



THE WARREN ALPERT
Medical School

BROWN UNIVERSITY

Clinical Psychology Training Programs at Brown

Research Accomplishments of Pre-doctoral Training Program Residents 2023-2024

Alexis Adams-Clark (Brown Research Advisor: Lindsay Orchowski)

Publications

Harsey, S., **Adams-Clark, A. A.**, Freyd, J. J. (under review, revise & resubmit). Associations between defensive victim-blaming responses (DARVO), rape myth acceptance, and sexual harassment.

Adams-Clark, A. A., Barnes, M. L., Lind, M. N., Smidt, A. M., & Freyd, J. J. (under review, revise & resubmit). Institutional courage attenuates the association between institutional betrayal and trauma symptoms among campus sexual assault survivors.

Adams-Clark, A. A., & Freyd, J. J. (under review, revise & resubmit). Contextual factors influencing posttraumatic stress after campus sexual assault.

Presentations

Sharma, A., Tamke, E. C., **Adams-Clark, A. A.**, Bhuptani, P. M., Orchowski, L. H. (accepted; 2024, Sept 25-28). Threats, Jokes, Dismissals: Describing #MeToo Backlash. Annual meeting of the International Society in Traumatic Stress Studies. Boston, MA.

Adams-Clark, A. A., & Freyd, J. J. (2024, March 28). Campus Sexual Assault Survivors' Experiences with Institutional Betrayal: Interview Study Protocol [Poster Session]. Brown University Mind-Brain Research Day. Providence, RI, United States.

Adams-Clark, A. A., & Freyd, J. J. (2023, November 17). Contextual factors influencing posttraumatic stress after campus sexual assault [Poster Session]. Association for Behavioral and Cognitive Therapies Annual Conference. Seattle, WA, United States.

Adams-Clark, A. A., & Freyd, J. J. (2023, November 17). Longitudinal associations between institutional betrayal and posttraumatic stress among campus sexual assault survivors [Poster Session]. Association for Behavioral and Cognitive Therapies Annual Conference. Seattle, WA, United States.

Grant Submissions

Brown Resident Grant Award, 2023-2024

Title: Campus Sexual Assault Survivors' Experiences with Institutional Betrayal: A Qualitative Investigation

Campus Sexual Assault Survivors' Experiences with Institutional Betrayal: Interview Study Protocol

Alexis Adams-Clark, MS
Lindsay Orchowski, PhD

Sexual violence is a pervasive problem on college campuses. After campus sexual assault victimization, many survivors experience “secondary victimizations” by university institutions that have been conceptualized as *institutional betrayal*. Research thus far on institutional betrayal is limited to quantitative studies using the closed-ended Institutional Betrayal Questionnaire (IBQ). However, qualitative data is needed regarding the circumstances and settings in which instances of institutional betrayal occur. The current study is the first qualitative study of its kind to collect interview data regarding the context of college student survivors' experiences with institutional betrayal (targeted $N = 15$), with an emphasis on understanding how experiences of institutional betrayal are shaped by sexual identity. Participants were recruited from a large sample of undergraduate students at a public university in the Pacific Northwest who previously participated in a survey study on campus sexual violence. During one-hour virtual interviews, participants were asked the following questions in relation to each IBQ item they endorse: What were you thinking about as you responded to this item? Who was involved? In what settings did this occur? How upsetting or severe did you think this experience was? How was this experience shaped by your sexual identity or any other identities that you hold? What could the university have done differently this case? What would you wish an institution would do instead? This information will provide critical information to facilitate the development of systems change strategies at an institutional level, particularly for sexual minority survivors. Challenges encountered during the recruitment and data collection process will also be discussed.

Allegra Anderson (Brown Research Advisor: Nicole Nugent)

Publications

Grogans, S., Hur, J., Barstead, M., **Anderson, A.S.**, Islam, S., Kim, H.C., Kuhn, M., Tillman, R., Fox, A., Smith, J., DeYoung, K.A., Shackman, A.J. (in press) Neuroticism/negative emotionality is associated with increased reactivity to uncertain threat in the bed nucleus of the stria terminalis, not the amygdala. *Journal of Neuroscience*.

Siciliano, R.E., McGonigle, T.W., Benningfield, M.M., Vandekar, S., Owens, M.V., Felts, B., **Anderson, A.S.**, Cole, D.A., Bettis, A.H. (in press) Anxiety and depression symptoms improve in partial hospitalization treatment for adolescents with and without suicidal thoughts and behaviors: Leveraging measurement-based care and electronic health record data. *Evidence-Based Practice in Child & Adolescent Mental Health*.

Anderson, A.S., Siciliano, R.E., Reising, M.M., Watson, K.H., Dunbar, J.P., Bettis, A.H., Gruhn, M.A., Compas, B.E. (2023) Youth coping and symptoms of anxiety and depression: Associations with age, sex, and interpersonal stress. *Current Psychology*. <https://doi.org/10.1007/s12144-023-05363-w>

Conway, C., Grogans, S., **Anderson A.S.**, Islam, S., Hur, J., DeYoung, K., Shackman, A.J. (2023) Neuroticism is prospectively associated with 30-month changes in broadband internalizing symptoms, but not narrowband positive affect or anxious arousal, in emerging adulthood. *Clinical Psychological Science*, 0(0) <https://doi.org/10.1177/21677026231205270>

Siciliano, R.E., **Anderson, A.S.**, Vreeland, A.J., Gruhn, M.A., Henry, L.M., Watson, K.H., Ebert, J., Kuhn, T., Liu, Q., Cole, D.A., Compas, B.E. (2023) Physiology and emotions: Within individual associations during caregiver–adolescent conflict. *Psychophysiology*, e14397. <https://doi.org/10.1111/psyp.14397>

Kim, H., Kaplan, C., Islam, S. **Anderson, A.S.**, Piper, M., Bradford, D., Curtin, J., DeYoung, K.A., Smith, J., Fox, A.S., Shackman, A.J. (2023) Acute nicotine abstinence amplifies withdrawal symptoms and threat-evoked fear and anxiety, but not extended amygdala reactivity. *PLoS One*, 18(7), e0288544. <https://doi.org/10.1371/journal.pone.0288544>

Anderson, A.S., Siciliano, R.E., Cole, D., Henry, L. M., Gruhn, M. A., Vreeland, A.J., Watson, K.H., Kuhn, T. M., Ebert, J., Ciriegio, A.E., Compas, B.E. (under review) Parental depression symptoms, skin conductance level reactivity, and parenting: Associations with youth psychopathology.

Siciliano, R.E., **Anderson, A.S.**, Gruhn, M.A., Henry, L.M., Vreeland, A.J., Watson, K.H., Ciriegio, A.E., Liu, Q., Cole, D.A., Ebert, J., Kuhn, T., Compas, B.E. (under review; invited resubmission) Momentary Autonomic Engagement During Parent-Adolescent Conflict: Parent and Adolescent Coping as Moderators of Associations with Emotions.

Gruhn, M.A., Siciliano, R.E., **Anderson, A.S.**, Vreeland, A.J., Henry, L.M., Watson, K.H., Slavich, G., El-Sheikh, M., Ebert, J., Kuhn, T., Compas, B.E. (under review) Early life adversity and autonomic nervous system coordination in response to acute stress.

Hur, J., Tillman, R.M., Smith, J.F., DeYoung, K.A., Kim, H.C., Anderson, A.S., Islam, S., Stockbridge, M.D., De Los Reyes, A., Shackman, A.J. (under review) Adolescent social anxiety is associated with diminished discrimination of anticipated threat and safety.

Presentations

Anderson, A.S., Armev, M., Brick, L., Nugent, N. R. (2024, September) *Family functioning and emotion regulation moderate the association between child maltreatment and suicidality* [Poster presentation, accepted]. Annual Meeting of the International Society for Traumatic Stress Studies, Boston, MA.

Metrailler, G., **Anderson, A.S.**, Armev, M., Nugent, N.R, & Brick, L. (2024, September) *PTSD symptom cluster severity and emotional dysregulation significantly predict suicidal ideation in adolescents hospitalized for suicidality* [Poster Presentation, accepted]. Annual Meeting of the International Society for Traumatic Stress Studies, Boston, MA.

Grogans, S. E., Hur, J., Barstead, M. G., **Anderson, A. S.**, Islam, S., Kim, H. C., Kuhn, M., Tillman, R. M., Fox, A. S., Smith, J. F., DeYoung, K. A., & Shackman, A. J. (2024, May). *The neural systems and real-world mood dynamics underlying dispositional risk for internalizing illness* [Poster presentation]. Annual Meeting of the Society of Biological Psychiatry, Austin, TX.

Didier, P., Cornwell, B., Grogans, S. E., **Anderson, A. S.**, Islam, S., Kim, H. C., Tillman, R. M., Hur, J., Fox, A. S., DeYoung, K. A., Smith, J. F., & Shackman, A. J. (2024, May). *A shared threat- anticipation circuit is dynamically engaged at different moments by temporally uncertain and certain threat* [Poster presentation]. Annual Meeting of the Society of Biological Psychiatry, Austin, TX.

Anderson, A.S., Siciliano, R.E., Gruhn, M.A., Cole, D., Henry, L.M., Vreeland, A.J., Watson, K.H., Kuhn, T.M., Ebert, J., Compas, B.E. (2024, March). *Parental Depression Symptoms, Physiological Reactivity, and Parenting Behaviors: Associations with Youth Psychopathology* [Poster presentation]. Mind Brain Research Day, Brown University, Providence, RI.

Anderson, A.S., Siciliano, R.E., Gruhn, M.A., Cole, D., Watson, K.H., Vreeland, A.J., Henry, L.M., Ebert, J., Kuhn, T.M., Compas, B.E. (2023, November). *Parental physiological arousal and parenting behaviors: Associations with adolescents' internalizing symptoms* [Poster presentation]. Annual Convention of the Association for Behavioral and Cognitive Therapies, Seattle, WA.

Baumann, M.G., Watson, K.H., Gruhn, M.A., Henry, L.M., Vreeland, A.J., Siciliano, R.S., **Anderson, A.S.**, Ciriegio, A., Ebert, J., Kuhn, T., Compas, B.E. (2023, November). *Applying the dimensional model of adversity and psychopathology to predict specificity in adolescent internalizing and externalizing symptoms*. [Poster presentation]. Annual Convention of the Association for Behavioral and Cognitive Therapies, Seattle, WA.

Parental Depression Symptoms, Physiological Reactivity, and Parenting Behaviors:
Associations with Youth Psychopathology

Allegra S. Anderson, Rachel E. Siciliano, Meredith A. Gruhn, David Cole, Lauren M. Henry,
Allison J. Vreeland, Kelly H. Watson, Tarah M. Kuhn, Jon Ebert,
Bruce E. Compas

Parental depression symptoms are a highly prevalent risk factor for youths' development of psychological problems. Additionally, the effects of parenting behaviors and physiological stress reactivity have been examined as mechanisms of interest in the intergenerational transmission of psychopathology symptoms. Yet prior research is highly variable regarding study methodology and the ages of youth across samples, and no existing studies have examined the interactions among these variables in association with adolescent psychopathology. In a sample of 97 adolescents and their parents, the current study utilized a multi-method and multi-informant design to examine the concurrent and longitudinal associations among parental depression symptoms, observed parenting behaviors, and parents' physiological reactivity (i.e., skin conductance level [SCL] and respiratory sinus arrhythmia [RSA]) with adolescents' internalizing and externalizing psychopathology. Findings emphasize the interacting roles of worsening parental depression symptoms, parenting behaviors, and parents' physiological hyperreactivity in the development of adolescents' internalizing and externalizing psychopathology. Clinical implications, limitations, and directions for future research are discussed.

Emily A. Beckmann, M.A. (Brown Research Advisors: Melissa Pielech & Justin Parent)

Publications

Beckmann, E. A., Aarnio-Peterson, C. M., & Jastrowski Mano, K. E. (2023). Advancing the assessment and treatment of comorbid pediatric chronic functional abdominal pain (CFAP) and restrictive eating disorders. *Children, 10*(9), 1539.

Beckmann, E. A., Pielech, M., & Parent, J. (2024). Clinical considerations for adolescents with eating disorders who use nicotine. *The Brown University Child and Adolescent Behavior Letter, 40*(2), 1-6.

Hogan, C., Maron, M., Sutton, K., **Beckmann, E.,** Hernandez Valencia, E. M., Highlander, A., Goldstein, S., Hellmuth, J., Pielech, M., Wolff, J., & Parent, J. (under review). The multidimensional assessment of parenting scale: Youth report form in a clinical sample.

McCarthy, A. **Beckmann, E. A.,** Garr, K. N., Stough, C. (under review). Caregiving style, adverse childhood experiences, and disordered eating: is caregiver autonomy support a protective factor?

Beckmann, E. A., Aarnio-Peterson, C. M., Homan, K. J., & Jastrowski Mano, K. E. (under review). *Clinician experiences with adolescents with comorbid chronic pain and eating disorders.*

Presentations

Beckmann, E. A. & Pielech, M. (2024, March). *Exploring caregivers' role in oral surgery among transitional aged-youth.* Poster presented at Brown University's annual Mind Brain Research Day.

Beckmann, E. A. (2024, April). *Clinician experiences with adolescents with comorbid chronic pain and eating disorders.* Oral presentation at the Pain Special Interest Group at the annual meeting of the Society of Pediatric Psychology, New Orleans, LA.

Beckmann, E. A., Aarnio-Peterson, C. M., Homan, K. J., Pielech, M., & Jastrowski Mano, K. E. (2024, April). *Provider perspectives on areas of growth in the identification and treatment of comorbid chronic pain and eating disorders in youth.* Poster presented at the annual meeting of the Society of Pediatric Psychology, New Orleans, LA.

Beckmann, E.A. & Pielech, M. (2024, April). *Parent/caregiver role in oral surgery among college students with history of substance use.* Poster presented at the annual meeting of the Society of Pediatric Psychology, New Orleans, LA.

Honors & Awards

Mind Brain Research Day, Resident Poster Award, First Place (2024)

Exploring caregivers' role in oral surgery among transitional aged-youth Emily Beckman, MS

Introduction

Oral surgery, specifically wisdom tooth extraction (WTE), is one of the most common painful surgical procedures in adolescents and young adults (AYA) and up to 20% of AYA experience post-operative complications that impact quality of life. Little research has examined factors that impact the experience of WTE, including caregiver involvement which is often overlooked among transitional age youth. The aim of this study was to explore the role of caregivers in supporting their child through WTE and AYAs' openness to caregiver involvement.

Methods

Semi-structured, individual interviews were conducted with AYA (age 15-20 years, M age= 18.9; SD= .94; 70% female-identifying) with upcoming WTE (N=15) OR past year WTE (N=15) and parents of AYA undergoing WTE (N=20). Transcripts were double coded for template style thematic analysis.

Results

Caregivers and teens emphasized the need for caregiver assistance in pre-operative preparation and post-operative recovery tasks, such as transportation to and from surgery, soft food preparation, changing gauze, and pain medication management (i.e. filling prescriptions, reminding AYA which medication to take and when). In fact, most AYA who live independently planned to have surgery when visiting home in order to access caregiver support. Many participants mentioned that caregivers also play an important role in offering comfort and emotional support, which was welcomed by most AYA although noted that sometimes it felt overbearing. Moreover, AYA reported relying on caregivers to communicate with dental providers for scheduling and post-operative questions/concerns.

Conclusions

Caregivers of AYA undergoing WTE play a significant role in pre-surgical planning, education, emotional support, medication management, and recovery. Despite the increase in healthcare independence and autonomy that takes place during adolescence/young adulthood, research supports that caregivers play an integral role in supporting their children undergoing WTE and that AYA are generally receptive to caregiver involvement in this clinical context.

Julie Cristello (Brown Research Advisor: Robert Miranda Jr)

Publications

Cristello, J.V., Strowger, M., Moreno, M.A., & Trucco, E.M. Navigating the modern landscape of social media: Ethical considerations for research with adolescents and young adults. *Translational Issues in Psychological Science*. In press.

Hartmann, S., **Cristello, J.V.**, Manresa, O., Sutherland, M.T., & Trucco, E.M. The E-Cigarette Assessment for Youth – Revised (EAsY-R): Refinement via cognitive interviewing. *Journal of Research on Adolescence*. In press.

Presentations

Bruzos, M.J., Sutherland, B.D., **Cristello, J.V.**, & Trucco E.M. (2024, April). Revisiting internalizing pathways to substance use in the era of social media. Poster submitted to the UF CARE 11th Annual Symposium, Gainesville, FL. Travel award awarded to first author (\$300).

Cristello, J.V., & Miranda, R., Jr. (2024, March). The development of a remote evidence-based intensive outpatient program for adolescents with substance use and co-occurring disorder. Poster presented at Mind Brain Research Day, Brown University, Providence, RI.

Cristello, J.V., Girouard Hallam, L., Kapoulea, E., Sasser, J. (2023, December). You're interviewing them too; How to prepare for your graduate school interview. Total Attendees: 1550.

Cristello, J.V., Girouard Hallam, L., Kapoulea, E., Sasser, J. (2023, September). Is it okay for be persona? Writing a personal and a diversity statement. Total Attendees: 1550.

Cristello, J.V., Girouard Hallam, L., Kapoulea, E., Sasser, J. (2023, August). Tips and tricks for writing your CV and contacting prospective mentors. Total Attendees: 1550.

Cristello, J.V., Girouard Hallam, L., Kapoulea, E., Sasser, J. (2023, August). It's not one size fits all: Selecting the psychology program that's best for you. Total Attendees: 1550.

Honors & Awards

Accepted into the Lifespan/Brown Criminal Justice Research Training (CJRT) Program. The CJRT Program is committed to developing the next generation of scientists that actively contribute to improving HIV and substance use disorder outcomes, and the advancement of health equity, within justice-involved populations (R25DA037190).

Title: The development of a remote evidence-based intensive outpatient program for adolescents with substance use and co-occurring disorders

Authors: Julie V. Cristello, MS & Robert Miranda Jr., PhD, ABPP

Introduction: More than three-quarters of adolescents in the United States engage in substance use (SU), leading to adverse consequences like injuries/death, impaired judgment, academic difficulties, and negative changes in the brain (Chassin et al., 2016, Swendsen et al., 2012). Adolescence also marks the onset for many non-substance-related psychiatric disorders (e.g., anxiety, depression), with co-occurring rates ranging from 60 to 75 percent (Hoffmann et al., 2004). Thus, integrated treatments addressing both SU and psychiatric symptoms yield better long-term outcomes. The Bradley Vista Intensive Outpatient Program (IOP) was developed to provide evidence-based treatment to adolescents experiencing SU and co-occurring disorders. The program is part of Bradley Hospital, the national's first psychiatric hospital dedicated to children. Although initially delivered in-person, the COVID-19 pandemic necessitated a rapid shift to a telehealth platform. This abstract describes the remote IOP along with key programmatic considerations involved with delivering IOP care to adolescents and their caregivers via telehealth.

Methods: Vista maintains a census of approximately 10 adolescents ($M_{age}=15$ to 16). Most adolescents engage in alcohol and marijuana use though many secondarily or primarily use other drugs. Adolescents often present with anxiety, depression, attention deficit/hyperactivity disorder, and a history of trauma.

Program Development: When in-person services were suspended in March 2020, Bradley Vista transitioned to an online videoconferencing platform, mirroring the three-hour, three-days-per-week schedule. Privacy, technology accessibility, and safety were frequently discussed when delivering remote services. Privacy: Except for family therapy sessions, adolescents must be alone while participating in all virtual programming. It is recommended that adolescents use headphones during sessions. Additionally, Bradley Vista staff developed a waiting room and individual offices in the videoconferencing platform, mirroring an in-person setting. At the start of each program day, teenagers are admitted to a "private room" to verify their identity. Technology Accessibility: During the intake process, barriers to care for both adolescents and caregivers (i.e., technology) are assessed. When needed, the Bradley Vista staff assist families with acquiring the required technology. Staff also assist adolescents and families with navigating the virtual platform during their treatment. Safety: Group rules are reviewed at the start of each treatment session on each program day. Adolescents are discouraged from communicating with other group members outside of the program. Remote settings are adjusted at the start of each day to ensure that adolescents cannot chat with other group members. Staff remove any adolescent from group therapy who disrupts the session. In terms of substances, teenagers must be sober during sessions and no drug paraphernalia may be present. Additionally, if an adolescent warrants medical attention, their caregiver is contacted, and a plan is developed to prioritize safety. Caregivers are required to be available during program hours each treatment day. **Conclusion:** The prevalence of adolescent SU poses significant risks, leading to several adverse consequences. When the onset of the COVID-19 pandemic prompted a transition to remote services, the Bradley Vista IOP required several adaptations to maintain privacy, technology accessibility, and safety of group members. Despite challenges, this shift has demonstrated the importance of technology in maintaining continuity of treatment and increasing access to evidence-based treatment services.

Genevieve Dash (Brown Research Advisor: Kirsten Langdon)

Publications

Dash, G.F., Conlin, W.E., & Winograd, R.P. (2024). Causation and common liability in the progression of the U.S. opioid crisis. *Journal of Studies on Alcohol and Drugs*, 85(1), 12-18. <https://doi.org/10.15288/jsad.23-00289>

Dash, G.F., Gizer, I.R., Martin, N.G., & Slutske, W.S. (2024). Differential etiologic associations of heroin use and prescription opioid misuse with psychopathology. *Journal of Psychopathology and Clinical Science*. Advance online publication. <https://doi.org/10.1037/abn0000921>

Dash, G.F., Gizer, I.R., & Slutske, W.S. (2024). Predicting first use of heroin from prescription opioid use subtypes: Insights from the Monitoring the Future Longitudinal Panel. *Drug and Alcohol Dependence*, 255, 111084. <https://doi.org/10.1016/j.drugalcdep.2024.111084>

Dash, G.F., Bryan, A.D., Yang, M., Chung, T., Hudson, K.A., & Feldstein Ewing, S.W. (2023). Adolescent:provider connectedness and STI risk reduction following a brief alcohol intervention: Findings from a randomized controlled trial. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1171264>

Hareskov Jensen, N., Vallentin-Holbech, L., **Dash, G.F.,** Feldstein Ewing, S.W., & Rømer Thomsen, K. (2023). Validity of an online, self-administered Timeline Followback for alcohol use with adolescents. *Frontiers in Psychiatry*, 14. <https://doi.org/10.3389/fpsyg.2023.1221487>

Presentations

Dash, G.F., Ramsey, S., Ranney, M., Rich, J., Carey, K., & Langdon, K.J. (2024, April). Impact of a mobile health intervention on emotion regulation among persons receiving medication for OUD. Poster presented at the Brown University Department of Psychiatry and Human Behavior's 26th annual Mind Brain Research Day. Providence, Rhode Island.

Langdon, K.J., & **Dash, G.F.** (2024, March). Pilot trial of a digital health intervention for persons receiving medication for opioid use disorder. Poster presented at the 55th annual American Society of Addiction Medicine Annual Conference. Dallas, Texas.

Impact of a Mobile Health Intervention on Emotion Regulation Among Persons Receiving Medication for OUD

Genevieve F. Dash, M.A., M.S.^{1,2}, Susan Ramsey, Ph.D.^{1,3,4}, Megan Ranney, M.D., M.P.H.⁵, Josiah Rich, M.D.^{6,7}, M.D., Kate Carey, Ph.D.^{8,9}, & Kirsten J. Langdon, Ph.D.^{10,11}

¹ Department of Psychiatry and Human Behavior, Alpert Medical School of Brown University, Providence, RI, ² Department of Psychological Sciences, University of Missouri, Columbia, MO, ³ Department of Medicine, Alpert Medical School of Brown University, Providence, RI, ⁴ Division of General Internal Medicine, Department of Medicine, Rhode Island Hospital, Providence, RI, ⁵ Yale School of Public Health, New Haven, CT, ⁶ Departments of Medicine and Epidemiology, Brown University, Providence, RI, ⁷ Center for Prisoner Health and Human Rights, The Miriam Hospital, Providence, RI, ⁸ Department of Behavioral and Social Sciences, Brown University School of Public Health, Providence, RI, ⁹ Center for Alcohol and Addiction Studies, Brown University School of Public Health, Providence, RI, ¹⁰ Department of Emergency Medicine, Rhode Island Hospital, Providence, RI, ¹¹ Brown-Lifespan Center for Digital Health, Providence, RI

Background. Opioid use disorder (OUD) remains a major public health concern in the United States. Medication for OUD, such as buprenorphine-naloxone (buprenorphine), is associated with significant reductions in illicit opioid use. However, nearly half of patients discontinue buprenorphine treatment prematurely. Distress tolerance (DT), defined as the perceived or actual ability to handle aversive physical or emotional states, is a transdiagnostic vulnerability factor implicated in the development and maintenance of substance use. Targeting DT during substance use treatment may improve outcomes by promoting the ability to persist in goal directed activity (e.g., recovery) even when experiencing physical or emotional distress. Personalized feedback interventions (PFI) represent a promising method to motivate engagement in and adherence to buprenorphine treatment, particularly among individuals characterized by low DT.

Methods. Participants were 76 adults with OUD recruited from a hospital-based outpatient addiction treatment center (38.16% female; 68.43% white; Mean=45.91, SD=12.23) and randomized to either PFI (iENDURE) or a treatment-as-usual (TAU) control. iENDURE included a brief, computer-delivered session targeting strategies for managing emotional distress followed by eight weeks of text messages intended to promote DT and enhance motivation for treatment/recovery. TAU included standard clinic services such as medication management, counseling, and/or peer recovery support. Participants completed the Distress Tolerance Scale and Difficulties with Emotion Regulation Scale (DERS) at baseline and 1-, 4-, 8-, and 12-weeks post-buprenorphine induction. Generalized estimating equations (GEEs) predicted changes in DERS score from time, condition, and a time x condition interaction. Covariates included age, gender, receipt of other treatment, and time in OUD treatment. These models were subsequently run with DT, a DT x time interaction, a DT x condition interaction, and a DT x condition x time interaction to explore how changes in DT over time may correspond with changes in DERS score. Analyses were conducted on an intent-to-treat sample using a last observation carried forward approach and an “as-treated” sample including participants who completed the intervention. Although subject to more bias, the latter more directly answers the question of intervention efficacy by providing an estimate of its maximal effects.

Results. GEEs demonstrated no effects of group, time, or a group by time interaction on DERS score. When covariates were included in the model, only receipt of other treatment predicted DERS score ($\beta=2.51$ [95% CI: 0.18-4.85]; $Z=2.11$, $p=.03$). In the DT models, the main effect of DT was significant ($\beta=-4.54$ [95% CI: -7.18--1.90]; $Z=-3.37$, $p=.0008$), but interaction terms were not. This effect held when covariates were added to the model ($\beta=-4.13$ [95% CI: -7.05--1.22]; $Z=-2.78$, $p=.005$). In the as-treated DT model, the time by condition interaction was significant ($\beta=-3.83$ [95% CI: -0.76-0.00]; $Z=-1.97$, $p=.05$) and showed a greater reduction in DERS score in the intervention group over time compared to the control group; the main effect of DT was also significant ($\beta=-4.12$ [95% CI: -7.29--0.95]; $Z=2.54$, $p=.01$). These effects remained significant with covariates included in the model.

Conclusions. Although no cross-condition differences in DERS over time were observed within the more conservative intent-to-treat sample, estimates of maximal intervention effects derived from the as-treated sample indicated that individuals receiving a DT skills intervention reported reduced difficulties with emotion regulation over time compared to those receiving TAU. These effects persisted above and beyond demographic characteristics and length of time in treatment for OUD. Mobile health interventions represent an accessible, real-time approach to effectively targeting a transdiagnostic risk factor for substance use and related problems.

Gina Erato Garza (Brown Research Advisor: Laura Stroud)

Publications

Addante, S., Kraft, J., Clement, D., **Erato Garza, G.**, Quigley, A., Armans, M., Fields, K., Oliphant, V., Wingate, L., & Ciciolla, L. (under review). Assessing childhood community experiences.

Addante, S., Clement, D., **Erato Garza, G.**, Fields, K., Keirns, N., Layman, H. M., Min, J., Stout, M.E., Traino, K., Hawkins, M.A.W., Mullins-Sweatt, S., & Wingate, L. (under review). Developing an evidence-based and community-informed training tool: Lessons from the Practice ARC podcast.

Addante, S., **Erato Garza, G.**, Fields Creech, K., Quigley, A., Shreffler, K.M., Price, J., Gold, K., Ciciolla, L. (under review). Implications of maternal adversity on birth trauma and bonding across the perinatal period.

Presentations

Erato Garza, G., Corey, A., McCallum, M., Stroud, L. R., (2024, March). *The effects of maternal smoking during pregnancy on fetal to neonatal neurodevelopment: A systematic review of the literature*. Poster presented at Mind-Brain Research Day, Providence, RI.

Title: Effects of Maternal Smoking During Pregnancy on Fetal to Neonatal Neurodevelopment: A Systematic Review of the Literature

Authors: Gina Erato Garza M.S., Alana Corey, Laura R. Stroud, PhD.

Background: Maternal smoking during pregnancy (MSDP) remains a common source of prenatal drug exposure worldwide. MSDP has been shown to increase fetal health risks and interfere with fetal development. Although newborns prenatally exposed to other substances (e.g., opiates, benzodiazepines) have been shown to have increased stress and withdrawal symptoms (e.g., restlessness, poor autonomic regulation, increased muscle tone), few studies have explored the effect of MSDP on newborn signs of abstinence.

Objectives: To conduct a systematic literature review to determine whether MSDP-exposed fetuses and newborns demonstrate altered neurobehavior and symptoms of abstinence over the first postnatal month.

Methods: We performed a comprehensive search for empirical research articles investigating the effects of MSDP on fetal and early newborn neurobehavior and signs of abstinence in PubMed and PsycINFO database searches. We considered only peer-reviewed, original studies published from 1980 to 2023. The early neonatal period is defined as birth to five days, and the late neonatal period is 10 to 35 days. Our search yielded 13 fetal and 14 neonatal empirical articles published between 2003 and 2023 for final analysis.

Results: In the fetal period, MSDP has shown to have an impact on fetal heart rate variability, and delayed recognition of maternal voice with some studies not showing any differences between exposed and non-exposed fetuses. In the early neonatal period, MSDP was shown to have an impact on multiple behavioral outcomes, including excitability, hypertonicity, irritability, need for handling, arousal, muscle tone, reflexes, and alertness. MSDP was also associated with signs of withdrawal (stress/abstinence) in 4 studies. MSDP was shown to have an effect on neonatal irritability, the peak of excitement, self-regulation, and lability of state. In the late neonatal period, the majority of studies found MSDP to have an effect on neonatal self-regulation, attention, quality of movement, abnormalities in reflexes, motor maturity, lethargy, need for handling, and stress signs.

Conclusions: Our review of the literature revealed that MSDP has been associated with alterations in behavior suggestive of potential abstinence symptoms, especially found for excitability, irritability, hypertonicity, attention, reflex abnormalities, and stress/abstinence signs. With the recent proliferation of novel smoking products and their increased use among reproductive-aged women, additional rigorous research needs to delineate the impact of MSDP (and other tobacco products) on fetal and newborn signs of abstinence.

Yoel Everett (Brown Research Advisor: Brandon Gaudiano)

Publications

Everett, Y., Lightcap, A., O'Brien, J.R., Weinstein, N.Y., Zalewski, M. (2024). Integrating Dialectical Behavior Therapy Skills and Parent Training for Dually Dysregulated Parents and Children: An Idiographic Case Study, *Cognitive and Behavioral Practice*.
<https://doi.org/10.1016/j.cbpra.2024.04.002>

Presentations

Everett, Y. (2023, September). *Piloting a Telehealth-delivered Transdiagnostic Dialectical Behavior Therapy (DBT) Skills + Parent Training Intervention for Parents with Emotion Dysregulation and Substance Misuse*. Symposium paper presentation at Munich International Conference on the Role of Parental Psychopathology and Preventive Interventions, Munich, Germany.

Everett, Y., Lightcap A., O'Brien, J., Weinstein, N., Lee, A., Cuellar, R., Mudiam, K., Metcalfe, R., Shryock, I., Zalewski, M. (2024, March). *Development of a Transdiagnostic Dialectical Behavior Therapy (DBT) Skills + Parent Training (PT) Skills Group for Parents Struggling with Emotion Dysregulation*. Poster presented at Mind-Brain Research Day, Brown University, Providence, RI.

Title: Development of a Transdiagnostic Dialectical Behavior Therapy (DBT) Skills + Parent Training (PT) Skills Group for Parents Struggling with Emotion Dysregulation

Authors: Yoel Everett, April Lightcap, Jackie O'Brien, Netanel Weinstein, Angela Lee, Ruby Cuellar, Kavya Mudiam, Robyn Metcalfe, Ian Shryock, Maureen Zalewski

Parental emotion dysregulation (ED) is linked to less effective parenting behaviors that are associated with increased child emotional and behavior problems. There is a lack of integrated adult mental health + parenting interventions that can improve these interlinked domains in families experiencing clinical-level symptoms. Given DBT Skills' robust effects on emotion dysregulation, there is growing interest in the application of DBT Skills to parents with elevated emotional dysregulation, as well as in the integration of DBT Skills with existing parent training programs, to improve parenting and children's outcomes (Zalewski et al., 2020). Integrating Dialectical Behavior Therapy (DBT) Skills with Parent Training (PT) may be a promising, transdiagnostic treatment approach to intervening on parental ED and parenting.

To advance these efforts, we conducted two clinical trial pilot studies of an integrated DBT Skills + PT intervention with parents of preschoolers. In the first study, we conducted a single-case experimental design with three parents who had elevated ED and reported that their child (ages 4-6) had elevated emotional or behavioral difficulties. We tested a telehealth-delivered, 24-week integrated DBT Skills + Parent Training intervention, with sessions devoted to DBT Skills and their application to parenting situations, as well as parent management training skills and parental emotion coaching skills. Measures of parental ED, parent-reported child ED, and parenting quality were collected at multiple timepoints pre-intervention, weekly during the intervention, and post-intervention. Utilizing advances in idiographic statistical approaches, we examined linear trajectories over time for each of the three dyads. We also examined time-lagged effects, as part of an exploratory effort to identify the transactional relationship among the three main outcomes: parental ED, child ED, and parenting quality. Parents A and B both reported large reductions in their own ED (*Cohen's d* = 1.21 and .81, respectively), and Parents A, B and C reported large increases in supportive parenting behaviors (*Cohen's d* = .97, .66, and .85, respectively). Parents A and B reported large reductions in their children's ED (*Cohen's d* = 1.93 and 1.30, respectively), while Parent C reported large increases in child ED (*Cohen's d* = .92). Significant changes for each parent were plotted to visually inspect the rates of change and key inflection points.

In the second pilot study, we built upon experience gained in a case study and conducted a revised 20-week DBT Skills + PT intervention for 12 parents with severe ED and difficulties with substance use. We evaluated aggregated group-level, pre-post effects on measures of parental mental health, child mental health, and parenting quality. As the study was underpowered to conduct inferential statistics, our aim was to descriptively compare these effect sizes to those found in the clinical trial literature base for DBT Skills and PT interventions for at-risk parent and preschooler populations, in order to better contextualize findings. Results from this pilot study point to large pre-post reductions (*Cohen's d* ≥ 0.8) in parental ED (*d* = -3.24), parenting stress (*d* = -1.92), children's externalizing behavior (*d* = -.90), and negative parenting behaviors (*d* = -1.78). These effects generally outperformed those found in the clinical trial literature base for DBT Skills and PT interventions.

Overall, the pilot studies provide preliminary evidence that DBT Skills + PT engages the treatment targets (i.e., parental ED and parenting quality) and shows improvement in parent mental health, preschooler mental health and behavior, and parenting quality. The studies lay the groundwork for future treatment development and testing efforts geared towards conducting a larger-scale RCT to test the effectiveness of the DBT Skills + PT intervention.

Emily S. Fu (*Brown Research Advisor: Hannah Frank*)

Publications

Fu, E., Merle, J., St. George, S.M., Berkel, C.B., Graham, A.K., Smith, J.D. (under review). A Scoping Review of Tailoring in Pediatric Obesity Interventions.

Kordon, A., Carroll, A.J., **Fu, E.**, Rosenthal, L.J., Rado, J.T., Jordan, N., Brown, C.H., Smith, J.D., (under review). Multilevel Perspectives on the Implementation of the Collaborative Care Model for Depression and Anxiety in Primary Care.

Presentations

Fu, E., Merle, J.L., Brown, C.H., Berkel, C., Smith, J.D., (2024, May) *The Effects of Tailoring on Program Engagement and Outcomes in an Individually-Tailored Pediatric Obesity Intervention*. Oral presentation presented at the 32nd Annual Society for Prevention Research Meeting. Washington DC

Fu, E., Merle, J.L., Berkel, C., Brown, C.H., Smith, J.D., (2024, March) *Development and Validation of the Observational Assessment Tool for Tailoring (OATT) for Pediatric Obesity Interventions*. Poster presented at the 45th Society for Behavioral Medicine Annual Meeting and Scientific Sessions. Philadelphia, PA

Fu, E., Merle, J.L., Berkel, C., Brown, C.H., Smith, J.D., (2024, March) *Development and Validation of the Observational Assessment Tool for Tailoring (OATT) for Pediatric Obesity Interventions*. Poster presented at Warren Alpert Medical School of Brown University Mind Brain Research Day

Fu, E., (2024, February) *Health Psychology and Behavioral Medicine Conceptual Models and Treatment Approaches*. Oral Presentation presented at Fordham University Clinical Psychology Program MAS Seminar
Carroll, A.J., **Fu, E.**, Carlo, A.D., Rosenthal, L.J., Rado, J., Brockmeyer, J., Philbin, S., Burnett-Zeigler, I., Jordan, N., Brown, C.H., Smith, J.D. *Examining disparities in Behavioral Health Treatment Engagement in the Implementation of a Collaborative Care for Depression Program*. (2023, December) Oral presentation presented at the AcademyHealth 16th Annual Conference on the Science of Dissemination and Implementation. Washington, D.C.

Brockenmeyer, J., Carroll, A.J., Rosenthal, L.J., **Fu, E.**, Carlo, A.D., Rado, J., Yoder, L., Jordan, N., Burnett-Zeigler, I., Brown, C.H., Smith, J.D., (2023, November) *Barriers to Entry into Collaborative Care for Depression: Understanding Disparities in Depression Screening and Referral*. Presented at the 70th Annual Meeting of the Academy of Consultation-Liaison Psychiatry. Austin, TX.

Honors & Awards

Society of Behavioral Medicine Outstanding Dissertation Award, 2024

Society for Prevention Research Early Career Prevention Network Travel Award, 2024

Development and Validation of the Observational Assessment Tool for Tailoring (OATT) for Pediatric Obesity Interventions

Emily S. Fu, MPH MS, James L. Merle, PhD, Cady Berkel, PhD, C. Hendricks Brown, PhD, Justin D. Smith, PhD

Background: Pediatric obesity is a health disparate public health epidemic. Prevention and management interventions for excess weight gain often have high program attrition. “One-size-fits-all” protocols negatively impact participant interest and pose threats to equity. On the other hand, individually tailored interventions may be engaging and equitable. However, there is currently no measurement tool to quantify tailoring, disallowing research on the impact of tailoring on recipient engagement and health outcomes. This study developed and validated the Observational Assessment Tool for Tailoring (OATT) to measure fidelity to tailoring using two trials of Family Check-Up for Health (FCU4Health).

Methods: First, we developed the two theory-informed domains and 10 items of the OATT. The two domains were: *Assess and Educate* and *Individualized Treatment Planning*. Next, we used the OATT to code interventionist fidelity to tailoring in English and Spanish video-recorded sessions ($n=173$) from the two FCU4Health trials.

FCU4Health uses assessments of health behaviors, parenting skills, mental health, and social determinants of health and collaboration with the family to provide individualized programming and connection to community resources. Trial samples were culturally diverse (>60% Hispanic/Latino). Children were between ages 2-12, 55% were female. We used Confirmatory Factor Analysis to test the two-factor OATT model. After latent factors were determined, we used bivariate correlations and multivariate regression models to examine reliability and discriminant and predictive validity.

Variables included program engagement and family health behaviors at 12 months post-baseline.

Results: Factor analysis confirmed a two-factor structure for the OATT (CFI = .980, TLI = .973, $\chi^2(26) = 31.39$, $p = .214$, SRMR = .059). Reliability was good for both trials (ICC >.77). Bivariate correlations and multivariate regression showed discriminant ($p > .05$ with unrelated scales) and predictive validity. Better *Assess and Educate* scores predicted better child beverage choices 12 months post-baseline ($\beta = -.27$, $p = .01$).

Individualized Treatment Planning positively predicted participant engagement in sessions and community referrals throughout the intervention ($\beta = .47$, $p = .02$).

Discussion: This study is the first to measure tailoring. Analyses suggest the OATT is a valid and reliable tool to measure tailoring. Better tailoring, as measured by the OATT, led to better program engagement and health outcomes 12 months post-baseline, thus highlighting the importance of tailoring to individual needs. Further evaluation of the OATT is needed in larger samples of diverse populations to validate the factor structure. The OATT opens new opportunities to study tailoring to optimally translate research into real-world practice and push programs upstream.

Christopher Georgiadis (Brown Research Advisor: Jennifer Freeman)

Publications

Comer, J. S., **Georgiadis, C.**, Schmarcker, K., Chen, D., Coyne, C. A., Gudiño, O. G., ... & Pachankis, J.E. (2024). Reckoning with Our Past and Righting Our Future: Report from the Behavior Therapy Task Force on Sexual Orientation and Gender Identity/expression Change Efforts (sogiecies). *Behavior Therapy*.

Hare, M., Conroy, K., **Georgiadis, C.**, & Shaw, A. M. (2024). Abbreviated dialectical behavior therapy virtual skills group for caregivers of adolescents: An exploratory study of service user and clinical outcomes. *Child Psychiatry & Human Development*, 1-13.

Conroy, K., **Georgiadis, C.**, & Comer, J. S. (2024). Students With Anxiety Disorders. *The School Services Sourcebook: A Guide for School-Based Professionals*, 181.

Freeman, J., Kemp, J., Herren, J., O'Connor, E., **Georgiadis, C.**, Righi, G., & Benito, K. (in press). Developing a Team-based Service Model for Delivering Outpatient Cognitive Behavioral Treatment for Pediatric Anxiety: A Stakeholder-driven Protocol. *Journal of the American Academy of Child and Adolescent Psychiatry*.

Georgiadis, C., Furr, J., & Comer, J. (in press). Intensive Treatment of Selective Mutism. In T. Davis & E. Storch (Eds.), *Brief CBT and Science-Based Tailoring for Children, Adolescents, and Young Adults*. Springer Nature.

Presentations

Georgiadis, C., Bose, D., Wolenski, R., Hong, N., Coxe, S., Pettit, J., Comer, J. (2024). How Flexible are Treatments for Youth Internalizing Disorders? Examining Modification Guidelines Included Across Supported Treatments. *Poster presented at the Warren Alpert Medical School's annual Mind Brain Research Day*.

Honors & Awards

DBT Student Spotlight Award, 2024

How Flexible are Treatments for Youth Internalizing Disorders? Examining Modification Guidelines Included Across Supported Treatments

Christopher Georgiadis, M.S., Deepika Bose, M.S., Rebecca Wolenski, M.S., Natalie Hong, M.S., Stefany Coxe, Ph.D., Jeremy W. Pettit, Ph.D., Jonathan S. Comer Ph.D.

Objective: Treatment protocols for youth internalizing disorders have been developed, however these protocols have yielded mixed findings in routine care settings. Despite increased recognition of the importance of flexibility when delivering evidence-based treatments (EBTs), little is known about the extent to which protocols offer guidance to providers in flexible EBT implementation. The current study examined the extent to which supported EBTs for youth internalizing disorders explicitly incorporate guidance for treatment modification.

Methods: Supported treatment protocols for youth internalizing disorders were identified ($n = 44$), from which 4,021 modification guidelines were extracted and coded using a structured coding system to classify *modification strategies* (i.e., the forms that recommended modifications take), and associated *tailoring factors* (i.e., the rationale for which modification are recommended). Descriptive statistics were computed to determine the frequencies and proportions of each code, and repeated-measures ANOVA analyses were conducted to determine if modification inclusion varied as a function of treatment family or diagnostic target of the treatment protocols.

Results: Across all EBTs, modification guidelines were quite common, with the average protocol including almost 91 text passages providing guidance for modification. That said, the majority of modification guidelines functionally *increase* session or treatment length by recommending the addition or repetition of material, whereas less than 5% of modification guidelines provided strategies for condensing, omitting, or streamlining care. Strikingly, less than 2% of modification guidelines in EBT protocols address patient cultural factors and rarely address provider or setting limitations that can challenge standard implementation. No differences in modification inclusion were identified as a function of treatment family or diagnostic target of the treatment protocol.

Conclusions: Findings highlight critical gaps in the current portfolio of EBT protocols for youth internalizing disorders, and suggest EBT protocols, as currently written, are not optimally poised to flexibly address the broad diversity of children and adolescents across varied settings in need of mental health care.

Keywords: internalizing disorders; treatment modification; child mental health; treatment protocols; treatment flexibility

Silvi Goldstein (*Brown Research Advisors: Robert Miranda Jr. & Hayley Treloar Padovano*)

Publications

Goldstein, S. C., Forkus, S. R., Fenn, N., Thomas, E. D., Suazo, N. C. & Weiss, N. H. (in press). Racial microaggressions mediate the association between posttraumatic stress and alcohol use among women of color experiencing intimate partner violence. *Journal of Dual Diagnosis*.

Goldstein, S. C., Newberger, N. G., Schick, M. R., Ferguson, J. J., Collins, S. E., Haeny, A. M., & Weiss, N. H. (in press). A systematic meta-epidemiologic review on nonabstinence-inclusive interventions for substance use: Inclusion of race/ethnicity and sex assigned at birth/gender. *American Journal of Drug and Alcohol Abuse*.

Weiss, N. H.,⁺ Spillane, N. S.,⁺ **Goldstein, S. C.**, Kiefer, R., Raudales, A. M., Nalven, T., Egan, A., Trinh, C. D., Moore, R. S., & Gone, J. P. (in press). Ground-up approach to understanding the impacts of historical trauma in one reserve-dwelling First Nations community. *Journal of Consulting and Clinical Psychology*. ⁺indicates joint first authorship

Newberger, N. G., Ho, D., Thomas, E. D., **Goldstein, S. C.**, Coutu, S. M., Avila, A. L., Stein, L. A. R. & Weiss, N. H. (in press). Observations of Substance Use Treatment Engagement During the Period of Community Re-Entry Following Residential Treatment. *Journal of Substance Use and Addiction Treatment*.

Kiefer, R., Thomas, E. D., Lawrence, E. R., **Goldstein, S. C.**, Dixon-Gordon, K. L., & Weiss, N. H. (in press). An investigation of laboratory-based positive and negative emotional suppression in relation to posttraumatic stress disorder symptom clusters. *Psychological Trauma: Theory, Research, Practice, and Policy*.

Weiss, N. H., Dixon-Gordon, K. L., Brick, L. A., **Goldstein, S. C.**, Schick, M. R., Laws, H., Kiefer, R., Contractor, A. A., & Sullivan, T. P. (in press). Measuring emotion dysregulation in daily life: An experience sampling study. *Anxiety, Stress, & Coping*.

Weiss, N. H., Forkus, S. R., Raudales, A. M., Kiefer, R., Thomas, E. D., **Goldstein, S. C.**, Lin, N., Samuels, E. A., Marshall, B. D. L., & Jacka, B. P. (in press). Emotion dysregulation as a risk factor for posttraumatic stress disorder stemming from opioid overdose responding among community laypeople. *International Journal of Mental Health and Addiction*.

Forkus, S. R., **Goldstein, S. C.**, Schick, M. R., Flanagan, J. C., Sullivan, T. P., & Weiss, N. H. (under review). HPA-Axis functioning and substance use among women currently experiencing intimate partner violence: The role of PTSD symptom severity.

Ferguson, J. J., **Goldstein, S. C.**, Thomas, E. D., Newberger, N. G., Meade, E. A., & Weiss, N. H. (under review). Influence of Exposure to Community Violence on Posttraumatic Stress in Community Women Experiencing Intimate Partner Violence.

Weiss, N. H., Schick, M. R., Raudales, A. M., Thomas, E. D., Ho, D., **Goldstein, S. C.**, Kiefer, R., Newberger, N. G., Contractor, A. A., & Sullivan, T. P. (under review). Examining concordance between emotion-dependent risk-taking in the laboratory and in the real-world.

Weiss, N. H., Newberger, N. G., Thomas, E. D., **Goldstein, S. C.**, Ho, D., Coutu, S. M., Avila, A. A., Contractor, A. A., & Stein, L. A. R. (under review). Influence of posttraumatic stress disorder severity on return to substance use immediately following substance use treatment.

Presentations

Goldstein, S. C., Forkus, S. R., Fenn, N., Thomas, E. D, Smith, B. N., & Weiss, N. H. (April, 2024). *Racial microaggressions mediate the association between posttraumatic stress and alcohol use among a women of color experiencing intimate partner violence*. 26th Annual Mind Brain Research Day, Providence, RI.

Goldstein, S. C., Weiss, N. H., Magham, K.A., Fentress, T., Taylor, E. M., & Collins, E. S., (August, 2024). Satisfaction with combined behavioral and pharmacological harm-reduction treatment among people experiencing homelessness and alcohol use disorder. In S.C. Collins (Chair), Community input & health technology boosts engagement for marginalized & minoritized populations. Symposium presented to be presented at the American Psychological Association 2024 Annual Convention, Seattle, WA.

Newberger, N. G., Thomas, E. D., **Goldstein, S. C.**, Ferguson, J. J., Ho, D., Zhang, F. & Weiss, N.H., (April, 2024). Substance Use Treatment During the Period of Community Re-Entry. In G. Fronk (Chair), Prevention, intervention, and continuing care across phases of use and recovery. Symposium to be presented at the 12th Annual Collaborative Perspectives on Addiction, Denver, CO.

Weiss, N. H., Spillane, N. S., **Goldstein, S. C.**, Kiefer, R., Raudales, A. M., Nalven, T., Egan, A., Trinh, C. D., Moore, R. S., & Gone, J. P. (November, 2023). Development of a culturally-grounded, trauma- informed alcohol intervention for a First Nations community. In A. A. Contractor (Chair), Culturally- informed trauma interventions in underserved communities: From development to implementation. Symposium presented at the 39th annual convention for the International Society for Traumatic Stress Studies (ISTSS), Los Angeles, CA.

Newberger, N. G., Thomas, E. D., Ho, D., **Goldstein, S. C.**, & Weiss, N. H. (April, 2024). Dynamic Associations Between Posttraumatic Stress Disorder Symptoms and Substance Use Among People Who Inject Drugs. Poster presented at the University of Rhode Island College of Health Sciences Research Night, Kingston, RI.

Alexander, K., Meisel, S., Pielech, M., Frazier, E., **Goldstein, S.C.**, Douchette, H., Miranda, R., (April, 2024). Development of a technology-assisted adjunct to intensive outpatient treatment for adolescents with co-occurring disorders. 26th Annual Mind Brain Research Day, Providence, RI.

Raudales, A. M., Weiss N. H., Forkus S. R., Kiefer, R., Thomas E. D., **Goldstein S. C.**, Lin, N., Samuels, E. A., Marshall B. D., & Jacka, B. P., (April, 2024). Emotion dysregulation as a risk factor for PTSD from opioid overdose responding among laypeople. Poster to be presented at the 12th Collaborative Perspectives On Addiction (CPA) Meeting, Denver, CO.

Coutu, S. M.*, **Goldstein, S. C.**, Newberger, N. G., & Weiss, N. H. (November, 2023). Gender as a moderator in the relationship between suicide risk and opioid symptom severity. Poster presented at the Symposium on Substance Use Research, Virtual.

Ferguson, J. J., **Goldstein, S. C.**, Meade, E., Newberger, N. G., Thomas, E. D., Kiefer, R., Raudales, A. M., & Weiss, N. H. (November, 2023). Influence of Posttraumatic Stress on Experienced and Vicarious Traumatization in the Community among Women Experiencing Intimate Partner Violence. Poster to be presented at the 39th annual convention for the International Society for Traumatic Stress Studies (ISTSS), Los Angeles, CA

Thomas, E. D., Ferguson, J. J., **Goldstein, S. C.**, Newberger, N. G., & Weiss, N. H. (November, 2023). Posttraumatic stress in the association between exposure to community violence and drug use and related problems among women experiencing intimate partner violence. Poster to be presented at the 39th annual convention for the International Society for Traumatic Stress Studies (ISTSS), Los Angeles, CA.

Newberger, N. G., Forkus, S.R., Thomas, E. D., **Goldstein, S. C.**, Ferguson, J. J., Sullivan, T. P., & Weiss, N. H. (November, 2023). Posttraumatic Stress Disorder Symptoms and Cannabis Use among Community Women Experiencing Intimate Partner Violence: An Ecological Investigation. Poster to be presented at the 39th annual convention for the International Society for Traumatic Stress Studies (ISTSS), Los Angeles, CA.

Coutu, S. M., **Goldstein, S. C.**, Newberger, N. G., & Weiss, N. H. (October, 2023). Gender as a moderator in the relationship between suicide risk and opioid symptom severity. Poster presented at the New England Psychological Association and the Northeast Conference for Teachers or Psychology, Worcester, MA.

Coutu, S. M., **Goldstein, S. C.**, Newberger, N. G., & Weiss, N. H. (July, 2023). Gender as a moderator in the relationship between suicide risk and opioid symptom severity. Poster presented at the Rhode Island Summer Undergraduate Research Symposium, Kingston, RI.

Honors & Awards

American Psychological Association Division 50 R13-Funded NIAAA Travel Award, 2024

Racial Microaggressions Mediate the Association between Posttraumatic Stress and Alcohol Use among Women of Color Experiencing Intimate Partner Violence

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Abstract

Objective: Women of color (WoC) experiencing intimate partner violence (IPV) have elevated rates of posttraumatic stress disorder (PTSD) and alcohol use and related harm (e.g., increased alcohol use and negative consequences). This secondary data analysis assessed the role of racial microaggressions in the association between PTSD and alcohol use and related harm among WoC experiencing IPV.

Methods: Participants were 103 WoC currently experiencing IPV and using substances ($M_{age}=40.39$, 51.5% Black) who were recruited from the community and completed assessments of PTSD, racial microaggressions, and alcohol use and related harm.

Results: Assumptions of Inferiority (e.g., intelligence; $B = 1.44$, $SE = 0.90$, 95%CI [.10, 3.54]) and Environmental Microaggressions (e.g., portrayal in media; $B = 1.88$, $SE = 1.03$, 95%CI [0.28, 4.30]) explained the association between PTSD and alcohol use and related harm.

Conclusions: Findings underscore the influence of specific microaggressions in the relation between PTSD and alcohol use and related harm among WoC experiencing IPV.

Lindy Howe (*Brown Research Advisors: Rachel Gunn & Jane Metrik*)

Publications

SciU Conversations in Science, Student-led Online Publication, Indiana University, Bloomington
Article: Miss Understanding: Clarifying Misconceptions on Sleep (2023)

Presentations

Howe, L. K., Boyle, H. K., Metrik J., Trull T. J., Lipperman-Kreda S., Gunn R. L., (Expected 2024, July). *Exploring planned vs. unplanned cannabis use on cannabis only and alcohol co-use days: Cannabis outcomes and order effects*. [Symposium talk accepted, March 2024]. Annual Research Society on Marijuana meeting, Toronto, Ontario, Canada.

Howe, L. K. Ingram, P., Quinn, P., Gunn R., Finn P. (2024, April). *The influence of positive drinking experiences on next event incentive ratings and drinking*. [Poster presentation]. Annual Collaborative Perspectives on Addiction meeting, Denver, CO.

Howe, L. K., Boyle H. K., Metrik J., Gunn R. L., (2024, March). *Outcomes and Consequences of Planned vs. Unplanned Alcohol and Cannabis Use*. [Poster presentation]. Brown University Mind/Brain Research Day. Brown University, Providence, RI.

Boyle, H. K., Gunn, R. L., **Howe, L. K.**, Aston, E. R., Swift, R. M., Kahler, C. W., & Metrik, J. (2024, January). *Cannabis use and cognitive functioning: Findings from a laboratory study*. [Symposium presentation]. Annual Meeting for the American Professional Society of ADHD and Related Disorders, Orlando, FL.

Howe, L. K. (2023, October). *Daily processes in decision making in young adults: Daily diary outcomes and next steps*. [Seminar talk]. Brown University Clinical Psychology Adult Track Internship Seminar. Brown University, Providence, RI.

Honors & Awards

Richard D. Young Summer Research Award, Indiana University, 2023

Title: OUTCOMES AND CONSEQUENCES OF PLANNED VS. UNPLANNED ALCOHOL AND CANNABIS USE

Authors: L. K. Howe, H. K. Boyle, J. Metrik, R. L. Gunn.

Abstract: *Background.* A core feature of substance use disorders involves exceeding intended consumption levels, indicating behavioral regulation difficulties, and sometimes observed as daily unplanned use. Ecological momentary assessment (EMA) has been crucial in examining planned versus unplanned substance use in young adults, revealing that planned (versus unplanned) alcohol use consistently leads to heightened consumption and intoxication, with mixed findings on consequences. Similarly, research on simultaneous alcohol and marijuana (SAM) use suggests that planned SAM use is associated with increased consumption while findings related to SAM-related consequences are similarly inconsistent. Notably, there is a gap in research focusing on intentions to use cannabis and intended level of intoxication (i.e., ‘high’), the impact of which likely differs from alcohol intentions as alcohol use within this population is often episodic in nature while cannabis is commonly habitual. Additionally, the prevalence of simultaneous alcohol and cannabis use underscores the need for considering the role of daily cannabis use when assessing alcohol use and intoxication intentions, and vice versa. The study aims to investigate daily alcohol and cannabis quantities and positive/negative consequences in relation to planned versus unplanned use and intended intoxication level.

Method. 97 non-treatment seeking individuals aged 18-30 who reported regular alcohol and cannabis use participated in a 28-day EMA study. Participants completed morning surveys to report previous day's alcohol (total drinks) and cannabis use (flower, concentrate, or edible quantity), positive (e.g., “was more sociable”, “got a buzz”) and negative consequences (e.g., “neglected responsibilities”, “was hungover”), and daily intentions (use and intoxication). Intention data was lagged one day and evaluated as morning intentions (i.e., plans) and examined as predictors of alcohol and cannabis use positive/negative consequences. Separate multilevel models assessed the association between daily planned/unplanned use (and intended level of intoxication) with quantity consumed and consequences for both substances. All models controlled for co-use, person-level effects, sex, race, and age.

Results. Planned drinking, versus unplanned drinking, was positively associated with alcohol consumption at both the daily ($\beta=1.81$, $p<.001$) and person ($\beta=2.32$, $p<.001$) levels, as well as with intended intoxication levels at both the daily ($\beta=0.60$, $p<.001$) and person ($\beta=0.56$, $p<.001$) levels. Positive alcohol consequences, but not negative consequences, were more likely to be reported on days when cannabis was used ($\beta=0.68$, $p<.001$), regardless of alcohol intentions. Planned cannabis use was associated with increased flower consumption at the person level ($\beta=0.89$, $p<.01$), but not the daily level. Intending to get high was associated with higher flower quantity (grams used) at both the daily ($\beta=0.03$, $p<.001$) and person ($\beta=0.17$, $p<.001$) levels, as well as with concentrate quantity (hits used) at both the daily ($\beta=0.53$, $p<.01$) and person ($\beta=1.30$, $p<.001$) levels, while there was no effect related to edible quantity. Additionally, planned cannabis use at the daily level was associated with a higher likelihood of experiencing negative cannabis consequences ($\beta=0.71$, $p<.001$).

Conclusion: This study underscores the importance of intentions in understanding alcohol, cannabis, and co-use patterns and their consequences. Results suggest that planned alcohol use is a risk factor for higher consumption in young adult non-treatment seeking samples, consistent with previous findings. Intentions to get high appear to be particularly relevant for cannabis use in this non-treatment seeking sample as well. Further, cannabis use on drinking days may impact an individual’s likelihood of experiencing positive alcohol consequences, regardless of alcohol intentions. Future research should continue investigating the dynamic relationship between alcohol and cannabis intentions and outcomes to enhance prevention and intervention strategies.

Research support from NIAAA K08AA027551 (Gunn)

Aleks Karnick (*Brown Research Advisor: **Leslie Brick, PhD***)

Publications

Buerke, M., Caulfield, N., **Karnick, A.**, Hill, R., Tucker, R.P., Capron, D.W. (Accepted). Suicidal Ideation and Sensation Seeking Predict Suicidal Completion in Virtual Reality: Considerations for the Future Use of Virtual Reality for the Study of Suicidality. *Journal of Technology in Behavioral Science*.

Hammer, L. A., **Karnick, A.**, Beals, K., Luther, L., & Bonfils, K. A. (2024). Empathy and Schizotypy: A Network Comparison of the Interpersonal Reactivity Index in High and Low Schizotypy Groups. *Behavioral Sciences*. <https://doi.org/10.3390/bs14030245>

Karnick, A., Brick, L. (submitted). From Perception to Projection: Exploring neuroaffective advances in understanding optimism bias and belief updating.

Presentations

Buerke, M., **Karnick, A.**, Capron, D. (November 2024). An Initial Network Examination of Repetitive Negative Thinking, Anxiety Sensitivity, Thought Control, and Suicidal Ideation Among a High-Risk Undergraduate Population. Poster Presentation: Association for Behavioral and Cognitive Therapies 56th Annual Convention, Philadelphia, PA, USA.

Ferguson, A., Buerke, M., Chang, C., **Karnick, A.**, Capron, D. (November 2024). Heterosexist Experiences are Associated with Suicide Risk Among Trauma-exposed Sexual Minority People. Poster: Association for Behavioral and Cognitive Therapies 56th Annual Convention, Philadelphia, PA

Karnick, A. T., Capron, D. (March 2024). Predicting suicide attempt histories using zero-inflated negative binomial regression: A combined psychological and demographic approach with military personnel. Poster Presentation: Mind Brain Research Day, Brown University, Providence, RI

Beals, K., Hammer, L. A., **Karnick, A. T.**, Ostermiller, L., & Bonfils, K. A. (March 2024). Interpersonal Reactivity Index in Schizotypy: A Network Comparison. Poster Presentation: 70th Annual Meeting of the Southeastern Psychological Association (SEPA), Orlando, Florida.

Grant Submissions

Applied Funding

National Institute on Drug Abuse (Individual NRSA: 1 F32 DA061553-01), 2024-2026
Title: Cannabis use, trauma, and self-regulatory cognitive processes: A multimodal study integrating biobehavioral markers and ecological assessment (PI: A. Karnick)

Current Funding

Brown Resident Grant Award, 2023-2024

Title: Linking Behavioral Observations of Implicit Bias with Naturalistic Observations of Affect:
A Dynamic Structural Equation Modelling Approach (PI: A. Karnick)

Predicting Suicide Attempt Histories with Zero-Inflated Negative Binomial Regression: A Combined Psychological and Demographic Approach with Military Personnel

Aleksandr Karnick, MA, MPH

Nearly 50,000 individuals die by suicide each year and, despite only representing 7% of the population, military Veterans represent nearly 14% of suicides. As a critical public health concern, research has been directed toward identifying risk factors for suicide. Over the last 50 years of research, nearly 3,000 separate effect sizes for suicide risk factors have been identified, but this research has made little progress toward identifying individual suicide risk and predictive capacity remains low. Although research from medicine and traumatic injury suggest that public health interventions that are implemented broadly can be highly effective at reducing risk for other causes of mortality, suicide research has largely failed to adopt these strategies. One method for developing public health interventions for suicide could include the identification of demographic factors associated with psychographic profiles of groups that appear to be at risk for suicide. The present study will address these goals through the following study aims: 1. To develop an atheoretical model of suicide risk in Veterans; 2. To isolate a population of individuals with similar psychographic profiles to individuals with prior suicide attempts; and 3. To identify demographic and psychological similarities between latent profiles within this group. Data from the Military Suicide Research Consortium's Common Data Elements will be analyzed to assess these aims. First, linear regression was used to identify risk factors with the strongest predictive capacity for suicidal thoughts and behaviors. Second, a zero-inflated count regression was used to identify a group of "excess zeros" with similar psychographic profiles to individuals with a history of prior suicide attempts. Third, latent profile analysis was used to identify any latent profiles within this "excess zero" group to define potential risk groups. Zero-inflated negative binomial regression had superior model fit to uninflated models for the overall population, but not the military ideator subsample. Latent profile analysis identified a two-class solution and four-class solution that were then used to compare demographic profiles and suggest potential avenues for targeting at-risk or underreporting groups identified. In summary, this research project seeks to address the public health issue of suicide among Veterans by developing a nuanced understanding of suicide risk factors and identifying specific risk groups within this population. Findings could inform development of more effective interventions and suicide prevention strategies.

Laura E. Laumann (*Brown Research Advisor: **Laura Stroud***)

Publications

Laumann, L. E., Lee, J., Blackmon, J. E., Delcourt, M. L., Sullivan, M. C., Cruess, S. E., & Cruess, D.G. (2023). Depression and anxiety as mediators of the relationship between sleep disturbance and somatic symptoms among adolescents on a psychiatric inpatient unit. *Clinical Child Psychology and Psychiatry*, 29(2), 513–525.

Daniels, T. E., Zitkovsky, E. K., **Laumann, L.E.**, Kunicki, Z. J., Price, D. J., Peterson, A. L., Dennery, P. A., Kao, H.T., Price, L.H., Abrantes, A.M., & Tyrka, A.R. (2023). Circulating cell-free mitochondrial DNA (cf-mtDNA) and depression in adults who smoke with low activity. *Psychosomatic Medicine*, 86(1), 37-43.

Kulak, M.J., Lewis-de los Angeles, W.W., Daniels, T.E., Gobin, A., **Laumann, L.E.**, Beck, Q., & Tyrka, A.R. (2024). Increased cardiometabolic risk in healthy young adults with early life stress. *Psychosomatic Medicine*, 86(2), 72–82.

Gnall, K.E., Sinnott, S., **Laumann, L.E.**, Emrich, M., David, A., & Park, C.L. (2024). Changes in interoception in mind-body therapies for chronic pain: A systematic review and meta-analysis. *International Journal of Behavioral Medicine*, 1-15.

Kudinova, A.Y., Kulak, M.J., Daniels, T.E., Lewis-de los Angeles, W.W., de la Monte, S., Jennings Mathis, K., Beck, Q. **Laumann, L.E.**, & Tyrka, A.R. (2024). Increased plasminogen activator inhibitor-1 (PAI-1) and its associations with metabolic risk in healthy young adults with early life stress. *Psychoneuroendocrinology*, 107071.

Delcourt, M.L., **Laumann, L.E.**, & Cruess, D.G. (Under review). Emotional and cognitive self-regulation mediates the relationship between premenstrual symptoms and negative affect.

Presentations

Nelson, Z.E., **Laumann, L.E.**, Lee, J., Delcourt, M.L., George, J.R., Hettie, G., Cruess, D.G. (2023, November). *The association between experiences of everyday discrimination and young adults' health locus of control*. Poster presented at the 2023 Fall Graduate Symposium for the UConn Department of Psychological Sciences, Storrs, CT.

Laumann, L.E., & Cruess, D.G. (2024, March). *Posttraumatic stress symptoms and physical activity among young adults with chronic pain*. Poster presented at the 45th Annual Meeting of the Society of Behavioral Medicine (SBM), Philadelphia, PA.

Laumann, L.E., Sokol, N.A., Ward, L.G., & Stroud, L.R. (2024, March). *High rates of hookah use in pregnancy and preconception: Prevalence and correlates of an oft-overlooked tobacco product*. Poster presentation at the 45th Annual Meeting of the Society of Behavioral Medicine (SBM), Philadelphia, PA.

Nelson, Z.E., **Laumann, L.E.**, Lee, J., Delcourt, M.L., George, J.R., Hettie, G., & Cruess, D.G. (2024, March). *The association between experiences of everyday discrimination and young adults' health locus of control*. Poster presented at the 45th Annual Meeting of the Society of Behavioral Medicine (SBM), Philadelphia, PA.

Gnall, K.E., Sinnott, S., **Laumann, L.**, Park, C.L. David, A., Emrich, M. (2024, March). Changes in interoception in mind-body therapies for chronic pain: A systematic review and meta-analysis. Poster presented at the 45th Annual Meeting of the Society of Behavioral Medicine (SBM), Philadelphia, PA.

Laumann, L.E., Sokol, N.A., Ward, L.G., & Stroud, L.R. (2024, March). High rates of hookah use in pregnancy and preconception: Prevalence and correlates of an oft-overlooked tobacco product. Poster presented at Mind Brain Research Day, Brown University, Providence, RI.

Delcourt, M.L., **Laumann, L.E.**, Lee, J., Nelson, Z., Hettie, G., George, J.R., & Cruess, D.G. (Accepted). Smartphone-based applications improve emotion regulation in emerging adults: Preliminary data from a randomized controlled trial. Poster to be presented at ABCT's 58th Annual Convention, Philadelphia, PA.

Honors & Awards

Research Poster Award Second Prize- Clinical Psychology Resident Category, Mind Brain Research Day, 2024

High rates of hookah use in pregnancy and preconception in a diverse sample: Prevalence and correlates of an oft-overlooked tobacco product

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Hookah use is common among people of reproductive age (6.5% prevalence) and is commonly (mis)perceived as less harmful than other forms of tobacco. Despite well-documented links between prenatal tobacco use and maternal and infant mortality, prenatal hookah use has been under-studied. We investigated the prevalence of hookah use during pregnancy and preconception, and compared sociodemographic characteristics, rates of mental health conditions, and rates of substance use in a large sample of racially/ethnically diverse, low-income pregnant people.

Participants were 1,839 pregnant people (M age=26.8, SD =5.2) who completed a telephone survey assessing tobacco product use, mental health, and substance co-use during pregnancy and the three months prior (preconception). Nearly 65% identified as racial/ethnic minorities and 67.5% reported a household income of less than \$30,000/year. Respondents were categorized into three groups: any hookah use, cigarette use only (no hookah), and no tobacco use.

Of the 1,839 pregnant participants surveyed, 172 (9.4%) reported hookah use, 458 (24.9%) reported cigarette use, and 1209 (65.7%) reported no tobacco use during pregnancy and preconception. Pregnant people who used hookah were younger and were more likely to identify as Hispanic/Latinx or multiracial than pregnant people who used cigarettes or who reported no tobacco use ($ps < .001$). Pregnant people who used hookah completed more years of education than those who used cigarettes, but reported fewer years of education and lower income levels than non-users ($ps < .01$). Pregnant people who used hookah were more likely to report prenatal alcohol use vs. those who used cigarettes and the non-users ($ps \leq .03$); participants who used hookah were also more likely to use e-cigarettes compared to participants who used cigarettes ($p < .004$); participants who used hookah were also more likely to report marijuana use and perinatal depressive symptoms than non-users ($ps < .01$).

Prevalence of hookah use during pregnancy and preconception was high (9.4%), particularly among younger pregnant people who identified as Latinx or multiracial. Perinatal hookah use was associated with increased rates of prenatal alcohol and e-cigarette use, as well as perinatal depressive symptoms. Pregnant people who used hookah showed distinct psychosocial, mental health, and substance co-use profiles; tobacco screening and intervention efforts in pregnancy should include hookah.

Julia Loup (Brown Research Advisor: Jennifer Sullivan)

Presentations

Loup, J., Montano, A.R., Adjognon, O., Solimeo, S., Harvey, K.; Temkin-Greener, H. & Sullivan, J. (2024, March). *Measuring Interdisciplinary Team Performance in Patient-Centered Medical Homes for Older Adults in the Veterans Health Administration*. Poster presented at the Mind Brain Research Day presented by Brown University DPHB, Providence, RI.

Title: Measuring Interdisciplinary Team Performance in Patient-Centered Medical Homes for Older Adults in the Veterans Health Administration

Authors: Julia Loup, Anna-Rae Montano, PhD, RN, MEDSURG-BC, OCN; Marlana; Omonyélé Adjognon, ScM, Samantha L. Solimeo, PhD; Kimberly Harvey; Orna; Helena Temkin-Greener, PhD, Jennifer L. Sullivan, PhD

Abstract:

Background: The Patient-Centered Medical Home (PCMH) model was developed by the VA to provide better health care to improve patient outcomes at lower cost. However, there continues to be a reduced focus on issues specifically pertaining to older adults receiving care in PCMHs such as advanced care planning, functional assessments, and caregiver/family involvement. In response, the VA implemented PCMHs named Geriatric Patient Aligned Care Teams (GeriPACT) to act as a team-based point-of-contact to try and meet these needs. Presently, few instruments are available to measure team performance in such settings to ensure care is comprehensive, coordinated, and patient-centered. The objective of this study was to assess interdisciplinary team performance in GeriPACTs.

Methods: In partnership with the VA Office of Geriatrics and Extended Care (GEC), a web-based survey was adapted from previous studies by Dr. Helena Tempkin-Greener to target GeriPACT team functioning. The web-based survey was administered to 627 GeriPACT team members across 71 facilities. Team members responded to questions focused on management (e.g., supportive leadership) and team processes, team cohesion, and team performance.

Principal Findings: In total, 328 GeriPACT team members participated in the survey resulting in a 52% response rate. Sample included only facilities with at least 3 team members responding to the survey, resulting in 297 team members within 38 facilities. Regression analysis demonstrated that communication/coordination and conflict management were significant positive predictors of both team cohesion and team effectiveness. Perceived team effectiveness significantly increased with (1) the length of time staff were with the VA and (2) with the amount of time staff worked with the GeriPACT team. No significant relationships emerged for supportive leadership or control variables of workplace conditions or resources.

Conclusions: Comfort with the VA system and GeriPACT model, as well as a primary focus on communication to ensure successful conflict management, are key elements to increased team effectiveness when for caring for complex older patients. Many of the factors influencing GeriPACT team effectiveness are potentially modifiable and could offer insights for improving team functioning and quality of the work environment. Future work should assess if team performance is related to patient outcomes and if these results are applicable in the private sector.

Keywords: team-effectiveness; geriatrics, patient medical home;

Caroline Nester (Brown Research Advisor: Louisa Thompson)

Publications

Thompson, L., De Vito, A., Kunicki, Z., Emrani, S., Strenger, J., **Nester, C.O.**, Harrington, K., Roque, N., Manoocheri, M., Salloway, S., Correia, S., Jones, R.N., & Sliwinski, M. Adherence and validity considerations for the implementation of high frequency, smartphone-based assessment approaches for remote cognitive screening and monitoring in older adults. *Manuscript in pre- print, PsychArchives*. <https://doi.org/10.23668/psycharchives.14177>

Nester, C.O., Gao, Q., Wang, C., Katz, M., Lipton, R., Verghese, J., & Rabin, L. (2024). “Cognitive” Criteria in Older Adults with Slow Gait Speed: Implications for Motoric Cognitive Risk Syndrome. *The Journals of Gerontology: Medical Sciences*. glae038. <https://doi.org/10.1093/gerona/glae038>

Nester, C.O., Gao, Q., Wang, C., Mogle, J.A., Katz, M. J., Derby, C., Lipton, R., Saykin, A. J., & Rabin, L. A. (2024). Does the Cognitive Change Index Predict Future Cognitive and Clinical Decline? Longitudinal Analysis in a Demographically Diverse Cohort. *The Journal of Alzheimer’s Disease*, 1-14. 10.3233/JAD-230752

Chang, K. H., Wang, C., **Nester, C.O.**, Katz, M. J., Lipton, R.B., Byrd, D., & Rabin, L. A. (2023). Examining the Role of Participant and Study Partner Report in Widely-Used Classification Approaches of Mild Cognitive Impairment in Demographically-Diverse Community Dwelling Individuals: Results from the Einstein Aging Study (EAS). *Frontiers in Aging Neuroscience*, 15. doi: 10.3389/fnagi.2023.1221768

Nester, C.O., De La Garza, A., Mogle, J.A., Katz, M. J., Ayers, E., Lipton, R., Verghese, J., & Rabin, L. Smartphone daily diary assessment of subjective cognition in Motoric Cognitive Risk Syndrome: A pilot study. *Manuscript under re-review at the Health Science Reports*.

Premnath, P., **Nester, C. O.**, Krishnan, A., Quinn, C., Bodek, H., Pare, N., Warren, D., & Rabin, A. Incremental Validity of the Test of Practical Judgment (TOP-J) in the Prediction of Diagnosis in Preclinical Alzheimer’s Disease. Under review at *Aging, Neuropsychology and Cognition*.

Walker, T., **Nester, C.O.**, Prieto, S., McManus-Shipp, K., Heinze, A., & Holler, K. Traumatic Experiences as Predictors of Substance Use Among a Sample of Adolescents in a Psychiatric Inpatient Setting. *Manuscript under review at Journal of Child & Adolescent Trauma*.

Presentations

Nester, C.O., De Vito, A., Kunicki, Z., Emrani, S., Strenger, J., Harrington, K., Roque, N., Sliwinski, M., & Thompson, L. (2024, July). Subjective Cognitive Concerns and High Frequency Mobile App Based Cognitive Assessment in Older Adults: Relationship to Adherence, Satisfaction, and Cognitive Performance. Poster to be presented at 2024 Alzheimer’s Association International Conference, Philadelphia, PA.

Prenmath, P., **Nester, C.O.**, Krishnan, A., Pare, N., Wilhelm, A., Zatkalik, A., Warren, D., & Rabin, L. (2024, July). Incremental validity of the Test of Practical Judgment (TOP-J). Poster to be presented at 2024 Alzheimer's Association International Conference, Philadelphia, PA.

Tse, P., De Vito, A., Kunicki, Z., **Nester, C.O.**, & Lee, A. (2024, March). Comparing the Association Between Subjective Cognitive Decline and Depression in Black, Hispanic/Latinx and White Samples. Poster presented at the 2024 Mind Brain Research Day at Brown University.

Walker, T., **Nester, C.O.**, Prieto, S., McManus-Shipp, K., Heinze, A., & Holler, K. (2024, March). Substance Use Among Adolescent Psychiatric Inpatients: The Role of Adverse Childhood Experiences (ACEs). Poster presented at the 2024 Mind Brain Research Day at Brown University.

Nester, C.O., De Vito, A., Kunicki, Z., Emrani, S., Strenger, J., Harrington, K., Roque, N., Salloway, S., Sliwinski, M., & Thompson, L. (2024, February). "How did I do?" Expectations about feedback and their associations with remote cognitive assessment in an older adult sample. Poster presented at the International Neuropsychological Society Annual Meeting, New York, NY.

Nester, C.O., Garcia de la Garza, A., Mogle, J., Wang, C., Katz, M., Ayers, E., Lipton, R., Verghese, J., & Rabin, L. (2024, February). Smartphone Assessment of Subjective Cognitive Concerns in Motoric Cognitive Risk Syndrome. Poster presented at the International Neuropsychological Society Annual Meeting, New York, NY.

McManus-Shipp, K., Walker, T., Heinze, A., **Nester, C.O.**, & Holler, K. (2024, February). Association Between Adverse Childhood Experiences (ACEs) and Executive Dysfunction Within an Adolescent Psychiatric Inpatient Sample. Poster to be presented at the International Neuropsychological Society Annual Meeting, New York, NY.

Chang, K. H., Wang, C., **Nester, C.O.**, Katz, M. J., Lipton, R.B., Byrd, D., & Rabin, L. A. (2024, February). Examining the Role of Participant and Study Partner Report in Widely-Used Classification Approaches of Mild Cognitive Impairment in Demographically-Diverse Community Dwelling Individuals: Results from the Einstein Aging Study (EAS). Paper presented at the International Neuropsychological Society Annual Meeting, New York, NY.

Nester, C.O., Gao, Q., Wang, C., Mogle, J.A., Katz, M. J., Derby, C., Lipton, R., Saykin, A. J., & Rabin, L. A. (2023, October) Does the Cognitive Change Index Predict Progression of Clinical Dementia Status? Longitudinal Analysis in a Demographically Diverse Aging Cohort. Poster presented at the National Academy of Neuropsychology Annual Conference, Philadelphia, PA.

Sergeyev, N., **Nester, C.O.**, Warren, D.E., Zatkalik, A., Aflagah, E., Rabin, L.A., Pare, N., & Beadle, J.N. (2023, October). Investigating Relationships Between Theory of Mind, Executive Functioning, and Adaptive Functioning in Non-Demented Older Adults. Poster presented at the National Academy of Neuropsychology Annual Conference, Philadelphia, PA.

Boek, H., Pare, N., **Nester, C.O.**, Warren, D.E., Wilhelm, A., Aflagah, E., Beadle, J.N., & Rabin, L.A. (2023, October). Association Between Social Vulnerability and Susceptibility in Non-Demented Older Adults. Poster presented at the National Academy of Neuropsychology Annual Conference, Philadelphia, PA.

Nester, C.O., Gao, Q., Wang, C., Ayers, E., Katz, M., Derby, C., Lipton, R., Verghese, J., & Rabin, L. (2023, July). Optimizing Subjective Cognitive Concern Assessment to Predict Cognitive Decline in Motoric Cognitive Risk Syndrome: Results from the Einstein Aging Study. Poster presented at the 2023 Alzheimer's Association International Conference, Amsterdam, NL and virtual.

Rabin, L., Mogle, J., Wang, C., **Nester, C.**, Derby C., De La Garza, A., Lipton, R., & Katz, M. (2023, July). Cognitive lapses reported by daily digital diary, and not by recall-based questionnaires, predict future MCI in a demographically diverse cohort of community-dwelling older adults. Poster presented at the 2023 Alzheimer's Association International Conference, Amsterdam, NL and virtual.

Honors & Awards

The Ted Blau Trainee Poster Award: Highest rated student poster, National Academy of Neuropsychology 2023 Annual Conference, 2023

High Frequency Mobile App Based Cognitive Assessment in a Sample of Older Adults with Subjective Cognitive Concerns

Authors: Caroline O. Nester^a, Alyssa N. De Vito^a, Sarah Prieto^a, Zachary Kunicki^a, Jennifer Strenger^a, Karra Harrington^b, Nelson Roque^b, Martin Sliwinski^b, & Louisa Thompson^a

^aDept. of Psychiatry & Human Behavior, Alpert Medical School, Brown University, Providence RI

^bCenter for Healthy Aging, Penn State University, University Park, PA

Background: Subjective cognitive concerns (SCC) are possibly one of the earliest clinical symptoms of dementia. There is growing interest in applying mobile app-based assessment to remotely screen for cognitive status in preclinical dementia, but the relationship between SCC and relevant mobile assessment metrics remains unclear. To address this gap, we characterize the relationship between SCC and adherence, satisfaction, and performance on digital cognitive assessment in cognitively unimpaired older adults.

Methods: Participants ($N=122$, $M_{age}=69.85$, $M_{education}=16.52$, $\%female=66.7$, $\%white=86.2$) completed 8 assessment days using Mobile Monitoring of Cognitive Change (M2C2), an app-based testing platform, with brief daily sessions within morning, afternoon, and evening time windows (24 total testing sessions). M2C2 includes working memory, processing speed, and episodic memory tasks. Participants provided feedback about their satisfaction and motivation related to M2C2. SCC was assessed via the Cognitive Function Instrument (CFI). Regression analyses evaluated the association between SCC and adherence, satisfaction, and performance on M2C2, controlling for age, sex, and loneliness (UCLA Loneliness Scale). Linear-mixed effects models evaluated whether SCC predicted M2C2 subtest performance longitudinally over the 8-day testing period, controlling for covariates.

Results: SCC was not associated with adherence to M2C2, app satisfaction, or protocol motivation. SCC endorsement significantly predicted worse overall episodic memory performance ($\beta=-0.201$, $p=.021$, 95% CI -0.02, -0.00), but was not associated with overall working memory or processing speed. There was a main effect of SCC on working memory performance at day 1 ($\beta=-1.017$, $SE=0.49$, $p=0.038$). There was a significant interaction between SCC and working memory over the 8-day period ($\beta_{interaction}=0.047$, $SE=0.02$, $p=0.039$), such that SCC was associated with initially worse, then progressively better working memory performance.

Conclusions: SCCs are associated with objective cognitive performance on mobile app-based assessments, but do not impact metrics related to protocol engagement (e.g., adherence, satisfaction, and motivation), suggesting that mobile app assessments may be sensitive to early neurodegenerative changes. Results provide reassurance that SCCs do not impact the feasibility of mobile app-based assessments in older adult samples. Future research in larger, more diverse samples which follow cognitive functioning longitudinally will be essential next steps to understand the utility of SCC to predict cognitive decline via mobile app.

Esther Palacios-Barrios (Brown Research Advisor: Nicole Nugent)

Publications

Palacios-Barrios, E.E., Patel, K., & Hanson, J.L. (2024). Early life interpersonal stress and depression: Social reward processing as a potential mediator. *Progress in Neuropsychopharmacology and Biological Psychiatry*. 129, 110887.

Iyer, R., **Palacios-Barrios, E.E.**, Nugent, N., Brick, L. (under review). How powerful is a family? Effects of family dysfunction on hopelessness in psychiatrically hospitalized adolescents. *The Brown University Child and Adolescent Behavior Letter*.

Presentations

Palacios-Barrios, E.E., Hanson, J.L., Albert, W.D., White, S.F., Skinner, A.T., Lansford, J.E., & Dodge, K.A. (2024, March). *Reduced neural signaling of subjective value is related to childhood socioeconomic status and adolescent depressive symptoms*. Poster presented at the Mind Brain Research Day, Brown University, Providence, RI.

Title: Reduced neural signaling of subjective value is related to childhood socioeconomic status and adolescent depressive symptoms

Authors: Esther E. Palacios-Barrios, Jamie L. Hanson, Dustin Albert, Stuart F. White, Ann T. Skinner, Jennifer E. Lansford, & Kenneth A. Dodge

Abstract: Exposure to childhood poverty and the stressors associated with lower socioeconomic status (SES) are associated with increased rates of adolescent depression. However, the pathways linking childhood poverty to adolescent depression are still poorly understood.

Previous research has connected exposure to childhood poverty with structural and functional differences in the prefrontal cortex, specifically the ventromedial prefrontal cortex (vmPFC).

Independent of SES, prior research has indicated that neural alterations in reward processing and decision-making brain circuitry are implicated in the developmental emergence and etiology of depression. For instance, adolescents with depression demonstrate reduced activation in portions of the striatum, as well as sub-divisions of the prefrontal cortex. However, limited studies to date have attempted to investigate the links between exposure to childhood poverty, decision-making brain circuitry, and adolescent depression. To address this gap in the literature, adolescents (mean age = 15.4 years) who were a part of an ongoing longitudinal project focused on parenting practices and child development, completed a passive avoidance learning task while undergoing functional MRI (total N = 94; usable N = 78). A computational neuroimaging approach was employed to identify neural regions representing 1) expected value (EV), the learned subjective value of an object, and 2) prediction error, the difference between EV and the actual reward/punishment received. Regions of interest in reward processing and decision-making brain areas (e.g., the ventral striatum; vmPFC), were examined in relation to childhood SES and adolescent depressive symptoms. As predicted, we found lower childhood SES was related to reduced representation of EV in the vmPFC during decision-making portions of the task ($\beta = -0.443$, $p = 0.008$). Additionally, we found lower activity in the vmPFC was related to adolescent depressive symptoms assessed 2 years after the neuroimaging session ($\beta = -0.246$, $p = 0.03$). These results represent an important first step in understanding connections between exposure to childhood poverty, brain changes in reward processing and decision-making circuitry, and adolescent depression. Further mechanistic clarification is crucial for predicting, preventing, and treating depression across the SES spectrum.

Sarah Prieto (*Brown Research Advisors: Seth Margolis and Jennifer Davis*)

Publications

Howard, E., Moody, J.N., **Prieto, S.**, & Hayes, J.P. (accepted manuscript). Higher cerebrospinal fluid levels of amyloid-beta-40 following traumatic brain injury relate to confrontation naming performance. *Journal of Alzheimer's Disease*.

Moody, J.N., Howard, E., Valerio, K.E, **Prieto, S.**, Logue, M.W., & Hayes, J.P. (accepted manuscript). Traumatic Brain Injury and Genetic Risk for Alzheimer's Disease Impact CSF β -Amyloid Levels in Vietnam War Veterans. *Neurotrauma Reports*.

Prieto, S., Bangen, K. J., Riegler, K., Kim, S. H., Mahmood, Z., Kaseda, E. T., ... & Sullivan-Baca, E. (2024). Representation of women in neuropsychology research prior to the COVID-19 pandemic. *Journal of Clinical and Experimental Neuropsychology*, 1-14.
<http://doi.org/10.1080/13803395.2024.2335109>.

Jurgens, S. M., **Prieto, S.**, & Hayes, J. P. (2023). Inflammatory biomarkers link perceived stress with metabolic dysregulation. *Brain, Behavior, & Immunity – Health*, 34, 100696.
<https://doi.org/10.1016/j.bbih.2023.100696>.

Do, C., Alexander, C., **Prieto, S.**, Finley, C., Taylor, L., & Nguyen, C.M. (2024). *Associations between leisure activities and cognitive function*. Manuscript submitted for publication.

Walker, T., Nester, C., **Prieto, S.**, McManus-Shipp, K., Heinze, A., & Holler, K. (2024). *Predictors of Substance Use Among Adolescent Psychiatric Inpatients: The Role of Adverse Childhood Experiences (ACEs)*. Manuscript submitted for publication.

Presentations

Walker, T., Nester, C., **Prieto, S.**, McManus-Shipp, K., Heinze, A., & Holler, K. (2024, September). Predictors of Substance Use Among Adolescent Psychiatric Inpatients: The Role of Adverse Childhood Experiences (ACEs). Poster accepted for presentation at NIJ National Research Conference Poster Session in Pittsburgh, PA.

Prieto, S., Kiriakopoulos, E., Tremont, G., Mankodiya, K., Goldstein, A., Castillo, E., Sadhu, S., Kaden, S., Davis, J., & Margolis, S. (2024, March). *Effects of Stigma Intersectionality on an Epilepsy Stigma Self-Management Program*. Poster accepted for presentation at Warren Alpert Medical School's Mind Brain Research Day in Providence, RI.

Walker, T., Nester, C., **Prieto, S.**, McManus-Shipp, K., Heinze, A., & Holler, K. (2024, March). *Substance Use Among Adolescent Psychiatric Inpatients: The Role of Adverse Childhood Experiences (ACEs)*. Poster accepted for presentation at Warren Alpert Medical School's Mind Brain Research Day in Providence, RI.

Prieto, S., Jurgens, S.M., Howard, E. & Hayes, J.P. (2024, February). *The Indirect Effect of Allostatic Load on the Relationship Between Perceived Discrimination and Cognitive Functioning*. Poster accepted for presentation at The International Neuropsychological Society (INS) in New York, NY.

Grant Submissions

Brown Resident Grant Award, 2023-2024

Title: Affiliate Stigma & Care Partner Burden in Adult Epilepsy: A Mixed-Method Study

Effects of Stigma Intersectionality on an Epilepsy Stigma Self-Management Program

Sarah Prieto, Elaine T. Kiriakopoulos, Geoffrey Tremont, Kunal Mankodiya, Allyson Goldstein, Elijah Castillo, Shehjar Sadhu, Sarah Kaden, Jennifer D. Davis, Seth A. Margolis

Background: Perceived stigma is a prevalent source of distress among people with epilepsy (PWE). In response, we developed an online stigma self-management program (**Reducing Internalized Stigma in Epilepsy: A Behavioral Online Video Education, RISE ABOVE™**). RISE ABOVE includes 4-8 weeks of self-administered tutorials and exercises in stress management, recognizing stigma, cognitive restructuring, and problem-solving. To ensure RISE ABOVE's utility for PWE regardless of background, this study recruited a diverse U.S. sample of beta users and assessed whether intersecting stigma identities (i.e., other reasons for stigma besides epilepsy) affect users' perceptions of RISE ABOVE's credibility, personal expectations for change, overall treatment satisfaction, as well as post-intervention psychosocial benefits.

Participants and Methods: Participants included an equal number of women and men with controlled and uncontrolled seizures from 13 U.S. states (N=20) who completed the RISE ABOVE program. All had at least a high school degree and were sociodemographically diverse (Age: 47.3±14.3 years; BIPOC: 30%; Bilingual: 30%; Unemployed: 30%). When asked about potential sources of stigma (e.g., age, sex, race, etc.), all participants, except one, reported feeling stigmatized due to factors other than epilepsy (Md=2.5 non-epilepsy stigmas, IQR=1, 3.75). *Credibility* and *Expectations for Change* were rated after each module's orientation videos were viewed using representative items from the Credibility and Expectancy Questionnaire. *Satisfaction* was assessed by asking if no, few, most, or almost all needs were met upon program completion. *Perceived Stress*, *Perceived Rejection*, *Loneliness*, *Self-Efficacy* (NIH Toolbox Emotion Battery) and *Satisfaction with Social Roles and Activities* (Neuro-QOL) were rated both pre- and post-intervention. Pearson correlations explored associations between number of non-epilepsy stigmas and credibility, expectations for change, and satisfaction (two-tailed p-values). Due to the small sample, one-tailed paired sample t-tests and Hedges' g effect sizes assessed pre-to-post improvements in those with low (≤ 2 , n=11) vs high (> 2 , n=9) non-epilepsy stigmas.

Results: Credibility and expectations for change were moderately high (Md=7.3, IQR=5.6, 8 and Md=70%, IQR=53.8%, 86.9%, respectively). Sixty-five percent said most or almost all of their needs were met. No relationships between non-epilepsy stigmas and credibility, expectations for change, or satisfaction emerged ($p \geq .24$). Regardless of low or high non-epilepsy stigmas, users saw large improvements in Perceived Stress (Low: $p = .007$, Hedges' $g = .84$; High: $p = .002$, Hedges' $g = 1.19$) and Satisfaction with Social Roles and Activities (Low: $p = .004$, Hedges' $g = -.91$; High: $p = .008$, Hedges' $g = -.92$), with medium sized improvement in Self-Efficacy (Low: $p = .046$, Hedges' $g = -.52$; High: $p = .029$, Hedges' $g = -.66$). Those reporting fewer non-epilepsy stigmas saw medium sized improvements in Perceived Rejection ($p = .01$, Hedges' $g = .74$) and Loneliness ($p = .037$, Hedges' $g = .55$), but those with a high number did not ($p \geq .22$).

Conclusions: Intersecting stigmas did not influence RISE ABOVE's credibility, users' expectations for personal benefit, or treatment satisfaction. Medium-to-large improvements in perceived stress, satisfaction with social roles and activities, and self-efficacy were seen regardless of intersecting stigmas. Yet, improvements in perceived rejection and loneliness were limited to participants with fewer intersecting stigmas. Though results reflect strong feasibility and markers of RISE ABOVE's utility, further work is needed to maximize RISE ABOVE's benefits among PWE who endorse high stigma intersectionality.

Johanna Ramirez (Brown Research Advisor: Megan Pinkston-Camp)

Presentations

Ramirez, J.L., Moitra, E., Jiménez, P. C., Pinkston-Camp, M. M., Sanchez, M. C. (2024, March). *Medical care retention challenges for people living with HIV and comorbid substance use: A mixed-methods study*. Oral presentation presented at Brown University's Department of Psychiatry and Human Behavior's Mind Brain Research Day, Providence, RI.

Ramirez, J. L., Muehlenhard, C. L., Wen, E. C. (2023, November). *Trump's Attorney Implied that Anyone Being Sexually Assaulted Would Scream. A Sample of Gay and Bisexual Men Explain Why They Did Not Try to Attract Attention*. Oral presentation presented at the Annual Conference for the Society of Scientific Sexuality, New Orleans, LA.

Medical care retention challenges for people living with HIV and comorbid substance use:
A mixed-methods study

Johanna L. Ramirez, Ethan Moitra, Paola C. Jiménez Muñoz & Megan M. Pinkston

Introduction: Advances in HIV care and medications have altered the course of the impact of HIV infection, and as persons living with HIV (PLWH) engage in their medical care and consistently take their medications, they can manage HIV and prolong survival. Despite the advances and the importance of engagement in HIV medical care, rates of retention in HIV care among PLWH have been poor, with over half of the more than one million PLWH in the U.S., not engaging in HIV medical care. Research findings have illuminated many factors contributing to low rates of engagement and retention, including but not limited to: stigma of living with HIV, substance use, mental health concerns, and social determinants of health. The present investigation sought to explore the current definitions and measures of HIV care retention, how these measures are reflected in clinical practice, and to seek understanding from PLWH how they view retention in care and the barriers that they have faced in maintaining their retention in care.

Method: First, a comprehensive screen of an electronic health record for an outpatient infectious disease clinic in Providence, RI was conducted. The purpose of this screening procedure was to identify a list of patients diagnosed with HIV with comorbid substance use who were labeled as “out of care”, defined as not having attended an HIV medical appointment in at least nine months. Next, qualitative interviews were conducted with PLWH to gain a better appreciation of their lived experiences of navigating barriers to HIV care. These interviews were examined for themes using thematic analysis.

Results: Optimal retention for PLWH is defined in multiple ways by major healthcare leaders in the United States, typically focusing on appointment attendance or laboratory work. Yet, these definitions rely on in-person encounters, an approach to care that is becoming less common due to the rise of telehealth visits, particularly in light of the coronavirus disease 2019 pandemic. Our findings reflect that reliance on electronic health records to identify PLWH who were not retained in care not only fail to capture the nuances of modern HIV medical treatment engagement, but also leads to misidentification of patients’ retention status due to limitations in the record system. Additionally, we provide a preliminary thematic structure for better understanding the retention issues relevant to PLWH who are comorbid substance-users.

Conclusion: In summary, we recommend a reevaluation of how HIV medical care retention is defined and reported. We also discuss implications and recommendations, based on participant accounts, for improving HIV medical care retention.

Danusha Selva Kumar (Brown Research Advisor: Ana Abrantes)

Publications

Addicott, M. A., Hinds, J., Mithi, V., Kypriotakis, G., Jacobs, W., **Selva Kumar, D.**, ... & Tan, A. (2024). SRNT Health Equity Network Survey on Authentic Health Disparity/Equity Research. *medRxiv*, 2024-03.

Selva Kumar, D., Brown, R., & Minami, H. (Under Review). Changes in Motivation and Self-Efficacy to Quit Smoking among People with Serious Mental Illness who Smoke: A Latent Class Growth Analysis. Manuscript in preparation.

Presentations

Selva Kumar, D., Paul, L., Herman, D., Stein, M., Abrantes, A. (2024, March). *Engagement of Smoking-Related Harm Reduction Strategies among People with Opioid Use Disorder who Smoke Cigarettes*. Poster presented at the Mind Brain Research Day at the Warren Alpert Medical School at Brown University, Providence, RI.

Engagement of Smoking-Related Harm Reduction Strategies among People with Opioid Use Disorder who Smoke Cigarettes

Danusha Selva Kumar, Lucia Paul, Debra Herman, Michael Stein, & Ana M. Abrantes

Abstract

Introduction: People with opioid use disorder (OUD) smoke at exceedingly high rates. Despite existing behavioral and pharmacological approaches for cessation, people with OUD have low rates of quitting. As such, harm reduction strategies (e.g., low-nicotine product, smokeless tobacco, e-cigarettes) have been considered potentially helpful options for this high-risk population. However, there is little research on the relationship between engaging in smoking harm reduction strategies and smoking-related characteristics such as nicotine dependence and withdrawal as well as opioid-related craving.

Methods: Participants were 136 adults (43.3% female; Mean age = 42.4 years) who smoked at least 10 cigarettes per day who were receiving methadone treatment for OUD and interested in switching to another nicotine product. Utilizing linear regression analyses, we tested whether having utilized a smoking harm reduction method over the past year was associated with nicotine dependence, smoking withdrawal symptoms, quit attempts, and opioid cravings.

Results: 89.2% of participants reported trying a smoking harm reduction strategy in the last year. Having tried a harm reduction strategy in the last year was not associated with nicotine dependence, withdrawal symptoms, or making a smoking quit attempt. However, utilizing a smoking harm reduction strategy in the past year was significantly related to higher opioid cravings ($\beta = 0.22$, 95% CI = 0.01, 0.31, $p = .04$).

Discussion: The results of this study suggest that nearly 90% of people with OUD who smoke are willing to engage in harm reduction strategies for cigarette smoking. However, engaging in harm reduction strategies for cigarette smoking may not translate to lower nicotine dependence, nicotine withdrawal, or quit attempts. On the other hand, the finding that harm reduction strategies were associated with opioid cravings requires further explication. It is possible that willingness to engage in harm reduction strategies may lead to increased opioid cravings due to having reduced cigarette smoking.

Lindsay Stager (Brown Research Advisor: Jared Saletin)

Publications

Stager, L., Watson, C., Cook, E., & Fobian, A. D. (2024). Effect of Sleep Restriction on Adolescent Cognition by Adiposity: A Randomized Crossover Trial. *JAMA Neurology*. doi:10.1001/jamaneurol.2024.1332

Borgatti, A., Morgan, C. H., **Stager, L.,** & Dutton, G. R. (2024). Associations between internalized weight bias, weight status, and health among a diverse cohort of freshman college students. *Journal of American College Health*. doi: 10.1080/07448481.2024.2346351

Stager, L., Watson, C., Morgan, C., Gower, B., & Fobian, A. D. (2023). Sleep and inflammation during COVID-19 virtual learning in adolescents with overweight or obesity. *Children, 10*(12), 1833. doi: 10.3390/children10121833

Stager, L., Watson, D., Long, D., & Fobian, A. D. (2023). Parenting factors predicting longitudinal fast- food consumption from adolescence. *American Journal of Lifestyle Medicine*. doi: 10.1177/15598276231208032

Morgan, C. H., **Stager, L.,** Shen, J., & Schwebel, D. C. (2023). Virtual reality as a tool to teach children pedestrian safety: A systematic literature review. *Journal of Pediatric Psychology*. doi: 10.1093/jpepsy/jsad058

Presentations

Stager, L., Gredvig-Ardito, C., Carskadon, M. A., Saletin, J. M. (2024, June 1-5). Overnight memory consolidation in adolescents: Effects of change in DLMO phase after sleep restriction. [Paper and Poster presentation]. SLEEP, Houston, TX, United States.

Morgan, C. H., **Stager, L.,** Schwebel, D. C. & Shen, J. (2024, April 15-17). *Meta-Analysis on the Efficacy of Teaching Children to Cross Streets in Virtual Reality*. [Poster presentation]. The Society for Advancement of Violence and Injury Research Conference, Chapel Hill, NC, United States.

Stager, L., Gredvig-Ardito, C., Carskadon, M. A., Saletin, J. M. (2024, March 28). Overnight memory consolidation in adolescents: Effects of change in DLMO phase after sleep restriction. [Poster presentation]. Brown University's 26th Annual Mind Brain Research Day, Providence, RI, United States.

Stager, L., Morgan, C. & Fobian, A. D. (2023, November 9 – 12). *The interactive effects of body composition and sleep on executive functioning: Comparing body mass index and total body fat percentage*. [Poster presentation]. Pediatric Sleep Medicine Meeting, Hilton Head Island, SC, United States.

Morgan, C., **Stager, L.,** & Fobian, A. D. (2023, November 9 – 12). *Sex Differences in the Effect*

of Sleep on Self-Reported Hunger and Desire to Eat. [Poster presentation]. Pediatric Sleep Medicine Meeting, Hilton Head Island, SC, United States.

Stager, L., Watson, C. & Fobian, A. D. (2023, November 3 – 5). The effects of sleep restriction on adolescent morning macronutrient consumption. [Paper presentation]. The Society of Behavioral Sleep Medicine Annual Scientific Meeting, San Diego, CA, United States.

Watson, C., **Stager, L.**, & Fobian, A. D. (2023, November 3 – 5). Racial differences in self-reported sleepiness. [Paper presentation]. The Society of Behavioral Sleep Medicine Annual Scientific Meeting, San Diego, CA, United States.

Honors & Awards

Trainee Merit Award 2024

Sleep Research Society

Paper Title: Overnight memory consolidation in adolescents: Effects of change in DLMO phase after sleep restriction

Outstanding Graduate Student in Medical/Clinical Psychology Award, 2024
The University of Alabama at Birmingham

Title: Overnight memory consolidation in adolescents: Effects of change in DLMO phase after sleep restriction

Authors: Lindsay Stager, MA, Caroline Gredvig-Ardito, BA, Mary Carskadon, PhD, Jared Saletin, PhD

Introduction: Sleep aids learning and memory. Limited studies have examined how circadian rhythms moderate this process, particularly in adolescents who experience developmental changes in circadian biology. Here we examine how sleep restriction, memory consolidation, and circadian biology interact in youth with distinct circadian phase preferences.

Methods: Adolescents were recruited based on circadian phase preference on the Morningness/Eveningness (M/E; Carskadon et al., 1993) scale. Sixteen participants entered the current analysis (6F, 2 Non-White; age 10-15, mean±sd:12.69±1.76 years; M/E 22-40; mean±sd: 33.38±5.78; 1 Evening-Type [M/E≤23]; 4 Neither Type [23>M/E<34]; 11 Morning type]). All completed 19 nights of stabilization on a self-selected 9-hour in bed schedule followed by 7 nights of sleep restriction (6.5 hours in bed; bedtime delayed and risetime advanced equally). In-lab dim-light-melatonin-onset (DLMO) assessment occurred on the final nights of stabilization and restriction. Overnight memory consolidation was indexed on the motor sequence task (MST; Walker et al., 2006) across the final night of sleep restriction. Memory outcomes included speed (# correct sequences), # of errors, and precision (speed-error trade-off). We examined overnight improvement (morning-evening) in MST performance and associations between improvement, phase preference score, stabilized DLMO phase, and the DLMO phase change after restriction (negative numbers indicate phase delay). Regressions controlled for age where statistically justified.

Results: MST speed improved ($t(15)=-3.44$, $p<.01$, $d=0.86$) for the morning (12.94 ± 6.89) test session compared to evening (10.81 ± 5.69). There were no overnight changes in errors or precision ($d's<.14$, $p's>.34$). Overnight improvement was not related to M/E phase preference (Adj. $R^2's<0.17$; $p's>.05$); however, there was a significant association between the change in DLMO phase (mean±sd: 10.34 ± 41.69 minutes) and memory consolidation for both speed (Adj. $R^2=0.54$, $F(2,13)=9.79$, $p<.01$) and errors (Adj. $R^2=0.21$, $F(1,15)=4.94$, $p<.05$). Specifically, children with a greater delay in DLMO phase demonstrated greater overnight improvement on the MST.

Conclusion: These data indicate a potential link between circadian biology and the cognitive benefits of sleep during adolescence. These findings are significant given the shifts in circadian rhythms occurring across adolescence. Understanding the influence of circadian rhythms in sleep-dependent memory may inform discussions of how sleep loss affects learning in school children.

Support: R01NR08381 and P20GM139743.

Matthew Thompson (*Brown Research Advisors: Jennifer Primack & John McGeary*)

Publications

Thompson, M. F., Schwandt, M. L., Ramchandani, V. A., Diazgranados, N., Goldman, D., & Luk, J. W. (2024). Stress and alcohol-related coping mechanisms linking lifetime suicide ideation and attempt to multidimensional quality of life. *Journal of Affective Disorders*, 351, 729-737.

Schultz, L. S., Murphy, M. A. Donegan, M., Knights, J. K., Baker, J. T., **Thompson, M. F.**, Waters, A. J., Roy, M., & Gray, J. C. (in press). Evaluating the acceptability and feasibility of collecting passive smartphone data to estimate psychological functioning in U.S. service members and veterans: A pilot study. *Military Medicine*.

Luk, J. W., **Thompson, M. F.**, Novak, L. A., Stangl., B. L., Schwandt, M. L., Goldman, D., Ramchandani, V. A., & Diazgranados, N. (in press). History of suicidality and pandemic outcomes: Longitudinal associations with anxiety symptoms, depressive symptoms, and problematic drinking. *Psychiatric Research and Clinical Practice*.

Luk, J. W. & **Thompson, M. F.** (under review). Mapping dialectical behavior therapy skills to clinical domains implicated in contemporary addiction research: A conceptual synthesis and promise for precision medicine.

Geda, D. W., Luk, J. W., Stangl., B. L., Arsenault., A., **Thompson, M. F.**, Schwandt, M. L., Goldman, D., Ramchandani, V. A., & Diazgranados, N. (under review). Drinking motives link positive and negative life events to problematic alcohol use during the COVID-19 pandemic: A longitudinal study.

Thompson, M. F. & Ghahramanlou-Holloway, M. (in press). Cognitive therapy for suicide prevention. In D. G. Friedman-Wheeler & A. E. Wenzel (Ed.), *The SAGE Encyclopedia of Mood and Anxiety Disorders*. SAGE.

Thompson, M. F. & Cobb, E. (in press). Biopsychosocial model. In D. G. Friedman-Wheeler & A. E. Wenzel (Ed.), *The SAGE Encyclopedia of Mood and Anxiety Disorders*. SAGE.

Presentations

Thompson, M. F., & Ghahramanlou-Holloay, M. (2024, April). National Research Service Award 101: Perspectives from an F31-Diversity recipient. In **M. F. Thompson (Chair)**, Demystifying the NIH training grant process in suicide prevention science. Symposium conducted virtually at the meeting of the Suicide Research Symposium (SRS).

Thompson, M. F., Luk, J. W., Schwandt, M. L., Ramchandani, V. A., Diazgranados, N., & Goldman, D. (2024, March). Pathways linking history of suicidality to quality of life: Testing perceived stress and problematic drinking as mediators. Poster presented at the Brown University Mind-Brain Research Day Conference, Providence, RI, United States.

Title: Pathways linking history of suicidality to quality of life: Testing perceived stress and problematic drinking as mediators

Authors: Matthew F. Thompson ^{1,2} Jeremy W. Luk ³, Melanie L. Schwandt ³, David Goldman ^{3,5}, Vijay A. Ramchandani ⁴, & Nancy Diazgranados ³

Affiliations: 1 Department of Medical and Clinical Psychology, Uniformed Services University; 2 Department of Psychiatry and Human Behavior, Warren Alpert Medical school of Brown University; 3 Office of the Clinical Director, National Institute on Alcoholism and Alcohol Abuse (NIAAA); 4 Human Psychopharmacology Laboratory, NIAAA; 5 Laboratory of Neurogenetics, NIAAA

Background: Suicide ideation and attempt are linked to adverse mental health outcomes, but few studies have examined their associations with quality of life (QoL). This study examined the impact of lifetime history of suicidal ideation and attempt on four QoL domains via perceived stress and problematic drinking.

Methods: Participants were drawn from the National Institute on Alcohol Abuse and Alcoholism Natural History Protocol (N = 1055), including those with no history of suicidality (78.6%), suicidal ideation only (15.3%), and a history of suicide attempt (6.2%). Structural equation modeling (SEM) was utilized to test perceived stress and drinking as mediational pathways to multidimensional QoL.

Results: Individuals with a history of suicide ideation and/or attempt reported higher perceived stress in the past month, more problematic drinking in the past year, and lower QoL domains in the past two weeks. SEM showed significant mediation effects through dimensions of perceived stress (helplessness, lack of self-efficacy) and alcohol problems. When these mediators were considered simultaneously, the mediation effects through alcohol problems were attenuated, while several direct effects of suicidality on physical, psychological, and social QoL were weakened but remained significant.

Limitations: Cross-sectional data with retrospective report of suicidality history.

Conclusions: A lifetime history of suicidality was associated with lower multidimensional QoL. These associations were partially explained by stress and alcohol-related coping mechanisms such as feeling helpless or inadequate when encountering stressors and problematic drinking. Perceived stress and drinking to cope may be important intervention targets to improve QoL among those with a history of suicidality.

Phoebe Ka Yin Tse (Brown Research Advisor: Athene Lee)

Publications

Stocks, J. K., Bing-Canar, H., Khan, H., Lapitan-Moore, F., **Tse, P. K. Y.**, Wisinger, A. M., ... & Resch, Z. J. (2024). Racial disparities in health literacy and numeracy: The role of sociodemographic and psychological risk factors. *Professional Psychology: Research and Practice*.

VanLandingham, H. B., Ellison, R. L., Turchmanovych-Hienkel, N., Alfonso, D., Oh, A., Kaseda, E. T., Basurto, K., **Tse, P. K. Y.**, & Khan, H. (2024). Neuropsychological assessment, intervention, and best practices for women with non-Central nervous system cancer: A scoping review of current standards. *The Clinical neuropsychologist*, 1–32. Advance online publication. <https://doi.org/10.1080/13854046.2024.2343147>

Phillips, M. S., Wisinger, A. M., Cerny, B. M., Khan, H., Chang, F., **Tse, P. K. Y.**, Ovsiew, G. P., Shapiro, G., Resch, Z. J., Soble, J. R., & Jennette, K. J. (in press). Effect of processing speed and memory performance on classification accuracy of the dot counting test in a mixed neuropsychiatric sample. *Journal of Clinical and Experimental Neuropsychology*.

Rodriguez, V.J., Basurto, K.S., Finley, J.C.A., Liu, Q., Khalid, E., Halliburton, A.M., **Tse, P.K.Y.**, Resch, Z.J., Soble, J.R., Ulrich, D.M. (in press). Unsupervised machine learning characterization of multidimensional symptom profiles: Associations with adverse childhood experiences. *Archives of Clinical Neuropsychology*.

Presentations

Tse, P.K.Y., De Vito, A. Kunicki, Z. J., Nester, C., & Lee, A. (2024) *Comparing the Association Between Subjective Cognitive Decline and Depression in Black, Latinx and Non-Hispanic White Samples*. Presented at Brown University's Mind-Brain Research Day, Providence, RI.

Tse, P.K.Y., De Vito, A. Kunicki, Z. J. & Lee, A. (2024) *Comparing the Association Between Subjective Cognitive Decline and Depression in Black, Latinx and Non-Hispanic White Samples*. Presented at International Neuropsychological Society's 52nd North American Annual Meeting, New York City, NY.

Title: Comparing the Association Between Subjective Cognitive Decline and Depression in Black, Hispanic/Latinx and White Samples

Phoebe Ka Yin Tse, M.A., Alyssa De Vito, PhD, Zachary J. Kunicki, PhD, MS, MPH, Caroline Nester, MA, MPhil, Athene Lee, PhD

Objective: Subjective cognitive decline (SCD) is characterized by a self-perceived decline in cognitive abilities, which may be an early indicator of cognitive decline. However, depression is frequently comorbid with SCD. Depressive symptoms are found to be associated with SCD in Non-Hispanic White population, and preliminarily Latinx; yet, the association is less clear in other ethnorracial groups. There is also limited research comparing the strength of the association across various ethnic groups concurrently using standardized SCD measures to allow for a more direct comparison. This study aimed to compare the relationship between subjective cognitive decline and depression across three ethnorracial groups (Black, Latinx, and White) using a well-validated SCD measure. We hypothesized that the association will be stronger in the Black and Latinx groups than NHW based on the current literature.

Participants and Methods:

The study consisted of 804 adults recruited through paid online platforms. All participants were administered the Cognitive Function Instrument (CFI) and Geriatric Depression Scale (GDS) as part of a larger research study. All participants are living in the United States, and they do not have a diagnosis of neurological illnesses, cognitive or psychiatric disorder.

Participants were tested in English/Spanish. The overall sample was 63% female and racially diverse (33% Black/African American, 37% Latinx, 30% Non-Hispanic White), with a mean age of 65.4 ($SD=6.4$). 76% of participants had more than 12 years of education. ANOVA and chi-square analyses examined for group differences in demographics, CFI and GDS. Bivariate Correlation tests investigated the association between SCD and depression in each group, and any significant covariates were controlled for in partial correlation analyses.

Fisher's z transformation was conducted to compare the GDS-CFI association between the three groups.

Results:

Education and income were significantly different between groups (Black < NHW & Latinx, $p < 0.001$). There were more female participants in Non-Hispanic White and Black groups ($p < .001$). Male participants had a higher level of income and education than their female counterparts ($p < .005$). SCD was significantly higher in NHW than the Black ($p < .01$) and Latinx participants ($p < .001$). Depressive symptoms were also higher in NHW than Black participants ($p < .05$). There were no group differences in age. The hypothesized association between SCD and depression was significant in all three groups ($r = .51$ for NHW; $r = .47$ for Black; and $r = .36$ for Latinx; $p < .001$). The association holds after adjusting for education and income. The association was significantly stronger for NHW than Latinx ($p = < .05$; $z = 2.216$, Cohen's $q = .19$), whereas the difference was nonsignificant between Black-Latinx, and Black-NHW participants.

Discussion:

This study provided evidence of the association between depression and SCD across ethnorracial groups and it is found to be strongest in the NHW group. The results reflect the importance of assessing depression symptoms when evaluating SCD, especially in the NHW group. Further, Latinx and Black participants reported a lower level of depression and SCD, which may have limited potential findings of a more profound association in these groups. Future studies will benefit from exploring the utility and psychometric properties of SCD and depression measures in ethnorracially diverse populations.