athletic and Greek life membership. Results revealed that males were more accepting of casual [$F(1, 414)=5.63, p=.018, \eta^2=.014$] and serious [$F(1,414)=12.94, p=.000, \eta^2=.03$] SEA compared to female counterparts. Additionally, Greek life members were more accepting of casual [$F(1, 414)=6.85, p=.009, \eta^2=.016$] and serious [$F(1,414)=4.19, p=.041, \eta^2=.01$] SEA compared to non-members. Two hierarchical regressions were run to predict attitudes towards casual and serious SEA from sex, Greek membership, attitudes towards alcohol use, previous experiences of SEA and risky alcohol use, and significantly accounted for 16.7% and 23.7% of the variance in attitudes towards casual and serious SEAs, respectively. Implications for prevention/intervention will be discussed. **Laura M. Longo MS, Jessica L. Martin PhD**

18. **PSYCHOMETRIC VALIDATION OF THE MODIFIED DRINKING MOTIVES QUESTIONNAIRE-REVISED IN PSYCHIATRIC SAMPLE.** Introduction: Measures of motives for alcohol use provide an important avenue for understanding underlying psychological reasons that drive use. The Modified Drinking Motives Questionnaire-Revised (MDMQ-R; Grant et al., 2007) measures five drinking motives: social, enhancement, conformity, coping-with-anxiety, and coping-with-depression. Purpose: The present study aimed to: (1) validate the factor structure and internal consistency of MDMQ-R in psychiatric sample of polysubstance-using young adults (YA), and (2) evaluate the equivalence of factor structure across exclusive alcohol-using and polysubstance-using YA. Method: Participants were 256 YA (18-26 years; $M= 21.15$) admitted to the YA partial hospitalization program at a private psychiatric hospital (63% female, 78% Caucasian). Results: A confirmatory factor analysis specifying the MDMQ-R item-loading pattern revealed that items loaded on their respective latent factors ($p<.01$; loadings between .50-.90). However, goodness of fit statistics in the overall sample revealed a poor to adequate-fitting model: $\chi^2=1118.49, df=340, p<.01$; CFI=.85, SRMR=.09; RMSEA=.095, 90% CI=.09-.10, $p<.01$. Model fit in alcohol-only and polysubstance-using samples was similarly poor. Suggested model modifications did not significantly improve fit. Discussion: Results suggest that the factor structure of MDMQ-R did not replicate in the present sample. Potential explanations are explored and future directions are discussed in light of the results, including generalizability and clinical utility. **Yulia Gavrilova MA, Claire Blevins PhD, Ana Abrantes PhD**
19. **FEASIBILITY OF DIGITAL RESPONDENT DRIVEN SAMPLING TO RECRUIT AND ASSESS EMERGING ADULT DRINKERS.** Emerging adulthood offers opportunities for educational, physical, and psychological growth, but is often marked by risk-taking, including excessive drinking. School-based intervention programs for college students are well established. However, the prevention needs of emerging adults (EAs) not attending college have been neglected largely due to difficulties reaching them. To reach non-college EAs, we implemented digital Respondent Driven Sampling (d-RDS), a peer-to-peer recruitment method that accesses social networks, a dominant influence on EA drinking. "Seeds" ages 21-29 years were recruited in person at community venues (e.g., sport events, markets). All procedures were then conducted online using a REDCap platform accessible by phone or computer. Seeds recruited peers, who then recruited peers in an iterative process. Peer recruits completed an online survey about drinking practices, problems, risk and protective factors, and social networks. Digital RDS successfully enrolled the desired target sample of risky EA drinkers (59 seeds, 140 recruits; M age = 24.7 years, 59.7% female, median income <\$20K/year). Participants averaged 11.4 past month drinking days; 4.9 drinks/drinking day, which exceeds low-risk drinking thresholds; and 9.7 alcohol-related negative consequences during the past 3 months. Thus, d-RDS is

feasible to recruit community-dwelling EAs to investigate risky drinking and deliver interventions through social networks. **Katie Lindstrom MA, Susan Chandler MPH MA, Diana Arrocha, Lauren Kousek, JeeWon Cheong PhD, Jalie Tucker PhD MPH**

20. **NEGATIVE AFFECT AND ALCOHOL AND CANNABIS USE IN DAILY LIFE: A MULTIVARIATE MULTILEVEL PERSPECTIVE.** Negative reinforcement models of substance use posit that many individuals use substances to relieve negative affect (NA). Individuals with emotion dysregulation may be at heightened risk for this pattern of use due to frequently experiencing elevated levels of NA and lacking adaptive emotion regulation strategies. We examined whether NA indices predicted use of alcohol or cannabis in the daily lives of outpatient women (N=26) with diagnoses of mood, anxiety, or borderline personality disorders during a 14-day EMA study. Participants answered up to 6 random prompts per day, reporting on recent affective states and substance use. We used generalized estimating equations to estimate two multivariate multilevel models examining the effects of fear, hostility, and sadness predicting momentary alcohol and cannabis use (Model 1), as well as instability of fear, hostility, and sadness predicting alcohol- and cannabis-use days (Model 2). Results from Model 1 indicated that higher person-level fear predicted less alcohol use throughout the study (Est.=-1.85, SE=0.53, $p<.001$), while higher person-level sadness predicted more alcohol use (Est.=0.95, SE=0.32, $p<.01$). Results from Model 2 indicated that day-level instability of hostility was negatively related to same-day cannabis use (Est.=-1.46, SE=0.61, $p<.05$). Additional results and implications will be discussed. **Andrea M. Wycoff MA, John G. Kerns PhD, Timothy J. Trull PhD**
21. **DOES AFFECT-LADEN IMPULSIVITY PREDICT SUBJECTIVE ALCOHOL RESPONSE AMONG YOUNG-ADULT HEAVY DRINKERS?** Impulsivity is a multifaceted construct and an established predictor of negative alcohol outcomes. Subjective response (SR), or differential sensitivity to alcohol effects, also relates to negative alcohol outcomes. High-risk SR patterns (heightened stimulation and/or dampened sedation) may relate to impulsivity. Prior research found relations between generalized impulsivity and SR among light drinkers, however affect-laden impulsivity (urgency) may best characterize this relation among heavy drinkers. This secondary analysis examined relations between positive and negative urgency and SR among young adult heavy drinkers. Eighty-two participants (50.6% female) completed an alcohol self-administration session. Urgency was measured before drinking and SR was assessed after drinking. Using multiple regression, we predicted SR from positive/negative urgency and covariates. Alcohol self-administration led to a range of BrACs (MBrAC=.051%; SDBrAC=0.03%; Range=.000%-.113%). Thus, we examined correlations between urgency and SR within BrAC ranges (0.035 - 0.055%; 0.055 - 0.075%; 0.075 - 0.095%). We hypothesized that greater urgency would predict high-risk SR patterns. Supporting our hypotheses, positive and negative urgency predicted heightened stimulation. However, negative urgency related to heightened sedation at lower BrACs only, perhaps due to participants being on the descending limb during SR assessments. Original data collection is needed to address impulsivity and SR at fixed alcohol doses. **Angela Grimberg, Benjamin Berey BA, Sara Jo Nixon PhD, Robert Leeman PhD**
22. **DEPRESSION AND PRESCRIPTION OPIOID USE AMONG PEOPLE LIVING WITH HIV: MODERATING ROLE OF IMPULSIVITY.** Depression and substance use are associated with nonadherence to antiretroviral therapy among PLWH. The aim of the present study was to examine whether impulsivity moderated the association between depressive symptoms and prescription opioid use among PLWH. Participants included 422 PLWH (34% female, 60% Black, M age = 48, SD = 11). Participants completed the Patient Health Questionnaire (PHQ-8) and the brief version of the Barrett Impulsiveness Scale (BIS-Brief). Participants self-reported recent use of prescription opioids.

Moderation analysis was conducted with PROCESS (Hayes, 2016) using mean-centering and 5,000 bootstrapped samples. Recent use of prescription opioids was reported by 12% of participants. In unadjusted models, depressive symptoms (OR = 1.07, 95% CI: 1.02, 1.12, $p = .008$) and impulsivity (OR = 1.08, 95% CI: 1.01, 1.16, $p = .029$) were associated with prescription opioid use. Impulsivity moderated the effect of depression on prescription opioid use, such that PLWH with greater depressive symptoms and higher impulsivity were more likely to endorse prescription opioid misuse ($b = .01$, $p = 0.036$). Depression and impulsivity may interact to increase the odds of prescription opioid use among PLWH. Additional research with a larger sample is needed to better understand this interaction. **Eugene M. Dunn PhD, Zachary L. Mannes MS, Zhi Zhou MPH, Nicole Ennis PhD, Robert Cook MD MPH**

23. PREPPING FOR THE QUIT DAY: IDENTIFYING UNIQUE TREATMENT NEEDS FOR NONDAILY

SMOKERS. Nondaily smoking is an increasingly prevalent smoking pattern that poses substantial health risks. Nondaily smokers are less likely than daily smokers to utilize traditional treatment, yet similarly to daily smokers, overwhelmingly fail in their quit attempts. To better understand unique treatment needs, we compared nondaily and daily smokers as they prepare for their quit day. Data were used from a study on college student smoking cessation, in which nondaily ($n=42$) and daily smokers ($n=125$) and participated in a brief advice session 1 week prior to their chosen quit day. At baseline, nondaily and daily smokers were similar on demographics and motivation to quit ($p=0.71$). On constructs relevant as treatment targets, nondaily smokers reported lower urge to smoke ($p<0.001$), lower pros of smoking ($p<0.001$), and expressed fewer concerns about craving or withdrawal ($ps<0.001$). In brief advice sessions, nondaily smokers reported fewer benefits of quitting ($p=.02$). The most frequently voiced barrier for both types of smoker was abstaining in social situations (64% and 59%, respectively), followed by drinking situations in nondaily smokers (31%) and stress (32%) in daily smokers. These results suggest that withdrawal could potentially be de-emphasized while benefits may need to be made more salient in interventions for nondaily smokers. **Hannah Carlon BS, Susanne Hoepfner PhD, Bettina Hoepfner PhD**

24. PARSING LIABILITIES VERSUS CONSEQUENCES IN SUBSTANCE USE DISORDERS USING THE CO-

TWIN CONTROL DESIGN. To establish a personality trait variable as a liability for the development of substance use disorders (SUDs), the trait must share heritable variance with SUDs and its association with SUDs must not be attributable to a direct impact of SUDs on the trait. The current work used a co-twin control (CTC) modeling approach to investigate the degree to which standard personality traits and neurobehaviorally-assessed traits are directly impacted by SUDs. Twins from the Human Connectome Project completed a Five Factor trait inventory (NEO-FFI) and SUD diagnostic interview. Another sample of twins from the Minnesota Twin Family Study completed an electroencephalographic (EEG) assessment, a trait disinhibition scale of the Externalizing Spectrum Inventory, and SUD diagnostic interview. Brain indicators from two EEG tasks were combined with the disinhibition scale, creating a neurobehavioral index of disinhibition (DIS). Results from CTC analyses revealed significant direct effects of SUDs on NEO-FFI Conscientiousness and Neuroticism, indicating that these traits do not operate as liabilities for SUDs. By contrast, there was no direct effect of SUDs on DIS, but analyses revealed shared heritable variance between DIS and SUDs. These findings highlight an advantage of neurobehavioral traits namely, the ability to index dispositional liabilities for SUDs. **Keanan Joyner MS, Christopher Patrick PhD**

25. VALIDATING A SMOKING ANALOGUE TASK AND PREDICTORS OF LAPSE FOR E-CIGARETTE USE.

E-cigarettes are now the dominant form of tobacco among young adults. Development of e-cigarette cessation treatments will likely become a priority in the field in coming years; thus, valid

experimental methods for assessing their effectiveness will be necessary. Laboratory tasks have been developed for rapidly screening new smoking cessation treatments. However, documented differences between the characteristics of combustible and electronic cigarettes raise concerns as to whether these established laboratory tasks will be valid for studying e-cigarette use. The main objective of this study is to examine whether previously identified predictors of lapse to cigarette smoking in the smoking analogue task paradigm are also predictors of e-cigarette lapse within the paradigm; representing the first step of validating the task for e-cigarette use. Daily e-cigarette users (N=60) will complete psychological, behavioral-economic, and neuropsychological measures followed by the analogue task in which small monetary incentives are offered to delay e-cigarette use following a period of abstinence. Specifically, the study will examine which proximal mood and smoking-related factors are predictive of the latency to initiate vaping behavior. Data collection was initiated 8/2018, we have complete data for 18 participants and expect to complete data collection and analyses (N=60) by 2/2019. **Natasha K. Sidhu MS, Ahmad A. Kittaneh BA, William V. Lechner PhD**

26. **MOTIVATIONAL INTERVIEWING TO INCREASE POSTPARTUM MAINTENANCE OF ABSTINENCE FROM TOBACCO.** Although many women quit smoking while pregnant, rates of relapse after delivery are high, putting both mothers and infants at risk. We examined the effectiveness of motivational interviewing (MI) in maintaining postpartum abstinence from smoking. Pregnant women who recently quit smoking (N=382) were randomized to receive 5 brief MI telephone counseling (MI) calls or to a usual care control condition (CON). Self-reported relapse to smoking was assessed at 3, 6, and 12 months postpartum. We conducted discrete time-hazard regression analyses to predict odds of relapse, where the log odds of relapse were conditional on intervention condition. No significant difference in relapse between conditions was found in analysis of all women randomized. When excluding participants randomized to the MI intervention condition who did not accept any MI calls (i.e., received no treatment; n = 74), however, women assigned to MI had reduced odds of relapse relative to those in the CON condition. Telephone counseling may facilitate maintenance of abstinence among new mothers willing to accept counseling calls. Additional work is needed to test other types of interventions (e.g., texting) that could improve participation. **Cara Murphy PhD, Lauren Micalizzi PhD, Belinda Borrelli PhD, Patricia Markham Risica DrPH**
27. **FURTHER VALIDATION OF A MEASURE OF ACCESS TO REWARD AMONG HEAVY DRINKING COLLEGE STUDENTS.** Objective: The Reward Probability Index (RPI) is a measure of access to environmental reward, which behavioral economics suggests is an important protective factor against risky substance use. Indeed, the RPI has shown consistent negative relations with alcohol use disorder, and alcohol-related problems among college students. However, it is unclear whether the 20-item, two-factor structure (e.g., environmental suppressors, reward probability) holds true among heavy drinking college students. Method: The current study exams the factor structure of the RPI using exploratory factor analysis (EFA) and attempts to provide further validity evidence for use among this population. Participants were 393 undergraduates who reported at least two recent binge-drinking episodes. Results: EFA results suggested a one-factor solution, which included seventeen items after removing items with insufficient factor loadings. In addition, the one-factor demonstrated good internal consistency (Cronbach's alpha = .88), test-retest reliability after 1-month (.82 $p < .01$), and explained unique variance in AUD symptoms and alcohol-related problems after controlling for depressive symptoms. Conclusions: The current study provides support for a shortened, single-factor RPI for use among heavy drinking college students. Results enable future

work examining access to reward as an important predictor of alcohol use disorder, independent of mood and consumption level. **Andrew Voss, Ashley A. Dennhardt PhD, James G. Murphy PhD**

28. **THERAPIST'S SPANISH LANGUAGE FLUENCY AND TREATMENT QUALITY OF MI FOR HEAVY DRINKING LATINO/AS.** Health disparities related to poor mental health and substance use are more pronounced among socially disadvantaged Spanish-speaking Latino/as. Yet, little is known about the quality of evidence-based treatments delivered in Spanish. This secondary analysis of a RCT testing motivational interviewing (MI) for Latino/a hazardous drinkers explores the relationship of therapist Spanish fluency and treatment quality. Method: MI Trained bilingual therapists delivered MI (unadapted and culturally adapted) to 192 English, and 92 Spanish speakers. The quality of MI delivery was measured by the MITI 2.1 coding system. Audiotapes of English (n=91) and Spanish (n=62) interventions were coded by six bilingual individuals trained in the MITI. Results: MI quality on MITI codes (Global spirit, Complex reflections, and MI adherent behaviors) were higher in English than in Spanish across MI conditions. Therapist "native" vs "non-native" speakers were compared. For the former group, there was high treatment fidelity in both languages. For non-native Spanish fluent therapists, the MITI codes were significantly higher in English. Discussion: Therapists who are more comfortable speaking Spanish, are able to deliver treatments with greater treatment fidelity. Future studies need to determine how Spanish fluency is assessed and monitored in study therapists. **Mariana Nicholls MA, Christina S. Lee PhD**
29. **HIERARCHICAL PREDICTORS OF HIGH FUNCTIONING RECOVERY THREE YEARS FOLLOWING ALCOHOL TREATMENT.** Recent research (Witkiewitz, Wilson, et al., 2018) identified four latent profiles of recovery from alcohol use disorder in the outpatient arm of Project Match (N=806) three years following treatment (39 weeks post-baseline). The profiles were identified as 1) poor functioning frequent heavy drinkers, 2) poor functioning infrequent heavy drinkers, 3) high functioning occasional heavy drinkers, and 4) high functioning infrequent non-heavy drinkers. The present investigation used recursive partitioning, an exploratory machine learning approach, to examine which of 184 variables measured from baseline to 15 months post-baseline were most predictive of membership in the two high-functioning profiles 3 years post-treatment. Hierarchical interactions of these predictors were examined with tree-based modeling, and cut-points with potential clinical utility were established for certain measures. Unsurprisingly, more proximal measures proved to have the most predictive utility, with Beck Depression Inventory scores less than or equal to 8, one year post-treatment, maximizing the chances of being in one of the high functioning recovery profiles three years post-treatment. Other strong predictors of profile membership included no heavy drinking days in months 1-3, lower social support for drinking at baseline, and higher scores on the Social Behavior Role Scale of the PFI at 15 months. **Adam D. Wilson MS, Katie Witkiewitz PhD**
30. **A SMARTPHONE INTERVENTION FOR PARENTS OF TEEN SUBSTANCE USERS: REMOTE VERSUS LOCAL DATA COLLECTION.** Adolescents with substance use disorders (ASUD) in residential treatment have poor post-discharge outcomes. Positive parenting skills temper these negative outcomes among adolescents in residential treatment; however, many parents are difficult to engage in intensive ASUD treatment. To meet the needs of parents of ASUD in residential, we tested the acceptability, feasibility, and effectiveness of a technology-assisted intervention. The intervention included a computer program with video vignettes, a smartphone app with expert and parent networking forums, and in-person coaching sessions. We first piloted the technology-assisted intervention with 47 parent-adolescent dyads at the sole ASUD residential treatment facility in Rhode Island; results indicated excellent acceptability and feasibility, but recruitment was

challenging due to low census. We therefore replicated our pilot study at the largest ASUD residential facility in the country to demonstrate feasibility of remote session delivery (via phone/video-conference) and data collection. This presentation describes our procedures for remote versus local staff engagement; treatment delivery; participant recruitment, consent/assent, and retention; and data collection (baseline, 6, 12, and 24-week follow-ups). Feasibility outcomes will include enrollment rates, parent engagement (sessions completed, technology use), treatment fidelity, and data quality. Acceptability outcomes will include exit interviews and post-treatment satisfaction. Clinical and research implications will be discussed. **Sarah Helseth PhD, Katherine Escobar BA, Sara Becker PhD**

31. **THE ROLE OF TRANSDIAGNOSTIC ASSESSMENT IN IDENTIFYING ADDICTION SYNDROME.** Despite the known phenomenological and neurobiological similarities between SUDs and behavioral forms of addiction, the field largely lacks transdiagnostic tools. The current work addresses this gap in the literature by developing and validating a transdiagnostic screening tool. In Wave I (N = 301), the items were developed and tested using exploratory factor analysis with an online-based community sample. A total of 35 items were retained that aligned with current DSM substance use disorder criteria and explored symptoms related to alcohol use, drug use, smoking, gambling, binge eating, hypersexual behavior, and excessive video-game playing. In Wave II (N = 427), the factor structure was validated using an independent online-based community sample and confirmatory factor analysis, $X^2(553) = 760.827, p < .001, CFI = .997, TLI = .997, RMSEA = .030$. The measure was also found to have good internal consistency ($\alpha = .91, \omega = .99$). The measure was found to correlate strongly with depression ($r = .50$), anxiety ($r = .31$), a history of childhood trauma ($r = .28$), and negative urgency ($r = .47$). Overall, the results support preliminary validity of a transdiagnostic screen of addiction that considers a diverse range of behaviors. **Meagan M. Carr MS, Jennifer Ellis MA, Angela Staples PhD, Karen Saules PhD**

32. **LINGUISTIC ATTRIBUTES MODERATE OUTCOMES OF A MOBILE PHONE- BASED DRIVING AFTER DRINKING INTERVENTION.** Despite the increasing utilization of text message-based interventions, little research has examined the impact of the language used throughout the intervention on outcomes. The current study utilized data from a pilot trial of a mobile-based driving after drinking (DAD) intervention including interactive text messaging (Teeters et al., in press) to explore the relationship between linguistic variables and intervention outcomes. Participants were 25 college student drinkers from a diverse public university who completed all phases of the pilot trial. Text messages were analyzed using the Linguistic Inquiry and Word Count program (LIWC; Pennebaker et al., 2015). LIWC evaluated the messages in terms of several linguistic attributes, including word count and use of positive and negative emotion words (e.g., confident, safe vs. selfish, unsafe). Bivariate analyses revealed: 1) word count was not significantly associated with changes in DAD and 2) researcher use of positive emotion words was significantly associated with changes in DAD. Results from a moderation analysis indicated that the relationship between DAD at baseline and DAD at follow-up was moderated by researcher's use of positive emotion words during the intervention ($t(23)=2.77, p=.01; 95\% CI [.14, .97]$). These findings suggest that the language used by the interventionist can impact intervention outcomes. **Jenni B. Teeters PhD, Robert E. Twidwell, Lance W. Hahn PhD, James G. Murphy PhD**

33. **UTILIZING TEXT MESSAGE BOOSTERS FOR A BRIEF BEHAVIORAL ECONOMIC INFORMED ALCOHOL INTERVENTION.** Behavioral economic (BE) research suggests that increasing the salience of delayed substance-free rewards increases individuals' capacity for delaying gratification. This study aimed to improve the efficacy of outpatient alcohol use disorder (AUD) treatment by adding elements that

target BE mechanisms of change. Participants were 41 adults engaged in community based outpatient AUD treatments. Participants were randomized to either an individual single-session intervention focused on increasing engagement in substance-free activities and future orientation (SFAS) or to an individual sleep hygiene and nutrition education control condition. Both groups received four weekly text-message reminders of the contents of the session. Participants reported 27.44 (SD = 14.25) binge drinking episodes in the past 90-days and 9.31 (SD = 6.62) drinks per drinking day at baseline. A series of regression models indicated that SFAS participants reported fewer binge drinking episodes, and reduced proportionate substance-related (relative to substance-free) reinforcement compared to controls. SFAS participants reported high average session satisfaction ratings 9.08 (SD = .94, on a scale of 1-10). These preliminary results support the efficacy, feasibility, and acceptability of supplementing already existing AUD treatment with a single-session intervention plus remote delivery of booster contacts aimed at targeting behavioral economic elements of change. **Lidia Z. Meshesha PhD, James G. Murphy PhD**

34. DELIVERING ACCURATE DESCRIPTIVE AND INJUNCTIVE DRINKING NORMS VIA TEXT MESSAGE.

Many efficacious interventions designed to reduce college student drinking aim to correct misperceptions of peers' drinking behavior. Building on our pilot work (Merrill et al., 2018), the present study tests the efficacy of using text messages to promote pro-moderation descriptive and injunction drinking norms. Data on campus drinking norms were derived from a 2017 campus wide survey (N=435) and undergraduates helped the research team translate these data into text-sized messages. Following a baseline survey (in progress), participants (projected N =100 heavy drinking first-year students, 50% female) will be randomly assigned to receive daily text messages containing accurate drinking norms (experimental group) or historical facts (control group) for 10 weeks. Follow-up surveys will be administered at the end of the intervention. We will calculate within- and between-group effect sizes, and ANCOVA analyses will test hypotheses that the experimental group will reduce (a) perceived descriptive and injunctive norms, (b) drinking behaviors, and (c) alcohol-related consequences, and increase (d) protective behavioral strategies, relative to control. We will also examine gender and race differences to determine whether subgroups of students benefit more from the text-based intervention. This study aims to expand technology-facilitated prevention efforts for college freshman with the goal of reducing alcohol-related harm. **Holly K. Boyle MA, Jennifer E. Merrill PhD, Miranda Lauher, BA, Kate B. Carey PhD**

35. THE SOCIO-MULTIDIMENSIONAL SEXUAL & GENDER MINORITY ADDICTION (SSGMA)

FRAMEWORK: A THEORETICAL LENS. LGBTQI+ individuals experience higher rates of addictive disorders (i.e., substance use and behavioral addictions) than heterosexual and cisgender individuals. For many, the biggest predictor in developing addictive behaviors is social influences, yet there is no comprehensive model encompassing social aspects. Additionally, many helping professionals are often not trained or have the appropriate competencies (skills, knowledge, awareness, and social advocacy) to provide culturally sensitive, congruent addiction treatment to queer clients. Integrative and strength-based approaches are needed to depathologize sexuality and gender from a social multidimensional perspective. The Socio-Multidimensional Sexual and Gender Minority Addiction (SSGMA) framework was designed to account for disparities among traditional models, as well as a lens for clinicians to utilize when working with the LGBTQI+ community. The SSGMA framework focuses on social determinants of an individual's mental health. The model consists of four social dimensions (individual, inter-cultural, ecological, and political). The dimensions can be utilized to consider an individual from different points of view. An understanding of intersectionalities and the influence of oppression, stress, stigma; along with strengths, on mental health and wellbeing requires acknowledging the existence of multiple intersecting identities and a

commitment to exploring individuals and their social environments. This is imperative when conceptualizing addictive risks. **Juan R. Pantoja-Patino MS**

36. **MOTIVATIONAL INTERVIEWING PROCESS WITH COMMUNITY-BASED YOUNG ADULT HEAVY DRINKERS.** This study tested technical and relational processes hypothesized to explain the therapeutic benefit of an efficacious brief motivational interview (BMI). A randomized controlled trial compared the efficacy of a BMI to an attention-matched control (i.e., relaxation training [REL]) for reducing heavy alcohol consumption and associated negative consequences. Participants were underage, past-month heavy drinkers recruited from community settings (N=167; ages 17-20; 62% female; 59% White). Data were collected on session recordings, using established motivational interviewing process measures. Statistical analyses followed three steps. First, a latent class model determined the optimal class solution for characterizing proportion change talk means within BMI and REL. Next, the probability of proportion change talk class membership was examined as a mediator and then as a moderated mediator of BMI efficacy. The latent class model yielded a 3-class solution, including a low-increasing proportion change talk class (n = 61), a moderate-increasing proportion change talk class (n = 97), and a nonlinear proportion change talk class (n = 7). Across the outcomes examined, membership in the moderate-increasing class rather than the low-increasing class mediated BMI effects on alcohol-related consequences at 6 weeks. Mediation tests for consequences at 3 months and heavy drinking were non-significant. Moderated mediation results showed mediation effects were not conditional on therapist empathy and MI Spirit. Conclusions. Findings suggest that moderate increases in pro-change statements, relative to anti- or neutral-change statements, help explain BMI effects on reducing alcohol-related negative consequences soon after intervention. **Molly Magill PhD, Tim Janssen PhD, Nadine R. Mastroleo PhD, Ariel Hoadley BA, Justin Walthers BA, Nancy P. Barnett PhD, Suzanne M. Colby PhD**

Poster Session 4: Saturday April 6th 8:00 – 9:00 am

1. **PSYCHOLOGICAL INFLEXIBILITY IN WEIGHT-CONCERNED FEMALE CIGARETTE SMOKERS.** Significance: The Smoking-Related Weight and Eating Episodes Test (SWEET) assesses the extent to which cigarette smoking is used to suppress appetite, prevent overeating, and cope with body image dissatisfaction, and withdrawal-related appetite increase. A previous study found that an indicator of psychological flexibility (mindfulness) moderated the relationship between SWEET scores and smoking frequency among young adult female smokers. Methods: We examined relationships between SWEET subscales and demographics, smoking history, body mass index (BMI), and general and body image-specific psychological flexibility. We used baseline data from adult female smokers (N = 100, Mage = 46.7) who were participating in a larger study evaluating a treatment intended to increase psychological flexibility related to weight concerns. Results: Some SWEET subscales were correlated with smoking frequency [r 's = .23-.24, p = .02] and BMI [r = .27, p = .007]. Also, all SWEET subscales were correlated with general [r 's = 0.21-0.34, p 's = .001-.03] and body-image specific [r 's = 0.37-0.58, all p 's < .001] psychological flexibility (higher SWEET = lower flexibility). Conclusion: Consistent with past research, psychological inflexibility was related to smoking for weight/appetite management among female smokers. Future research is needed to target psychological inflexibility among weight-concerned smokers, which may improve treatment outcomes. **Erika Litvin Bloom PhD, Jared Leventhal MD**

2. **WHO RECOVERS FROM OPIOID USE DISORDER WITHOUT TREATMENT? FINDINGS FROM A NATIONAL SAMPLE.** Introduction: Remission from substance use disorders (SUDs) without treatment is common. Greater knowledge of people with past opioid use disorder (OUD) who quit without treatment could improve understanding of addiction and inform treatment efforts in the US. Methodology: Using wave III of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), we conducted multivariable logistic regression to compare adults in remission from a DSM 5 OUD who never received addiction treatment (i.e., self-quitters) to 1) all others with a lifetime history of OUD, to 2) those who quit with treatment, and to 3) those who did not quit or receive treatment. Results: Of the 777 who met criteria for lifetime OUD, 221 (28%) quit without treatment. In comparison to all others with an OUD (n=556), self-quitters were less likely to be Hispanic (OR=0.5) or have a history of arrests (OR=0.4), more likely to have a history of either heroin or pain pill OUD but not both (OR=2.7), and more likely to be in remission from co-occurring alcohol (OR=2.3) and illicit SUDs (OR=2.9). Conclusion: Approximately 25% of individuals with lifetime OUD quit without treatment and differ from those who received treatment or continue to use. Implications will be presented. **Elias M. Klemperer BA, Terril Verplaetse PhD, Sherry McKee PhD**

3. **IDENTITY DEVELOPMENT AND SUBSTANCE USE IN YOUTH FROM THE MULTICULTURAL SOCIETY OF MAURITIUS.** Mauritius is an east African island nation often described as a mosaic culture, with the three main religioethnic groups (Hindus, Creoles, Muslims) having differing views on the appropriateness of drinking and smoking. The purpose of this study is to better understand how social and group identity formation relates to substance use choices and behaviors during critical developmental periods in adolescence and early adulthood. We assessed two groups of offspring of the 1969-1970 birth cohort from the Mauritian Joint Child Health Project – one group transitioning from primary (6th grade) to secondary school, and one group transitioning from 17 to 18 years old when drinking and smoking become legal (n = 60). Here we present our initial results from the baseline phase of this 2-year Fulbright research study, which indicate that both age groups have strong sense of belonging to their religioethnicity, with differing expectations for drinking/smoking once being of legal age by gender, religioethnic group, and strength of affiliation. This research project provides the first opportunity to assess identity formation and substance use within Mauritian youth during critical developmental periods, with the ultimate goal to more fully explicate cross-cultural pathways to substance use and problems. **Susan E Luczak PhD, Caroline Ng Tseung-Wong PhD, Tashneem Mahoomed BSc, Shameem Oomur BSc, Uma Bhowon PhD**

4. **GENETIC OVERLAP AND CAUSALITY AMONG SCHIZOPHRENIA AND SUBSTANCE USE: THE GENOMIC PSYCHIATRY COHORT.** Despite epidemiological reports on the association between schizophrenia and substance use (SUD), there has been limited research on the nature of causality with respect to these psychiatric disorders, particularly in cohorts of diverse ancestry. We estimated genetic correlations between schizophrenia and substance use including cross-ancestry associations using data from the Genomic Psychiatry Cohort (GPC), which includes 6152 cases of African ancestry with a diagnosis of schizophrenia and 3918 screened controls, as well as participants of Latino (1234 cases, 3090 controls) and European ancestry (6046 cases, 4534 controls). We tested whether SUD polygenic risk scores were associated with schizophrenia risk or substance use behaviors among schizophrenia cases including causal models. Results indicated significant genetic correlations of schizophrenia with smoking initiation, cigarettes-smoked-per-day, and age-of-onset of smoking, as well as lifetime cannabis use. Comparing substance use behaviors among schizophrenia cases to the general population, we observe positive genetic correlations for smoking initiation and cannabis use. We report on the first cross-ancestry genome-wide association studies of smoking and cannabis use behaviors among schizophrenia cases. Results provide support for a partially shared genetic

basis for schizophrenia and substance use and for substance use among schizophrenia patients and the general population, and suggest possible population differences in patterns of genome-wide pleiotropic effects. **Roseann E. Peterson PhD, Tim B. Bigdeli PhD, Jacquelyn Meyers PhD, Giulio Genovese PhD, Michele Pato MD, Steven McCarroll PhD, Carlos Pato MD, Genomic Psychiatry Cohort Consortium, Ayman Fanous MD**

5. **SMOKING, DRINKING, AND AGGRESSION: COMPARING HEARING AND DEAF OR HARD-OF-HEARING COLLEGE STUDENTS.** Deaf and hard-of-hearing (DHH) individuals experience unique pressures, such as communication, academic, or social barriers. Given the unique cultural and linguistic experiences of DHH students as well as the barriers they may experience, understanding risk pathways for these individuals is important. The present study examined heavy episodic drinking, nicotine dependence, and aggression in hearing and DHH college students. Participants were 291 college students (DHH = 35, Hearing = 256). There was a significant interaction between nicotine dependence and hearing status predicting heavy drinking. DHH students reporting nicotine dependence had significantly higher rates of heavy episodic drinking than hearing and DHH students who were non-smokers. DHH students also reported significantly higher levels of physical aggression and higher levels of nicotine dependence for DHH individuals was associated with increased aggression. DHH students also reported experiencing more physical victimization which was exacerbated by higher levels of alcohol use. These findings may be due to substance use motivation or social experiences for DHH students, such as potentially engaging in substance use as a general coping mechanism. The present research begins to unpack differences in risky behavior and opens up important areas for continued research into the health and social behavior of an understudied population. **Stephanie Godleski PhD, Cory Crane PhD**

6. **IDENTIFICATION OF EMOTIONAL FACIAL EXPRESSIONS IN MEN AND WOMEN WITH ALCOHOL USE DISORDERS.** Background: Deficits in affect processing are noted among individuals with alcohol use disorders (AUDs), including identification of emotional facial expressions (EFEs). Although rich literatures highlight the import of sex in emotion processing and vulnerabilities to alcohol, little attention has been directed to their intersection. Methods: Participants included community controls (n=66) and treatment-seeking individuals with AUDs (n=44). Participants completed an emotion judgement task in which they identified emotionality of facial stimuli in a two-choice discrimination task. Accuracy and reaction time were the primary dependent measures in mixed model analyses incorporating Group and Sex as fixed effects. Results: A group difference in accuracy was observed, with AUD individuals performing more poorly in emotion identification ($p < .01$). A Sex by Group interaction was detected, such that accuracy among AUD women appeared markedly reduced relative to other groups ($p < .01$). Conclusions: Results provide direct evidence that among women, emotion processing may be particularly susceptible to chronic alcohol effects. These findings are consistent with previously separate literatures identifying sex-contingent vulnerabilities to alcohol and altered responding to EFEs in AUD. Given the role of emotion processing in treatment retention, relapse, and interpersonal functioning, this investigation provides provocative initial evidence for the potential import of sex in these relationships. **Ben Lewis PhD, Julianne Price MS, Christian Garcia MS, Sara Jo Nixon PhD**

7. **INTIMATE PARTNER AGGRESSION, ISOLATION, AND PROBLEMATIC ALCOHOL USE IN SEXUAL AND GENDER MINORITIES.** Sexual and gender minorities (SGMs) are at elevated risk for experiencing intimate partner aggression (IPA), which is associated with increased problematic alcohol use. This relationship in SGMs may be explained by minority stress exacerbated by partner-perpetrated victimization. The current analysis examines the mediating effect of minority stress, particularly

isolation resulting from daily heterosexism, on the association between minor and severe IPA in the past year and problematic alcohol use in a sample of SGMs (N = 180; Age range: 20-59 years (M = 31.36, SD = 7.25)). All participants identified as a sexual minority and 9.4% (n = 17) also identified as a gender minority; 27.8% (n = 50) reported having experienced minor IPA and 17.2% (n = 31) reported having experienced severe IPA. A significant mediation model did not emerge for minor IPA ($p > 0.05$). However, isolation partially explained the relationship between severe IPA and problematic alcohol use ($\beta = 0.72$, SE = 0.32, BootCI = 0.24, 1.57). Intervention strategies following severe victimization that focus specifically on experiences of minority isolation and foster opportunities for survivors to feel connected to others may be effective in reducing problematic alcohol use. Limitations and further clinical implications will be discussed. **Nora K. Kline MA, Kathleen Palm Reed PhD**

8. **VALIDATION OF THE BARKLEY DEFICIT EXECUTIVE FUNCTIONING SCALE-SHORT FORM IN SUBSTANCE USERS.** Extant research suggests deficits in executive function (EF) among substance using populations. The current study examined the factor structure of the proposed 20-item Barkley Deficit Executive Functioning Scale Short Form (BDEFS-SF), a brief screening tool assessing EF, among college-aged alcohol drinkers (N=616, Mage=19.1, Range=18-25; 50.6% female) and e-cigarette users (N=133, Mage=30.6, Range=18-44; 37.6% female). We aimed to examine the factor structure of the proposed five-factor model of BDEFS-SF, with additional examination of a higher order factor. Using confirmatory factor analysis (CFA), a single-factor model and a hierarchical multidimensional model were compared. In both samples, as expected, CFA of the BDEFS-SF revealed a single higher-order factor of EF, and five lower-order factors: self-management to time ($\alpha=.82$ and $.86$), self-organization/problem solving ($\alpha=.83$ and $.90$), self-restraint ($\alpha=.81$ and $.87$), self-motivation ($\alpha=.84$ and $.88$), and self-regulation of emotion ($\alpha=.91$ and $.92$). The BDEFS-SF also demonstrated good convergent and discriminant validity with mood variables, in both samples. Weak to moderate relations were found between BDEFS-SF and specific alcohol and e-cigarette variables (e.g., use and problems). Our results support the utility of BDEFS-SF as a brief screening tool in unselected alcohol and e-cigarette using populations. **Min-Jeong Yang MS, Olivia Costagliola, Xinyi Xu BA, Teresa Leyro PhD**
9. **THE EFFECTS OF RACE ON ALCOHOL-RELATED PROBLEMS AMONG AMERICAN INDIAN AND WHITE ADOLESCENTS.** Adolescent substance use is a significant public health concern. The current study aims to examine the interaction between race and alcohol consumption on alcohol-related problems. The current study's data were drawn from a larger longitudinal study examining substance use in American Indian (AI) 7-12th graders attending school on or near a reservation (N=5744., 47% female, 69% AI). Participants completed self-report measures of alcohol involvement and alcohol-related problems. Increased alcohol consumption was associated with increased alcohol-related problems for both AI and White youth. There was a significant interaction between race and alcohol consumption on alcohol-related problems. Simple slopes analysis revealed that in comparison, White adolescents experienced more alcohol-related problems at higher rates of alcohol consumption than AI adolescents. These findings are surprising given that they are inconsistent with the literature on AI adolescent drinking. Research has shown that AI adolescent experience disproportionately higher alcohol-related problems. Our results suggest that White youth living on or near AI reservations have riskier alcohol consumption and more problems. Future research should investigate if there are culturally specific problems that adolescent alcohol use presents for AI adolescents. **Silvi C. Goldstein BA, Nichea S. Spillane PhD**

10. EMOTION REGULATION, AMBIVALENCE OVER EMOTIONAL EXPRESSION, AND DRINKING TO COPE.

Difficulties in emotion regulation have long been identified as a determinant of alcohol problems. Suppression, one type of difficulty in emotion regulation, involves withholding or restraining the experience or expression of (typically negative) emotions. Another construct, ambivalence over emotional expression (AEE), represents conflict between the desire to and reluctance over expressing emotions. Given the previous literature on negative health outcomes related to suppression, we expected that suppression would be associated with drinking to cope with negative affect. We also expected this association to be even stronger among individuals who are high in ambivalence over emotional expression. In a sample of 653 heavy drinkers who completed all measures as part of a separate intervention trial, hypotheses were supported. The link between suppression and drinking to cope was amplified for those higher in AEE and not significant among those lower in AEE. Implications and future directions are discussed. **Lindsey Rodriguez PhD, James Onufrak, Emmalene Robinson, Qian Lu PhD, Chelsie Young PhD, Jordanna Lembo MA, Joanne Angosta, Clayton Neighbors PhD**

11. ASSOCIATIONS BETWEEN PARENTAL COMMUNICATION AND ALCOHOL-RELATED RISKY SEXUAL INTENTIONS AND BEHAVIOR.

Young adults are at risk for experiencing consequences associated with alcohol use and risky sexual behavior (RSB). Research indicates that greater parental communication about sex predicts less RSB and greater parental communication about alcohol use predicts less risky alcohol use. However, no research to date has examined the impact of these different types of communication on alcohol-related RSB intentions and behaviors. We hypothesized that there would be an interaction between parental communication about alcohol and parental communication about sex such that young adults who reported receiving more communication about both topics would report less risky alcohol-related sexual intentions and behaviors. A national sample of young adults (N= 194; mean age =19.18 (SD = 0.79); 53.6% female) completed a baseline survey for a larger clinical trial from which the current data is drawn. Results from negative binomial regressions indicated that only parental communication about sexual behavior (but not alcohol communication or their interaction) predicted intentions to engage in alcohol-related RSB. However, neither parental communication about alcohol or sex nor their interaction were associated with alcohol-related RSB. Future research is needed to determine how parental communication, and in particular communication about sex, can be leveraged to reduce engagement in alcohol-related RSB. **Dana M. Litt PhD, Ashley D. Lowery MS, Melissa A. Lewis PhD**

12. THE INTERACTIVE EFFECT OF PERCEIVED STRESS & EMOTION REGULATION ON MARIJUANA USE AMONG ADOLESCENTS.

Research suggests that emotion regulation deficits may increase the risk of problematic substance use among adolescents. The present study examined the influence of perceived stress on this relationship following high school graduation, a key period of developmental transition. A community sample of 91 recent high school graduates, endorsing past 3-month marijuana use, completed an online survey including measures of perceived stress, emotion regulation, marijuana use and associated problems, and open-ended questions regarding stressors, coping, and changes in substance use during the transition period. Marijuana use among participants ranged from monthly to daily use, with relatively low levels of problems related to marijuana use (M = 2.45, Range = 0-18). Analyses examined whether perceived stress moderated the relationship between emotion regulation and problems related to marijuana use. When controlling for marijuana use frequency, greater difficulties with emotion regulation were associated with more severe problems with marijuana use only among those endorsing low perceived stress, $F(1, 86) = 4.54, p < .05, \Delta R^2 = .03$. These findings suggest that a certain amount of perceived stress actually may be a protective factor for adolescent substance use during this developmental

transition period. Potential explanations will be explored alongside qualitative data. **Korine Cabrera BS, Camilo Posada Rodriguez, Kathleen Palm Reed PhD**

13. MEDIATORS OF CHILDHOOD ABUSE ON RELAPSE RISK IN ADULTS WITH SUBSTANCE USE

DISORDERS. Background: Childhood physical and sexual abuse are known risk factors for substance use disorders. However, few determinants have been identified that explain these effects. Anxiety sensitivity and grit are two psychological variables that have been associated with substance misuse and may be impacted by exposure to trauma. The aim of this study was to determine if anxiety sensitivity and grit mediate the effects of childhood abuse on relapse risk in those with substance use disorders (SUDs). Method: Treatment-seeking adults with SUDs (N=655) on a detoxification unit who were recruited for an ongoing cross-sectional study completed the Anxiety Sensitivity Index, Short Grit Scale, Childhood Trauma Questionnaire, and Brief Addiction Monitor (BAM). Mediation analyses were conducted to examine the effects of anxiety sensitivity and grit on associations between childhood physical and sexual abuse and relapse risk as assessed by the BAM. Results: Analyses indicate that childhood physical and sexual abuse were significantly associated with relapse risk scores, and anxiety sensitivity and grit partially mediated these relationships. Conclusions: Our findings suggest individuals with SUDs and a history of childhood trauma may benefit from treatment that includes a focus on anxiety sensitivity and grit. Study limitations and directions for future research are discussed. **Blake T. Hilton PsyD, Christopher King EdM, Margaret Griffin PhD, Nadine Taghian BS, Elizabeth Kneeland PhD, R. Kathryn McHugh PhD, Rachel Geyer BA, Scott Provost MM MSW, Monika Kolodziej PhD, Kerry Ressler MD PhD, Roger Weiss MD**

14. RESULTS FROM AN EPISODIC FUTURE THINKING PILOT STUDY IN A TREATMENT SEEKING

ADDICTION SAMPLE. Rationale: Individuals with addictive disorders commonly exhibit a shortened temporal window, which interferes with treatment that focus on long-term sobriety. Episodic Future Thinking (EFT) involves generating personalized cues related to anticipated, positive events at various future time points. EFT has been shown to reduce the reinforcing value of addictive substances, however this has only been in non-treatment samples. Purpose: The cumulative and sustained effects of EFT were assessed over a 1-week protocol on decision-making and drug motivation in a sample of people in treatment for alcohol use disorder. Methods: Treatment seeking individuals were randomly assigned to either undergo an EFT intervention or a control episodic recent thinking protocol. Assessments were completed at baseline, end of week 1, and a 1-week follow-up. Measures included motivation, craving, alcohol demand, impulsivity, verbal IQ, and substance use. Results: Data collection is ongoing. Currently, we have a sample of 16 individuals (87.5% male; mean age, 38.9). The average score on the AUDIT is 26.13, indicating relatively severe alcohol misuse. At baseline, 68.75% report it is highly important to change their drinking habits. Conclusion: If pilot study is successful, it will support a future clinical trial of EFT in individuals with alcohol use disorder. **Herry Patel BSc, Lana Vedelago BA, Michael Amlung PhD**

15. PATTERNS OF RECREATIONAL SUBSTANCE USE AMONG UNDERGRADUATES: A LATENT CLASS

ANALYSIS. Research on polysubstance use patterns among undergraduates is growing, however few have examined opioid use amongst other substances. The current study sought to examine identified classes of recreational substance use in the past 30 days among a sample of undergraduates (N = 1,259; 70% Female; 49% Hispanic/Latinx; Mean age = 19.52, SD = 1.67). Categories of alcohol use were no use, 1-5 days, 6-15 days, or 16-30 days. Categories of marijuana, stimulant, opioid, and sedative use were no use or any use. Four classes emerged: Class 1 (alcohol, marijuana, stimulants; 4.6%), Class 2 (alcohol, marijuana, stimulants, opioids; 2.4%), Class 3 (alcohol, marijuana; 24%), and Class 4 (abstainers; 69%). A 4-class model had excellent entropy (.975) and fit

marginally better than a 3-class model (LRT = 14.558, $p = .05$). Differences in demographic and functioning variables by class membership found Class 2 associated with significantly worse functioning as compared to all other classes, and Class 1 associated with significantly worse functioning than Class 3 and 4. There were no gender or race differences, however older age was associated with Class 2. Findings indicate that, among undergraduates, recreational stimulant and opioid use may be indicative of a broader pattern of polysubstance use. **Karlyn A. Edwards MS, Kevin E. Vowles PhD**

16. EFFECTS OF COUNSELING AND SUPPORT GROUP PARTICIPATION ON OPIOID USE DISORDER TREATMENT OUTCOMES.

Background: While the WHO considers concurrent psychosocial interventions an essential component of opioid dependence treatment [1], recent literature has emphasized the importance of medication over counseling [2-4]. Studies have shown that medication alone produces more favorable rates of abstinence (49%) than psychosocial interventions alone (20%) [5]. The current study examined the relationship between counseling and support group participation and opioid treatment outcomes. Methods: Data from a multisite study of 570 opioid dependent individuals enrolled in a 24-week randomized trial of buprenorphine-naloxone and extended-release naltrexone were analyzed. A series of logistic regressions examined the relationships between the number of hours of individual & group counseling and AA involvement and biologically confirmed opioid abstinence at 3-month follow-up. Results: After controlling for age, race, education, marital status, treatment condition, and opioid use severity, the odds of abstinence at 3-month follow-up was significantly associated with the number of hours of individual counseling during treatment (OR: 1.03; 95% CI: 1.01-1.06; $p < 0.05$) and the number of hours of AA participation during treatment (OR: 1.07; CI: 1.004 - 1.01; $p < 0.001$). Conclusion: Findings support the utilization of psychosocial interventions in conjunction with medication during the treatment of opioid use disorders. **Laura Harvey BA, Lycinda Rodriguez, Saman Essa, Morgan McNeel, Eden S. Absar, Prakriti Srivastava, Ann Wang, Marcel de Dios PhD**

17. THE RELATION BETWEEN ANXIETY SENSITIVITY AND NONMEDICAL PRESCRIPTION DRUG USE AMONG COLLEGE STUDENTS.

Nonmedical prescription drug use (NMPDU) has increased over the past decade, particularly among college students (Johnston et al., 2012). A small body of work indicates that anxiety sensitivity (AS) may be positively associated with an increased risk of NMPDU endorsement (McHugh et al., 2017); however, findings remain mixed, and few studies have examined the extent to which these associations may differ between relevant drug categories (e.g., anxiolytic versus stimulant). The current project aims to fill this gap by evaluating associations between AS and several NMPDUs among 702 undergraduates (69.8% female). The Anxiety Sensitivity Index-3 (ASI-3; Taylor et al., 2007) assessed AS, and three face-valid lifetime endorsement questions assessed analgesic, anxiolytic, and stimulant medication misuse (Kearns et al., 2018). Point biserial correlation analyses indicated that AS was positively associated with lifetime endorsement of nonmedical analgesic ($p = .006$, $R^2 = .011$) and anxiolytic medications ($p = .004$, $R^2 = .012$), but not stimulant medications ($p = .117$). Results indicated that there are significant differential associations between AS and lifetime endorsement of various NMPDU, highlighting the need to disaggregate the assessment of analgesic, anxiolytic, and stimulant medication misuse. Implications, limitations, and future directions will be discussed. **Caitlyn N. Carey BS, Hanan Rafiuddin, Holly Proenza, Kayla Corley, Nathan T. Kearns MS, Renee M. Cloutier MS, Heidemarie Blumenthal PhD**

18. DOES EPISODIC FUTURE THINKING SUPPORT INCREASED VALUATION OF DELAYED REWARDS IN COCAINE USERS?

Recent evidence suggests that episodic future thinking (i.e., envisioning oneself in

future contexts) promotes future-minded decision-making in healthy adults (Peters and Büchel, 2010). Specifically, healthy individuals exhibited reduced discounting of future reward when personally-meaningful future event cues were included in a modified intertemporal decision-making task (i.e., choosing between smaller, immediate rewards and larger, delayed rewards). This finding highlights potential opportunities to support future-oriented decision-making in substance use recovery; however, the impact of personally-meaningful future event cues on discounting behavior in substance users has not yet been evaluated. This pilot study aims to (1) assess the feasibility of methods employed by Peters and Büchel in patients with current substance use disorders and (2) examine preliminary evidence of an “episodic future thinking effect” on discounting behavior in treatment-seeking cocaine users. Patients with cocaine use disorder (n = 17) were interviewed about events at six future latencies and identified 101/102 total events requested. Consistent with successful event identification, participants demonstrated a significant decrease in delay discounting behavior when event tags were included on intertemporal choice trials (relative to discounting behavior without event tags; p = 0.011). Results support future inquiry into episodic future thinking as a factor in future-minded decision-making in substance users. **Sarah E. Forster PhD, Andrea Ortiz BA, Stuart Steinhauer PhD, Steven Forman MD PhD**

19. **A TREATMENT ENGAGEMENT INTERVENTION FOR MILITARY VETERAN SMOKERS WITH PSYCHIATRIC COMORBIDITY.** Veterans enrolled in VHA have access to free smoking cessation counseling and low-cost medication, yet treatment utilization rates are low. The present study reports on the initial evaluation of a telephone delivered brief motivational intervention (BMI) designed to encourage Veterans with psychiatric illness to utilize evidence-based treatment. The BMI was compared with a non-MI control condition. Of 88 participants 49% were non-White, 60% reported household income below \$35,000 and 88% were male. The primary outcome was engagement in a treatment session within 30 days of the intervention. GLMM analyses controlled for gender and cigarette dependence. At 1 month post-intervention no statistical differences were observed for attending a treatment session (35% BMI versus 29% control) or 24 hour quit attempts (46% BMI versus 39% control). At 3-months post-treatment BMI participants were significantly more likely to report 7-day point-abstinence (33% BMI versus 18% control; b=3.44, se=1.60, p= 0.03). The failure to observe significant differences in engagement and quit attempts during the 30 days following treatment may reflect that both conditions employed similar content, assessed motivation and included proactive efforts to connect smokers with treatment resources. Utility of the BMI condition was demonstrated with a significant effect on point abstinence at 3-month follow-up. **Mark Myers PhD, David Strong PhD, Timothy Chen PharmD.**

20. **RESTING STATE FUNCTIONAL CONNECTIVITY ASSOCIATED WITH ALCOHOL USE SEVERITY AND IMPULSIVITY.** Alcohol Use Disorder (AUD) is characterized by neurocognitive and behavioral impairments including impulsivity, which is both a risk factor for, and a consequence of problematic alcohol use. Individuals with AUD exhibit alterations in neural circuitry that may underlie difficulties with impulsivity. This study uses resting state functional connectivity (rsFC) to examine in functional networks between individuals with AUD and social drinkers (SD). Participants were non-treatment seeking young adult drinkers (n = 53; AUD = 23). Group ICA was used to test differences in rsFC, and associations between impulsivity and rsFC. Although we expected hypoconnectivity in AUD, we found no statistically significant group difference in any rsFC network. Furthermore, we found no associations between impulsivity and rsFC. To explore these null findings, we visualized small-to-moderate effect size differences in spatial map intensity and found limited evidence for increased rsFC in some frontal cortical, default mode, and visual networks (SD>AUD). These were small, statistically non-significant effects, but in the expected direction. However, we found also

inconclusive effects in other frontal executive regions and salience network. Various explanations are presented and future directions are proposed to further explore associations between behavioral traits and neurobiological mechanisms that may confer risk among young adult drinkers.

Elena Stein BA, Eric Claus PhD, Katie Witkiewitz PhD

- 21. EXPLORING PATHWAYS TO ADOLESCENT SUBSTANCE USE: A LONGITUDINAL EXAMINATION OF SPORT PARTICIPATION.** While sport participation has many benefits (e.g. increased self-esteem), its impact on adolescent substance use is unclear. Research has shown that sport participation increases risk for alcohol use and reduces risk for cigarette use. Additionally, it increases exposure to peer groups that may facilitate use. Yet, pathways by which these associations occur remain untested. Moreover, research on the role of sport participation on marijuana use is lacking. The sample consisted of 533 adolescents from the Michigan Longitudinal Study (67.4% male, 78.1% White). Prospective models were tested to determine whether aggression mediated, and peer substance use moderated, the association between number of sports played and later alcohol, cigarette, and marijuana use. There was evidence for a direct effect of number of sports played on alcohol use, while the association between number of sports played and cigarette and marijuana use was mediated by aggression (Estimate=0.052, 95% CI [0.002, 0.135]; Estimate=0.096, 95% CI [0.002, 0.261], respectively). Findings can be explained in part by social norms. Adolescent cigarette and marijuana use are viewed as more deviant compared to alcohol use. Thus, deviant behavior such as aggression may only characterize the pathway between sport participation and less normative behaviors, such as cigarette and marijuana use. **Julie Cristello BA, Elisa M. Trucco PhD, Robert A. Zucker PhD**
- 22. EVALUATING CONTINGENCY MANAGEMENT FOR PROMOTING SMOKING ABSTINENCE IN AN INPATIENT SCHIZOPHRENIA POPULATION.** The prevalence of cigarette smoking is disproportionately high among people with schizophrenia and contributes to numerous negative health outcomes. Management of smoking is a significant challenge for psychiatric hospitals. This pilot study investigated the potential for a contingency management (CM) strategy to reduce smoking among inpatients with schizophrenia. Patients completed a 2-week CM protocol involving escalating incentives for consecutive negative carbon monoxide (CO) screens. Baseline data included demographics, smoking history, nicotine dependence, readiness to change, psychiatric diagnosis, and psychiatric severity ratings. Primary outcome measures included daily expired CO levels, daily self-report smoking behaviours, and visit attendance during the 2-week CM protocol. Data from 13 case studies will be presented to highlight the differences between patients who reduced their smoking by 50% or more and those who did not. Common barriers included early discharge dates, hospital passes, changes in medications, decline in wellness (i.e. mood, psychosis), boredom, low motivation to change and unexpected life stressors. Moving forward, we will explore the possibility of adding a motivational interviewing component to the protocol as well as changing the reward system to reflect smoking changes over time (i.e. a 50% reduction) rather than a static CO level. **Carmen MacPherson BA, Megan Hemlow MSW RSW, Holly Raymond MSW RSW, Robert Zipursky MD, James MacKillop PhD, Michael Amlung PhD**
- 23. THE ALCOHOL PURCHASE TASK PREDICTS ALCOHOL USE/CONSEQUENCES IN YOUNG MEN FROM THE GENERAL POPULATION.** The alcohol purchase task (APT), which presents a scenario and asks participants how many drinks they would purchase and consume at different prices, has been used among students and small clinical samples and has not been tested using long-term prospective design. We administered the APT to a large sample of 4790 Swiss young men from the general population. Among those, 4326 were successfully followed-up 4 years later [mean age 21.4 and 25.4

(sd=1.3)]. Parameters derived from the APT at baseline were used to predict weekly drinking, monthly binge drinking, maximum drinks in one occasion, alcohol-related consequences, and DSM-5 alcohol use disorder criteria. Intensity (planned consumption when drinks are free) and Omax (maximum alcohol expenditure) were significantly correlated with all outcomes (r range: 0.25-0.37 for Intensity, 0.17-0.28 for Omax, all $p < 0.001$). Breakpoint (price at which consumption was suppressed) and Elasticity were significantly, but weakly correlated with outcomes (r range: 0.09-0.12 for Breakpoint, -0.07--0.11 for Elasticity, all $p < 0.001$). Pmax (price at which demand became elastic) was not a significant predictor. Regression analyses controlling for baseline value of outcome showed consistent findings. APT measures are useful in characterizing alcohol demand in young men from the general population and have long-term predictive value. **Jacques Gaume PhD, James G. Murphy PhD, Joseph Studer PhD, Jean-Bernard Daeppen MD, Gerhard Gmel PhD, Nicolas Bertholet MD MSc**

24. **BEHAVIORAL ECONOMIC CANNABIS DEMAND OVER TIME: HOW ACCURATELY DO CANNABIS USERS PREDICT THEIR FUTURE DEMAND?**. Cannabis is the most widely-used illicit drug among young adults and can have various adverse effects, including Cannabis Use Disorder (CUD) and cannabis-related consequences. Heightened behavioral economic demand (high consumption despite increasing price) is related to problematic cannabis use. Inaccurate prediction of future substance use behavior may explain continued use despite negative consequences (i.e. addiction and relapse). The current study examined how accurately young adults predict future demand for cannabis. Young adults (18-28 yrs., current $n = 53$) completed two in-person sessions, 3 months apart. At baseline, participants imagined “a typical day in three months from now” and indicated how many hits they would consume at 22 prices between \$0 and \$10 (i.e. Marijuana Purchase Task, MPT). At follow-up, they completed the MPT for present consumption. DSM-5 CUD symptoms and cannabis-related consequences were assessed. A repeated-measures t-test showed that individuals significantly under-estimated the number of hits they would consume at \$0 (Intensity of demand) in three months. More CUD symptoms and consequences at baseline were associated with this under-estimation of intensity of demand. These preliminary results suggest an association between CUD and overly optimistic future predictions about cannabis use. Future research should examine prediction of future demand as a treatment-related variable. **Ricarda K. Pritschmann BS, Richard Yi PhD, Ali M. Yurasek PhD**

25. **ALCOHOL AND GAMBLING IDENTITY AS A PREDICTOR OF ADDICTION-RELATED OUTCOMES.** Identity with respect to addiction is the salient part of a college student’s self that relates to addiction-related behavior. Research indicates that identity-related factors are predictive of substance use and behavioral addictions. The current study examined participants’ self-reported identification as an alcohol user and gambler to observe whether these identity-related factors were predictive of the frequency and negative consequences associated with each respective behavior. Data were collected online from participants ($N = 425$) through the Amazon Mechanical Turk marketplace. Participants were predominantly male, 33 years of age, and Caucasian. The tobacco self-concept scale was adapted to measure alcohol and gambling identity. Participants provided information on past 30-day frequency of alcohol use and gambling behavior. Negative consequences were also assessed (e.g., Brief Young Adult Alcohol Consequences Questionnaire, Gambling Problem Severity Index). Results indicated that the level of identification as an alcohol user and gambler were predictive of the frequency (Alcohol [$B = .38$, $p < .001$], Gambling [$B = .29$, $p < .001$]) and negative consequences (Alcohol [$B = .44$, $p < .001$], Gambling [$B = .31$, $p < .001$]) associated with each respective behavior. These findings indicate that identity-related factors may operate similarly in different

addiction-related domains. In terms of research implications, identity-related interventions may need to more broadly target identity across addiction domains. **Kevin Montes PhD**

26. **TOBACCO USE AND QUIT INTENTIONS IN A DIVERSE COLLEGE STUDENT POPULATION: WHO IS AT RISK AND FOR WHAT.** Ninety-nine percent of smokers initiate cigarette use by age 26 (CDC, 2017). Consequently, intervening on tobacco use in college student populations is an increasingly important public health priority. The present study investigated tobacco use behaviors (previous 30-day cigarette, e-cigarette, and hookah use) and quit intentions among a diverse group of 335 college students from a large public university who completed an online survey. Path analysis was used to analyze results. The model demonstrated a saturated fit to the data (CFI = 1.00, RMSEA = .00). Results demonstrated that older age was significantly associated with higher rates of daily cigarette use in the last 30 days ($\beta = .32$, $p < .001$), whereas White race ($\beta = .21$, $p < .001$) and male gender ($\beta = .17$, $p = .002$) were significantly associated with higher rates of daily e-cigarette use in the last 30 days. Non-White race was associated with higher rates of daily hookah use ($\beta = -.17$, $p = .001$). Finally, female gender was significantly associated with quit intentions ($\beta = .28$, $p = .048$). Findings illuminate potential pathways to create interventions tailored to the needs of diverse student groups who differ in use and intentions to quit. Descriptive and path analysis results will be discussed in the context of clinical implications for reducing college student tobacco use. **Melissa M. Ertl BA, M. Dolores Cimini PhD, Karen L. Sokolowski PhD, Natalie L. Sumski MPH, Estela M. Rivero PhD**
27. **EXAMINING INTERACTIONS OF GROUP BONDING AND SUBJECTIVE RESPONSE AMONG YOUNG ADULT HEAVY DRINKERS.** Subjective response (SR; individual differences in sensitivity to alcohol's effects) and alcohol demand (extent to which a person values alcohol) are predictors of negative alcohol outcomes among young adults. Drinking within social contexts is common among this population and is associated with increased group bonding. However, the predictive utility of heightened group bonding in the context of alcohol use on negative alcohol outcomes has not been examined. The purpose of this secondary analysis was to investigate the influence of group bonding on SR, and the interaction of the two, on alcohol demand. Young adult heavy drinkers (N=79; 51.7% female) completed a group drinking session, then completed measures assessing perceived group bonding, SR (stimulation and sedation), and demand intensity (number of drinks consumed if free). Separate regression analyses indicated that greater group bonding predicted heightened alcohol stimulation and dampened sedation, and greater group bonding, but not SR, predicted alcohol intensity. A group bonding by stimulation interaction predicted greater alcohol intensity. Findings suggest that the combination of social and individual-level factors may contribute to the over-valuation of drinking, placing young adults at increased risk for negative alcohol outcomes. Future research should examine these variables in relation to actual drinking behaviors. **Bonnie Rowland BS, Benjamin Berey BA, Ali M. Yurasek PhD, Robert Leeman PhD**
28. **TEACHING EMOTION REGULATION TO IMPROVE INHIBITORY CONTROL AND DECREASE CRAVINGS AMONG WOMEN VETERANS.** Among women with alcohol misuse, decreased inhibitory control (IC) and increased craving mediate the association between negative emotion and drinking. Women with co-occurring depression or post-traumatic stress disorder (PTSD) are at particular risk of drinking to cope. This study examines whether an emotion regulation strategy (cognitive reappraisal, CR) ameliorates the effect of negative emotion on IC and craving, and whether this effect is moderated by depression/PTSD severity. In session one, women Veterans with alcohol misuse are urn randomized to one of two conditions: experimental condition, in which they are taught CR, or control psychoeducation. In session two, after a personalized negative emotion/stress induction, women in the experimental condition implement CR. Craving and IC are assessed at 3

points: baseline, post-induction, and after CR (or sitting quietly for control). Mixed Modeling was used to test hypotheses (n=34 completed, final n=40). Depression [F(1,70)=7.54, p=.008] and PTSD [F(1,70)=5.31, p=.024] severity moderated the effects of CR on IC, but not craving. CR more effectively improved stress-modulated IC among women with more severe PTSD, and was less effective among women with more severe depression. Depression severity had a main effect on craving, regardless of condition [F(1,90)=26.8, p=.000]. Findings have implications for alcohol treatment among women. **Cathryn Glanton Holzhauer PhD, Elizabeth Epstein PhD, David Smelson PsyD, Kristin Mattocks MPH PhD**

29. **A BEHAVIORAL ECONOMIC APPROACH FOR EXPLORING CIGARETTE REGULATIONS IN A COMPLEX TOBACCO MARKETPLACE.** As the Food and Drug Administration (FDA) moves forward with cigarette regulation, it is important to recognize that cigarettes exist within a complex tobacco marketplace. Regulations targeting cigarettes will likely affect consumption of other tobacco products (OTP). The Experimental Tobacco Marketplace (ETM) is a behavioral economic (BE) task that enables researchers to simulate effects of potential tobacco regulations, such as product standards for cigarettes, within the context of a complex marketplace. Our ongoing study (n = 7) is assessing how restricting access to menthol cigarettes, simulating a menthol flavor ban, affects OTP use. Menthol cigarette smokers complete the ETM task during which they purchase tobacco products from an online store, using money provided by the study based on their typical patterns of tobacco spending. As participants shop, the price of their menthol cigarettes increases until they cannot afford them and have to switch to OTP. BE variables generated include demand elasticity and substitutability. To date, vaping devices are the primary preferred substitution products in the context of a menthol ban. Implications of study results with respect to FDA cigarette regulations will be discussed, as well as the utility of the ETM task within other vulnerable populations. **Rachel Denlinger-Apte MPH, Jennifer W. Tidey PhD**

30. **TARGETING SUBSTANCE USE FOLLOWING A SEXUAL ASSAULT: PRELIMINARY EVIDENCE OF AN EHEALTH INTERVENTION.** Sexual assault victimization is associated with numerous long-term negative outcomes, including an increased risk of developing a substance use disorder. Research estimates that up to 49% of sexual assault survivors become dependent on alcohol and 61% become dependent on other substances following an assault (see Dworkin et al., 2018 for review). Despite these rates, there are limited post-sexual assault interventions designed to prevent increases in substance use immediately following experiences of sexual assault victimization. We developed an eHealth intervention targeting post-sexual assault substance use and associated mental health symptoms to be used immediately after a sexual assault. Intervention content included screening, brief intervention, and referral to treatment for alcohol and drug misuse, and psychoeducation and coping skills to reduce or prevent the development of mental health symptoms post-sexual assault. Feedback on the intervention content and usability data were collected from individuals who received a sexual assault medical forensic examination within 120 hours of the assault (n = 10) and service providers including mental health providers, advocates, and lawyers (n = 25). Common feasibility and content themes from recent sexual assault victims and providers will be discussed as well as suggested dissemination strategies. **Ruschelle M. Leone MA, Lauren Barnes MA, Daniel W. Oesterle BS, Julianne Flanagan PhD, Ron Acierno PhD, Tatiana Davidson PhD, Amanda K. Gilmore PhD**

- 31. ALCOHOL USE AND BYSTANDER BEHAVIOR AMONG HIGH SCHOOL STUDENTS: OPPOSING PATHWAYS.** Bystander intervention training is a promising tool to prevent sexual violence among high school students (Coker et al., 2007). Though bystanders are often intoxicated when their intervention skills are needed (Haikalis et al., 2018), the implications of bystander alcohol use on intervention behavior are not well understood. The present study tested the hypothesis that alcohol use influences bystander behavior via opposing pathways. High school drinkers may have greater opportunity to intervene, given the heightened sexual risk associated with alcohol (Abbey, 2002), resulting in greater bystander behavior. Alternatively, drinkers may be less perceptive of risk (O'Hara & Cooper, 2015), resulting in less bystander behavior. Participants were 2,592 10th grade students across 27 schools. Students completed self-report measures related to alcohol use, risk perception, and bystander opportunity, attitudes, and behaviors. Results supported the hypothesized path model ($\chi^2[1] = 1.20, p = .27, RMSEA = .01$). The significant indirect pathways of alcohol on bystander behavior via opportunity and risk perception counterbalanced one another, such that there was no overall effect of alcohol on bystander behavior. Findings highlight the importance of targeting risk perception among student drinkers to make the most of the bystander opportunity they experience. **Michelle Haikalis MA**
- 32. ALTERNATIVE PEER GROUPS AND RECOVERY CAPITAL.** Our talk focuses on recovery capital as perceived by adolescents who participated in an Alternative Peer Group (APG). The APG model is a peer recovery support model that has a 45-year history of helping adolescents build recovery capital APGs integrate recovering peers and social activities into clinical practice. Anecdotal evidence suggests APGs are successful in helping adolescents recover by facilitating a change in their social networks from "high (relapse) risk" peers to "low (relapse) risk" peers. All APGs provide peer support, social activities, and linkages to treatment and other recovery support services to build recovery capital. This qualitative study explored how the recovery capital framework applied to APG participants' recovery narratives. Findings on recovery capital factors and recovery capital barriers that emerged from interviews with 12 youth will be presented followed by a discussion of strategies for building culturally appropriate resource support, identification of areas of vulnerability, and addressing resource gaps. Recently there has been a surge in growth of new APGs across the U.S. The authors will conclude by proposing directions for future qualitative and quantitative research that highlights best practices for building adolescents' recovery capital in APGs. **Angela J Nash PhD CPNP-PC PMHS, Crystal Collier PhD LPC-S, Emily Hennessy MPhil PhD**
- 33. CLIENT SPEECH IN MOTIVATIONAL INTERVIEWING: ARE NON-TREATMENT-SEEKERS DIFFERENT?** Within motivational interviewing (MI), an empirically-supported treatment for substance use, two types of within-session client speech have shown to predict drinking outcomes: client statements for changing substance use ("change talk":CT) and client statements for the status quo ("sustain talk":ST). It remains unclear how they differ in predictive quality. Much of the research supporting ST is based on non-treatment-seeking populations mandated to treatment. The goal of this study was to compare the predictive power of CT and ST in a sample of non-mandated, non-treatment-seeking drinkers. Participants (N=43; M age=27.4, SD=9.6; 48.8% male; 51.2% Hispanic/Latino; M AUDIT=12.1, SD=6.5) had a brief MI session that was rated using the MISC2.5 coding system. Follow-up AUDIT scores from 1-month and 3-month were regressed hierarchically on CT-rate and then ST-rate, controlling for baseline drinking. At 3-month, CT-rate accounted for 7.0% of variance in outcome (B=-17.799, t=-2.063, p=0.046), while ST-rate accounted for 0.7% (B=-9.11, t=-0.674, p=0.504). No significant effects were detected at 1-month. In our data, only CT was a significant predictor of drinking outcomes, and only at 3-months. This is consistent with work suggesting substantial differences between treatment-seeking and non-treatment-seeking populations. It may

be that clinicians should differentially focus on client speech, depending on the population. **Brigitte R Stevens BS, Jon M Houck PhD**

- 34. EXPERIENCING MEDICAL PROBLEMS PROMOTES THE USE OF AN IPHONE APP-BASED BREATHING INTERVENTION.** Resonance breathing has been shown to dampen physiological reactivity in moments of stress. It also shows promise as a clinical intervention to promote long-term mental and physical health. In substance use populations, the utility of resonance breathing to reduce use in response to triggers is being examined in an 8-week randomized clinical trial for parenting women seeking substance use treatment. Eighty-five women were instructed to use a paced breathing iPhone app for 5 minutes whenever they felt stressed or triggered to use substances. Previous analyses showed that being triggered to use alcohol or drugs predicted app use across positive, negative, and temptation situations in these women. The current study assessed how self-reported physical health affected app use. The number of self-reported medical conditions did not predict app use; however, being bothered by medical problems predicted higher frequency of app use. A critical aim of the current clinical trial is to understand the type of individuals who are most likely to benefit from resonance breathing interventions. These results suggest that subjective experience of medical problems may drive use of the app, possibly indicating that individuals who are significantly bothered by health problems may benefit from breathing-based intervention. **Sabrina M. Todaro BA, Sarah Grace Helton BA, Julie Morgano MSW, Laura Lesnewich MS, Marsha E. Bates PhD, Jennifer F. Buckman PhD**
- 35. DOES PROLONGED EXPOSURE LEAD TO INCREASES IN ALCOHOL USE IN VETERANS WITH CO-MORBID PTSD/AUD?** A common perception of trauma-focused treatment is that it may have iatrogenic effects on alcohol use. Integrated treatment for posttraumatic stress disorder (PTSD) and alcohol use disorder (AUD) attempts to improve both disorders simultaneously. This study examined rates of during-treatment increases in alcohol use among a sample of 101 veterans with PTSD and AUD receiving either Prolonged Exposure plus relapse prevention (COPE) or Seeking Safety (SS). Across both conditions, 40% of veterans endorsed alcohol use increases during treatment post-session 1 (percent days drank multiplied by the average number of drinks per occasion). Chi-square analyses indicated that 32.1% of veterans in COPE versus 46% veterans in SS reported an increase in drinking, $X^2(1)=3.36, p=.07$. No between-group differences existed in time of first increase in alcohol use $X^2(2) = 1.45, p = .49$, with the majority reporting first increase in early-treatment (sessions 1-4; 43.9%; COPE=52.9%; SS=43.9%) or mid-treatment (sessions 5-9; 36.6%; COPE=35.3%; SS=37.5%). Results suggest that integrated treatments may lead to temporary increases in alcohol use for some individuals but dispel the belief that exposure-based treatment will lead to more alcohol use compared to non-exposure treatments. **Jessica Tripp PhD, Abigail Angkaw PhD, Brittany Davis PhD, Moira Haller PhD, Sonya Norman PhD**
- 36. THE EFFECT OF ACUTE ALCOHOL INTOXICATION ON ALCOHOL IMPAIRED DRIVING DECISION MAKING STRATEGY.** To explore a possible mechanism for the discrepancy between widely held negative perceptions of alcohol-impaired driving (AID) and high rates of AID, we developed a task assessing strategies by which decisions about AID are made. In this task, participants choose between driving and a safe ride in a series of hypothetical scenarios, where alcohol consumption and the ride cost vary. Decision-making strategies on this task can be classified as compensatory (incorporating all relevant information) and non-compensatory (using heuristics). Previous studies from our lab have suggested that a compensatory strategy is associated with higher rates of AID. This task was administered in a within-subject, placebo-controlled alcohol administration study to test potential effects of alcohol intoxication on strategy use. Preliminary data ($n = 20$) suggested that

51% used a compensatory strategy, 31% used heuristics, and 18% were unclassified while intoxicated. Similar proportions were observed in the placebo condition. There was moderate evidence supporting the stability of strategy use across the alcohol and placebo conditions (Bayes Factor = 2.45), as only two participants switched from a non-compensatory to a compensatory strategy. These results provide initial evidence suggesting that alcohol intoxication does not influence AID related decision making strategy use. **Kayleigh McCarty MA, Laura E. Hatz MA, Sanghyuk Park MA, Clinton P. Davis-Stober PhD, Denis M. McCarthy PhD**

37. **DEVELOPING A TRANS-AFFIRMATIVE ALCOHOL PREVENTIVE INTERVENTION FOR TGNC EMERGING ADULTS.** The effects of minority-specific stressors on alcohol use are pronounced for transgender and gender non-conforming (TGNC) individuals. Extant interventions targeting prevention of alcohol use among college students (1) frequently utilize heteronormative and cis-centered language and (2) may not appropriately address specific concerns regarding alcohol use that are most salient to TGNC people, including coping with minority stressors. Given that there are no current well-established alcohol prevention approaches directly targeted toward the TGNC emerging adults, the current study involves conducting focus groups with TGNC emerging adults to ascertain components most relevant for the development of a prototype brief alcohol preventive intervention. We currently have data from nine participants with the expectation of up to 21 additional participants. Using thematic analysis, emerging themes include the role of representation in the structure and delivery of the intervention, as well as an emphasis on intersectional identities and a desire for comorbid substance use prevention in addition to alcohol. Formal thematic analyses are ongoing and would be presented at the conference. In consultation with our panel of community stakeholders, themes collected from these focus groups have the potential to inform future affirmative alcohol prevention practices among this marginalized and underserved group. **Peter P. Ehlinger BA, Jessica M. Cronce PhD**
38. **CROSS-PRICE ELASTICITY OF MARIJUANA AND TOBACCO DEMAND PILOTED IN DUAL-USING YOUNG ADULTS.** Dual tobacco and marijuana use in early adulthood has been linked with greater risk for health and behavioral problems later in life. Despite this, behavioral phenotypes of marijuana and tobacco dual use are not well characterized, making it challenging to identify users who are at risk of escalating use as marijuana and tobacco price and availability change. This pilot study modeled behavioral mechanisms of dual use using a novel Cross-Price Elasticity of Demand (CPED) task designed to assess how demand (i.e., relative substance value) for tobacco may shift as the price and availability of marijuana changes (and vice versa). Young adult marijuana and tobacco dual users (n=8, mean age: 19 years) completed the CPED task and participated in a post-task qualitative interview. Task comprehension was high, and data were sensitive to price manipulations across substance. Demand patterns displayed individual differences in CPED, including within-subject asymmetry of purchasing patterns. Six participants demonstrated a complementary dual use pattern (i.e., decreasing alternative substance use as primary substance price increases) or a dual use substitutive pattern (i.e., increasing alternative substance use). The clinical implications of high-risk dual use patterns will be discussed, specifically with respect to tailored prevention and treatment efforts for dual users. **Elizabeth R. Aston PhD, Rachel N. Cassidy PhD**
39. **COMPLEX MARIJUANA USE PATTERNS: RELATIONS WITH SIMULTANEOUS ALCOHOL AND MARIJUANA USE AND ASSOCIATED CONSEQUENCES.** Rates of marijuana use have been increasing among young adults in the wake of changes in marijuana's legal status. Within this evolving landscape, a variety of marijuana administration modes (e.g., joints, bong, vaporizers) and products (e.g., leaf, concentrates, edibles), are being utilized, and use behaviors (i.e., frequency, quantity) are

rapidly shifting. These changes have implications for alcohol use behaviors, as 50% of young adult marijuana users report simultaneous alcohol and marijuana (SAM) use. This study utilized latent class analysis to classify marijuana users (N=1390) on several marijuana use indicators (e.g., modes, products, frequency). Five unique classes of marijuana users emerged: high frequency all product users (22%), high frequency heavy leaf/moderate edible and concentrate users (8%), low frequency primary leaf users (41%), moderate frequency primary leaf and edible users (24%), and low frequency typically edible users (5%). We observed significant differences by class on number of SAM and alcohol use days, as well as marijuana and alcohol consequences, with frequency and product being important predictors of both. Thus, it is important to consider not only frequency, but product and mode when assessing marijuana use behaviors and associations with outcomes. **Rachel Gunn PhD, Elizabeth R. Aston PhD., Kristina M. Jackson PhD, Helene R. White PhD**

40. ALCOHOL USE DISPARITIES AMONG GENDER AND SEXUAL MINORITIES IN NEW ZEALAND.

Introduction: Research in the U.S. has shown that sexual minorities (SMs) drink more hazardously than non-SMs. The minority stress framework posits that this occurs due to minority populations experiencing discrimination and subsequently higher overall stress than non-minority populations. To test this theory, we aimed to determine if disparities in alcohol use occur between SMs and non-SMs in a country with less sexual identity discrimination: New Zealand. Results: Secondary analyses were performed on data from the 2015/16 and 2016/17 New Zealand Health Survey (n = 27,379; SMs = 695). Bayesian logistic regression model and thin plate age splines were employed to test whether SM identity predicted hazardous alcohol use. SMs were 2.3 times more likely to drink hazardously than non-SMs. This finding was largely due to SM women (SMW), who were 2.7 times more likely to drink hazardously than non-SM women (there was no difference between SM and non-SM men). Discussion: Our findings corroborate results from U.S. based research on alcohol disparities by sexual identity; New Zealand SMW engaged in more hazardous drinking than non-SMW. More research is needed to determine if discrimination could be disproportionately influencing SMW's alcohol use in New Zealand. **Anthony Surace MA, Benjamin C. Riordan MSc, Taylor Wintor MSc**

41. DEPRESSION AND RISKY ALCOHOL USE: AN EXAMINATION OF THE UNDERLYING ROLE OF DIFFICULTIES REGULATING POSITIVE EMOTIONS IN TRAUMA-EXPOSED INDIVIDUALS.

Background: The co-occurrence of depression and risky alcohol use is clinically-relevant given their high rates of comorbidity and reciprocal negative impact on outcomes. Emotion dysregulation is one factor that has been shown to underlie this association. However, literature in this area has been limited in its exclusive focus on emotion dysregulation stemming from negative emotions. Objectives: The goal of the current study was to extend research by exploring the role of difficulties regulating positive emotions in depression symptom severity, risky alcohol use, and their association. Methods: Participants were 395 trauma-exposed adults recruited from Amazon's Mechanical Turk (Mturk) platform (56.20% female, Mage = 35.55) who completed self-report questionnaires. Results: Zero-order correlations among depression symptom severity, the three dimensions of difficulties regulating positive emotions, and risky alcohol use were positive. Two dimensions of difficulties regulating positive emotions or nonacceptance of positive emotions and difficulties controlling impulsive behavior when experiencing positive emotions accounted for the relationship between depression symptom severity and risky alcohol use. Conclusion: Results suggest the importance of incorporating skills focused on improving positive emotion regulation in interventions for risky alcohol use among individuals with depression. **Melissa R. Schick BS, Nicole H. Weiss PhD, Ateka Contractor PhD, Katherine L. Dixon-Gordon PhD, Nichea S. Spillane PhD**