



**BROWN**  
Alpert Medical School

# **Research Accomplishments**

Clinical Psychology Training Programs at  
Brown University

**Pre-doctoral Training Program Residents  
2024-2025**

**Olivia Bolts (Jane Metrik, PhD. and Rachel Gunn, PhD.)**

**Publications**

Gray, B.A., **Bolts, O.L.**, Fidler, D., & Prince, M.A. (2025). Identifying three psilocybin use patterns by frequency and quantity. *Journal of Studies on Alcohol and Drugs*, 86(3), 378–390.

<https://doi.org/10.15288/jsad.23-00312>

Howe, L.K., **Bolts, O.L.**, Metrik, J., Gunn, R.L. (under review). Simultaneous alcohol and cannabis use is associated with daily consequences reflective of alcohol use disorder symptoms.

**Bolts, O.L.**, Blanchard, B.E., Prince, M.A., & the Protective Strategies Study Team. (under review). A qualitative study of self-reported cannabis protective behavioral strategies among US college students.

**Bolts, O.L.**, Conner, B.T., Riggs, N.R., & Prince, M.A. (under review). Effects of protective behavioral strategies in a randomized controlled trial of the cannabis eCHECKUP TO GO intervention.

Douglass, M., O'Donnell, M., **Bolts, O.**, Wallace, G. & Prince, M.A. (under review). Navigating uncertainty: College student resilience and risky alcohol behaviors during the COVID-19 pandemic.

**Presentations**

Howe, L., **Bolts, O.L.**, Metrik, J., & Gunn, R.L. (2025, June). *Simultaneous alcohol and cannabis use is linked to daily alcohol use disorder symptoms*. Poster presentation at the Research Society on Alcoholism annual scientific meeting, New Orleans, LA.

**Bolts, O.L.**, Howe, L.K., Micalizzi, L., Pedersen, E.R., Metrik, J., Battle, C., & Gunn, R.L. (2025, April). *Use of cannabis protective behavioral strategies during pregnancy*. Poster presentation at the Collaborative Perspectives on Addiction annual meeting, Providence, RI.

Metrik, J., Shirley, K., **Bolts, O.**, Pinto, L., & Gaudiano, B. (2025, April). *Veteran and provider perspectives on the mood and substance use disorder treatment adherence program*. Poster presentation at the Collaborative Perspectives on Addiction annual meeting, Providence, RI.

**Bolts, O.L.**, Howe, L.K., Micalizzi, L., Pedersen, E.R., Metrik, J., Battle, C., & Gunn, R.L. (2025, March). *Use of cannabis protective behavioral strategies during pregnancy*. Poster presentation at Brown's Mind-Brain Research Day, Providence, RI.

## Use Of Cannabis Protective Behavioral Strategies During Pregnancy

Olivia L Bolts, MA<sup>a</sup>, Lindy K Howe, PhD<sup>b</sup>, Lauren Micalizzi, PhD<sup>b</sup>, Eric R Pedersen, PhD<sup>c</sup>, Jane Metrik, PhD<sup>a,b,d</sup>, Cynthia Battle, PhD<sup>a</sup>, and Rachel L Gunn, PhD<sup>a,b</sup>

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Prenatal cannabis use (PCU) is increasing and associated with potential harm. Pregnant individuals who use cannabis report seeking PCU information informally (e.g., online forums) and adopting practices perceived to reduce harm. However, no evidence-based harm reduction interventions address PCU. Cannabis protective behavioral strategies (PBS) are associated with less cannabis use and fewer cannabis-related negative consequences among non-pregnant populations. No studies to our knowledge explore PBS during pregnancy.

This study combined two samples of pregnant individuals who use cannabis ( $N=48$ ;  $M_{\text{age}}=30.33$ ,  $SD=5.33$ ; 2% American Indian/Alaska Native, 2% Asian, 19% Black, 15% multiracial, 58% White). Participants completed the Protective Behavioral Strategies for Marijuana scale and an open-ended question about cannabis PBS during pregnancy. We examined relationships between cannabis use frequency, PBS, negative consequences, and perceived harm of PCU.

Participants reported using PBS ( $M=4.07$ ,  $SD=0.93$ ) and experiencing negative consequences in the past 30 days ( $M=3.77$ ,  $SD=3.30$ ). Higher perceived harm of cannabis to maternal ( $b=0.02$ ,  $p=0.002$ ) and fetal health ( $b=0.02$ ,  $p<0.001$ ) and later trimesters (second:  $b=0.82$ ,  $p=0.003$ ; third:  $b=0.79$ ,  $p=0.02$ ) were positively associated with PBS. PBS was associated with less frequent cannabis use ( $b=-0.14$ ,  $p=0.02$ ) but did not associate with consequences ( $b=0.05$ ,  $p=0.69$ ). Open-ended responses revealed pregnancy-specific practices perceived to reduce harm (e.g., “I shared my intentions with my partner for support,” “I had a date set to quit and slowly decreased the amount I was smoking”).

Results underscore the need for PCU harm reduction research and validation of PBS and consequence measures for PCU to support informed decision-making among pregnant individuals who use cannabis.

**Ardhys De Leon (Hayley Treloar Padovano, PhD.)**

**Publications**

Smallman, R., Arthur, K., **De Leon, A. N.**, Gresham, P., Dvorak, R.D., & Fields, S. A. (in press). A Randomized Controlled Trial of Counterfactual and Personalized Normative Feedback Interventions to Increase Safe Drinking Strategies. *Substance Use and Misuse*.

Pasarica, M., Opera, E. M., Canario Asencio, D., Kay, D., Yalim, A. C., Neely, L., Diaz, D., Daly, K., **De Leon, A. N.**, & Bailey, M. (in press). Yoga for Wellness: An Innovative Educational Intervention for Health Professions Students. *International Journal of Yoga*.

Arthur, K. A., **De Leon, A.**, Dvorak, R., Fields, S., Gresham, P., & Smallman, R. (in press). If only I could drink like everyone else: Effects of counterfactual thinking and personalized normative feedback on perceived behavioral control over drinking. *Psychiatry: Interpersonal and Biological Processes*.

Pasarica, M., Daly, K., Yalim, A. C., Kay, D., **De Leon, A. N.**, Neely, L., Diaz, D. A., & Bailey, M. (2025). Long-Term Impact of an Interprofessional Health Promotion Curriculum in Healthcare Student. *Medical Science Educator*. <https://doi.org/10.1007/s40670-025-02347-2>

Burr, E. K., Dvorak, R. D., **De Leon, A. N.**, Klaver, S. J., Peterson, R., Hayden, E. R., Maynard, M. H., Almeyda, S., & Medina, A. (2024). Understanding loss of control eating through the lens of expectancies and reinforcement sensitization. *Psychiatry*, 88(1), 55–70.  
<https://doi.org/10.1080/00332747.2024.2403664>

**De Leon, A. N.**, Vasquez Collao, I. P., Dvorak, R. D., Zelaya, D. G., Peterson, R., Rogriguez, N. E., Almeyda, S. M., Burr, E. K., & Paitan, C. S. (under review). How Perceived Discrimination Buffers Safe Drinking Self-Efficacy's Impact on Alcohol Problems among Hispanic/Latinx SGM and Non-SGM Drinkers.

Burr, E. K., Dvorak, R. D., Lynch, G., Peterson, R., **De Leon, A. N.**, & Leary, A. V. (under review). The influence of COVID-19 fear beliefs on the relationships between positive mood and loss-of-control eating: a ten-day diary study.

Pasarica, M., Kay, D., Yalim, A. C., Daly, K., Neely, L., Bailey, M., Diaz, D. A., & **De Leon, A. N.** (under review). Enhancing Health Promotion Among Healthcare Professionals: The Impact of an Evidence-Based Multidisciplinary Approach.

Pasarica, M., Kay, D., Daly, K., Yalim, A. C., Neely, L., Diaz, D. A., Bailey, M., & **De Leon, A. N.** (under review). The Enduring Impact of Health Promotion Programs on Healthcare Professionals.

Magri, T., **De Leon, A. N.**, Klaver, S. J., Hayden, E., Burr, E. K., Almeyda, S., Bilagi, N., Nguyen, M., Wang, C., Dunn, M. E., Meshesha, L. Z., & Dvorak, R. D. (under review). I'm Not Thinking When I'm Drinking: The Interaction of Mood and Rumination Across Drinking and Non-Drinking Days.

Schlauch, R. C., Dvorak, R. D., Walsh, B. E., **De Leon, A. N.**, & Davis, J. A. (under review). Does treatment-seeking matter? An examination of daily approach and avoidance cravings predicting drinking in those diagnosed with Alcohol Use Disorder.

## **Presentations**

**De Leon, A. N.,** Dvorak, R. D., Almeyda, S. M., Vasquez Collao, I. P., & Ramos, A. (2025, April) *A Qualitative Understanding of PBS and Sociocultural Factors among Hispanic/Latinx Drinkers*. Poster presented at the 13<sup>th</sup> annual Collaborative Perspectives on Addiction (CPA) Meeting, Providence, RI.

Morales, A., Talamantes, J., **De Leon, A. N.,** & Treloar Padovano, H. (2025, March). *Goal setting and achievement in adults with alcohol use disorder and with or at risk for alcohol-associated liver disease: A qualitative analysis of the Pathways intervention*. Poster session presented at the Rhode Island Public Health Summit, Warwick, RI.

**De Leon, A. N.,** & Treloar-Padovano, H. (2025, March). *A Mixed-Method Examination of a Brief Personalized Motivational Intervention Among Adults at Risk for Alcohol-Associated Liver Disease*. Poster presented at Mind Brain Research Day at Brown University.

## **Grant Submissions**

Enoch Gordis Research Recognition Award, Research Society on Alcohol, 2025

Title: A Mixed-Method Examination of a Brief Personalized Motivational Intervention Among Adults at Risk for Alcohol-Associated Liver Disease.

## **Honors & Awards**

Research Society on Alcohol (RSA) Student Merit Award, 2025

College of Sciences Dean's Stellar Doctoral Fellowship, University of Central Florida, 2024

American Psychology Foundation 2024 National Register Internship Travel Scholarship, 2024

## **A Mixed-Method Examination of a Brief Personalized Motivational Intervention Among Adults at Risk for Alcohol-Associated Liver Disease.**

Ardhys De Leon, MS & Hayley Treloar Padovano, PhD

**Introduction:** Alcohol consumption is a leading cause of preventable diseases globally, with alcohol-associated liver disease (ALD) affecting 1 in 20 U.S. adults. ALD is the leading cause of liver-related deaths, with over 30,000 deaths annually in the U.S. The mortality rate for ALD is rising, particularly among younger adults, women, and uninsured individuals, who also have less access to alcohol health services. ALD is preventable through behavior change, but over 90% of those in need of intervention remain unreached. Early identification and intervention for liver damage is critical, especially for vulnerable populations like women and Hispanic/Latinx adults who face systemic healthcare barriers.

**Methods:** This mixed-methods pilot study tested the feasibility and acceptability of a personalized motivational intervention to reduce alcohol consumption. Adults with moderate-to-severe alcohol use disorder and at risk for ALD, fluent in English or Spanish, were recruited from a hepatology clinic and the community. Procedures included liver-health biomarker blood tests, personalized feedback, weekly interviews, ecological momentary assessments, and qualitative exit interviews. Personalized feedback was delivered through motivational interviewing sessions (1-hour at baseline and half-hour booster at week 3). Data analysis included generalized mixed effects models and inductive thematic analysis.

**Results:** Thirty-four participants were enrolled, with 29 completing the study (85% retention). The sample was 59% White, 52% Female, and 31% Hispanic/Latinx, with a *M* age of 45.03 (*SD*=12.6). Results indicated high feasibility and acceptability, with high scores on the System Usability Scale (*M*=86.1, *SD*=12.0). and the Client Satisfaction Questionnaire (*M*=92.4 *SD*=10.8). Participants showed increased readiness to change ( $p=.001$ ) and drinking days decreased from 64% to 29% and heavy drinking days dropped from 40% to 20%. Qualitative results supported these findings, with participants finding the personalized drinking, liver-health results, and daily-life feedback to be helpful in understanding their drinking patterns and motivating in reducing their drinking, though some suggested improving the clarity of liver-health explanations.

**Discussion:** This pilot study demonstrates the feasibility and acceptability of a brief, personalized intervention for reducing alcohol consumption and improving liver health, especially for underserved populations. Personalized feedback on drinking patterns, liver health, and daily-life factors effectively motivated behavior change. Further efforts are needed to reach underserved populations, particularly underserved adults at risk for ALD.

**Kristina Dickman (Laura Stroud, PhD.)**

**Presentations**

**Dickman, K. D.**, McGreevy, E., DeAngelo, L., Kamarck, T. W., & Binning, K. R. (2025, March). *The effect of a brief social belonging intervention on sleep quality, binge drinking, and physical activity in college students*. Oral paper presentation presented at the Society for Biopsychosocial Science and Medicine 82nd Annual Scientific Meeting, Seattle, Washington.

**Dickman, K. D.**, Lee, S. Y., Stroud, L. R. (2025, March). *Cardiovascular Reactivity to Peer Rejection Moderates the Prospective Effects of Early Life Stress Exposure on Adolescent BMI*. Poster presented at the Department of Psychiatry and Human Behavior Mind Brain Research Day, Providence, Rhode Island.

**Honors & Awards**

Scholars Award, Society for Biopsychosocial Science and Medicine

Graduate and Professional Student Travel Award, University of Pittsburgh

# Cardiovascular Reactivity to Peer Rejection Moderates the Prospective Effects of Early Life Stress Exposure on Adolescent BMI

Dickman, K. D., MS; Lee, S. Y., PhD; Stroud, L. R., PhD

**Introduction:** Early life stress is associated with negative cardiometabolic outcomes including obesity. Recent evidence suggests that blunted cardiovascular reactivity (CVR) to stress is linked to various adverse outcomes, including obesity, perhaps due to associated deficits in motivation and behavioral regulation. Moreover, emerging research indicates that early life stress may contribute to blunted cardiovascular reactivity in some individuals. Given this, cardiovascular reactivity may explain individual differences in the relationship between early life stress and BMI, such that early life stress is linked to higher BMI only among adolescents who exhibit blunted reactivity. The present study tests this hypothesis by examining whether cardiovascular reactivity moderates the association between early life stress and BMI in adolescents one year later.

**Methods:** Participants included 73 adolescents (Mage = 13.4 years, 100% female, MBMI = 22.3) who took part in study procedures between 2012 and 2016. During a baseline visit, participants completed the Yale Interpersonal Stressor-Child while systolic blood pressure (SBP), diastolic blood pressure (DBP), and heart rate (HR) were continuously measured. Reactivity scores for SBP, DBP, and HR were calculated by subtracting baseline values from the average measurement across all three stress tasks. K-means clustering identified cardiovascular reactivity patterns based on SBP, DBP, and HR reactivity scores. The Hopkins statistic ( $>0.5$ ) confirmed the data's clustering tendency. Participants additionally completed structured interviews including the Psychosocial Schedule, which was used to assess cumulative early life stress, conceptualized as the number of different early life stressors (e.g., parental divorce). Twelve months later, height and weight were measured to derive BMI.

**Results:** Two CVR clusters were identified: high CVR ( $n = 29$ ), marked by large increases in SBP, DBP, and HR from baseline to the stress task ( $M\Delta$  SBP = 15.0 mmHg,  $M\Delta$  DBP = 8.23 mmHg,  $M\Delta$  HR = 7.14 bpm), and low CVR ( $n = 44$ ), characterized by small or no increases ( $M\Delta$  SBP = 5.14 mmHg,  $M\Delta$  DBP = 3.67 mmHg,  $M\Delta$  HR = 0.8 bpm). Multivariate linear regression revealed a significant CVR  $\times$  early life stress interaction predicting 12-month BMI, controlling for baseline BMI, pubertal status, socioeconomic status, and race/ethnicity ( $B = -0.30$ ,  $SE = 0.13$ ,  $\beta = -0.23$ ,  $p = .030$ ). Simple slopes analysis showed that higher early life stress predicted higher BMI among adolescents with low CVR ( $B = 0.32$ ,  $SE = 0.12$ ,  $p = .01$ ), but this association was not observed among those with high CVR ( $B = 0.02$ ,  $SE = 0.07$ ,  $p = .81$ ).

**Conclusion:** Findings suggest that links between early life stress and higher BMI may be most evident in individuals with a blunted cardiovascular reactivity profile, highlighting blunted reactivity as a potential physiological risk pathway for obesity.



**Kayla Ford (Lindsay Orchowski, PhD.)**

**Publications**

**Ford, K.,** Zamboanga, B.L., Bacon, M., Ramarushton, B., Van Hedger, K., Blumenthal, H., Hurlocker, M.C., Madson, M.B., & The Harm Reduction Team (2024). The party is not over: Living situation, perceived party norms, and drinking games behavior among college students during a pandemic (COVID-19). *Journal of American College Health*.

McClain, P., Zamboanga, B. L., Ramarushton, B., Walukevich-Dienst, K., Thompson, L., **Ford, K.,** Blumenthal, H., Ham, L., Bartholomew, J., Michikyan, M., Harkness, A., & Regan, P. (2025). Pregaming in the digital age: Drinking before joining a virtual social event with friends or family among university students. *Current Psychology*.

Zamboanga, B. L., Duryea, P., Newins, A. R., Walukevich-Dienst, K., Perrotte, J. K., Van Hedger, K., **Ford, K.,** Ham, L. S., Kim, S. Y., Grigsby, T. J., & Lui, P. P. (2024). A replication and extension of the factor structure of the Masculine Drinking Norms Measure (MDNM) and associations with drinking behaviors in a multisite sample of college men. *Psychology of Men & Masculinities*.

Zamboanga, B. L., Newins, A. R., **Ford, K.,** & Perrotte, J. K. (2024). Conformity to masculine norms and its association with drinking behaviors and alcohol-related consequences among adult men: A meta-analysis. *Social Science & Medicine*, 117198.

**Ford, K.,** Sawyer, H.B., & Ham, L.S. (in press). Bystander intervention matters: Differences in posttraumatic cognitions based on (no) bystander presence and helping. *Violence Against Women*.

**Ford, K.,** Ham, L.S., Zamboanga, B.L., & Bridges, A.J. in press). Presenting the Evading Responsibility as Strategy for Emotion Regulation (ERASER) Model. *Deviant Behavior*.

**Ford, K.,** Ham, L. S., & Sawyer, H.B. (under review). Who Steps In and For Whom?: The Impact of Bystander Relationship and Victim Gender on the Likelihood of Helping Behavior during Sexual Harassment.

Peterson, R., Mayer, E., Oesterle, D., **Ford, K.,** & Adams-Clark, A. A. (under review). A qualitative follow-up of the Sexual and Negative Dating Inventory (SANDI): Barriers, facilitators, and context of dating and sexual protective behavioral strategies use.

Adams-Clark, A. A., **Ford, K.,** Driessen, M. C., Bhuptani, P., H. & Orchowski, L. M. (under review). Variations in when survivors disclose nonconsensual sexual experiences: An examination of sexual and gender identity.

**Ford, K.,** & Ham, L. S. (under review). Bystander responses to an expression of guilt following alcohol-involved sexual assault perpetration: Developing vignette methodology to detect post-moral disengagement as interpersonal emotion regulation.

## **Presentations**

Ham, L.S., Randazza, M.P., **Ford, K.**, Zamboanga, B.L., Griswold, A., & White, B. (2025, April) *Social Anxiety and Beliefs about Sexual Outcomes from Alcohol: It Depends on the Context*. Poster presented at the annual meeting of the Collaborative Perspectives on Addiction, Providence, RI.

**Ford, K.**, Ham, L.S., Griswold, A., & White, B. (2025, April). *Post-Moral Disengagement as Emotion Regulation for Alcohol-Involved Sexual Violence*. Poster presented at the annual meeting of the Collaborative Perspectives on Addiction, Providence, RI.

**Ford, K.**, Ham, L.S., & Sawyer, H. (2025, March). *Intervening in Sexual Harassment: The Influence of Bystander Relationship and Victim Gender on Helping Behavior*. Poster presented at the annual conference of Mind Brain Research Day, Providence, RI.

## **Honors & Awards**

P.E.O Scholar Award Recipient, 2024

## Intervening in Sexual Harassment: The Influence of Bystander Relationship and Victim Gender on Helping Behavior

Kayla Ford<sup>1</sup>, Lindsay S. Ham<sup>1</sup>, & Hannah Sawyer<sup>2</sup>  
University of Arkansas<sup>1</sup>, Auburn University<sup>2</sup>

**Objectives:** Bystander interventions aim to mitigate risk for sexual assault through promoting helping behavior among community members (Banyard et al., 2007) across a range of intervention timepoints (i.e., before, during, or after assault; McMahon & Banyard, 2012). Research suggests that bystanders are most frequently present prior to a sexual assault (Haikalis et al., 2018) wherein it is possible that bystanders will witness sexual harassment (e.g., sexist jokes, unwanted touching). Importantly, pre-assault intervention may be the most effective timepoint to reduce incidence of sexual assault. Both contextual factors (e.g., relationship to the victim; Bennett et al., 2014) and sex of a victim (e.g., Katz et al., 2015) impacts decisions for bystanders to intervene. As such, the present study examines how the presence of certain types of bystanders (e.g., friends) during sexual harassment influences the likelihood of bystander intervention, and whether gender of the victim moderates this relationship. **Methods:** Participants included 715 college students (79% female; 82.9% White; 89.3% heterosexual) ages 18 to 24 ( $M_{age}=18.98$ ,  $SD_{age}=1.12$ ) from a larger study ( $N=1479$ ) on sexual victimization, bystander intervention, and mental health outcomes. The data analytic sample consisted of students who reported at least one experience of sexual harassment (adaptation of SEQ; Fitzgerald et al., 1995), the presence of a witness during sexual harassment [family ( $n=79$ ), friends ( $n=432$ ), strangers ( $n=45$ ), acquaintances ( $n=55$ ), police officers ( $n=1$ ), roommates ( $n=97$ ), other ( $n=6$ )], and indicated whether a bystander intervened (52.3% reported bystander intervention occurred). **Results:** Two binomial linear regressions were conducted with bystander types with sufficient cell sizes. Controlling for gender, friends present during sexual harassment was negatively related to the likelihood of bystander intervention ( $OR=0.67$ ,  $p=0.05$ ). Compared to friends, the presence of family members ( $OR=2.64$ ,  $p<0.001$ ) and roommates ( $OR=1.84$ ,  $p=0.010$ ) increased the likelihood of intervention. In contrast, acquaintances ( $OR=0.41$ ,  $p=0.01$ ) and strangers ( $OR=0.41$ ,  $p=0.01$ ) decreased odds of intervention compared to friends. Additionally, identifying as female ( $OR=1.74$ ,  $p=0.01$ ) as opposed to male enhances the odds of bystander intervention. Gender did not moderate the relationships between bystander presence type and likelihood of intervention. **Conclusions:** Consistent with previous work, these findings suggest that the odds of bystander intervention are significantly related to the social context in which sexual harassment occurs. Family members and roommates may feel a stronger sense of responsibility to intervene due to their closeness to the victim compared to friends, acquaintances, and strangers. Male college students who experience sexual harassment were less likely to report bystander intervention during sexual harassment compared to their female counterparts, which suggests barriers to helping behavior. Future research could explore how other factors (e.g., public versus private location, number of bystanders present) may interact with the relationship between the bystander and victim to influence the likelihood of bystander intervention among college students. Bystander programming can use this information to help students overcome barriers to intervening for male students and less familiar victims.

**Jamilah R. George (Chrystal Vergara-Lopez, PhD. and Laura Stroud, PhD.)**

## **Publications**

**George, J. R.**, Taylor, R. J., Rouleau, T. M., Turner, E. D., & Williams, M. T. (2025). Seeking Care for Obsessive-Compulsive Symptoms Among African Americans: Findings from the National Survey of American Life. *Behavior Therapy*, 56(1), 1–15. <https://doi.org/10.1016/j.beth.2024.08.002>

## **Presentations**

**George, J. R.**, Lee, S. Y., Jennings, E. G., Stroud, L., Cruess, D., & Vergara-Lopez, C. (2025, March). *Racial discrimination and posttraumatic stress symptoms among African Americans adults: Conceptual framework for a quantitative systematic review*. Poster presented at the 27<sup>th</sup> Annual meeting of the Mind Brain Research Day, Warren Alpert Medical School of Brown University, Providence, RI.

Printz Pereira, D. M. B., Marfo, N., **George, J. R.**, Anderson, R. E., & Milan, S. (2025, March). *Preliminary findings of a culturally-adapted mindful parenting intervention for Black and Hispanic mothers*. Poster presented at the 27<sup>th</sup> Annual meeting of the Mind Brain Research Day, Warren Alpert Medical School of Brown University, Providence, RI.

**George, J. R.**, Watson, C., DeCastro, W., & Goldpaugh, D. (March, 2025). *Resilience in the face of power, discrimination & privilege in the psychedelic space*. Panel presented at the 3<sup>rd</sup> annual gathering of the Chacruna Psychedelic Culture 2025 Conference, San Francisco, CA.

Emerson, A., **George, J. R.**, McGowan, J., & Sisley, S. (March, 2025). *Digesting the FDA decision and the future of psychedelic treatments*. Panel presented at the 3<sup>rd</sup> Annual gathering of the Chacruna Psychedelic Culture 2025 Conference, San Francisco, CA.

Block-Lerner, J., **George, J. R.**, Graham-Lopresti, J., Vijay, A., Marks, D., Cardaciotto, L., & Wilde, Z. *Recruitment, retention, and reverence: ABCT as a partner in building diverse doctoral training communities*. (November, 2024). Panel presented at the 59th Annual Convention of the Association for Behavioral and Cognitive Therapies, Boston, MA.

Hong, J., **George, J. R.**, Chang, N. A., Das, A., Khin, P. P., Seager van Dyk, I., Shah, M. *Strengthening professional identities and career pathways in a landscape of diversity, equity, and inclusion advocacy: Taking the next step*. (November, 2024). Panel presented at the 59th Annual Convention of the Association for Behavioral and Cognitive Therapies, Boston, MA.

## **Grant Submissions**

Brown Resident Grant Award, 2024-2025

Title: Racial discrimination and posttraumatic stress symptoms among African Americans adults: Conceptual framework for a quantitative systematic review

## **Honors & Awards**

Robert Wood Johnson Foundation, Distinguished Dissertation Award, 2024

## **Racial Discrimination and Posttraumatic Stress Symptoms among African American Adults: Conceptual Framework for a Systematic Review**

<sup>1,2</sup> Jamilah R. George, M.S., <sup>1</sup> Sharon Y. Lee, PhD., <sup>1</sup> Ernestine G. Jennings, PhD., <sup>1</sup> Laura R. Stroud, PhD., <sup>2</sup> Dean Cruess, PhD., <sup>1</sup> Chrystal Vergara-Lopez, PhD

<sup>1</sup>*Brown University, Alpert Medical School, Department of Psychiatry and Human Behavior*

<sup>2</sup>*University of Connecticut, Department of Psychological Sciences*

African Americans (AAs) frequently experience racial discrimination across various social settings, including healthcare, education, housing, and employment, contributing to chronic stress and trauma throughout the lifespan. As a result, racial discrimination has been recognized as a distinct and persistent stressor among AAs. While growing academic attention has explored the relationship between racial discrimination and posttraumatic stress symptoms (PTSS), no systematic review to date has quantitatively examined this association in AAs. This systematic review was preregistered in PROSPERO and will follow the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, employing a structured search across PsycINFO, CINAHL, PubMed, and PTSDpubs (formerly PILOTS). Extracted data will include author(s), publication year, sample size, sample characteristics, trauma symptom measures, racism/discrimination measures, key findings, reported association strength, and effect size. The initial search identified 3,430 articles, currently being coded by two independent reviewers. The next phase will involve resolving discrepancies in included articles with a third independent coder. This study aims to bridge critical gaps in the literature by synthesizing how racial discrimination is operationalized and quantifying its association with PTSS. Clarifying the link between these constructs could advance understanding of the mental health consequences of racial discrimination and trauma on African Americans. Findings may also have implications for assessment and future interventions targeting racism-based trauma.

**Rachel Keszycki (Louisa Thompson, PhD.)**

**Publications**

Yang, J., **Keszycki, R. M.**, Boulais, B. M., Scimeca, L. M., Orleans, N. A., Ulrich, D. M., Ovsiew, G., P., Cerny, B. M., Robinson, A. D., Soble, J. R., & Phillips, M. S. (in press). The impact of comorbid internalizing psychopathology on verbal learning and memory among adults with attention-deficit/hyperactivity disorder. *Psychology & Neuroscience*.

Kawles, A., **Keszycki, R.**, Minogue, G., Zouridakis, A., Ayala, I., Gill, N., Macomber, A., Lubbat, V., Coventry, C., Rogalski, E., Weintraub, S., Mao, Q., Flanagan, M. E., Zhang, H., Castellani, R., Bigio, E. H., Mesulam, M. M., Geula, C., & Gefen, T. (2024). Phenotypically concordant distribution of pick bodies in aphasic versus behavioral dementias. *Acta neuropathologica communications*, 12(1), 31. <https://doi.org/10.1186/s40478-024-01738-7>

Finley, J. A., Tufty, L. M., Abalos, S. A., **Keszycki, R.**, Woloszyn, M., Shapiro, G., Cerny, B. M., Ulrich, D. M., Phillips, M. S., Robinson, A. D., & Soble, J. R. (2024). Identifying Factors that Increase False-Positive Rates on Embedded Performance Validity Testing in ADHD Evaluations. *Archives of clinical neuropsychology: the official journal of the National Academy of Neuropsychologists*, acae099. Advance online publication. <https://doi.org/10.1093/arclin/acae099>

**Presentations**

**Keszycki, R.**, Ayala, I., Zouridakis, A., Kawles, A., Macomber, A., Minogue, G., Weintraub, S., Castellani, R. J., Mesulam, M.-M., Geula, C., and Gefen, T. (2025, July). *Amygdala nuclei are not uniformly vulnerable to FTLT-tauopathies in PPA*. Poster to be presented at the 2025 Alzheimer's Association International Conference (AAIC), Toronto, Canada.

Stocks, J., **Keszycki, R.**, Gutstein, D., Parrish, T., Castellani, R. J., Geula, C., Barbieri, E., Weintraub, S., Mesulam, M.-M., and Gefen, T. (2025, July). *Amygdala parcellation reveals unique subregions of atrophy in FTLT-tauopathies*. Poster to be presented at the 2025 Alzheimer's Association International Conference (AAIC), Toronto, Canada.

Senkow, K. J., Kawles, A., Schleck, M., Nelson, C., Minogue, G., **Keszycki, R.**, Zouridakis, A., Macomber, A., Mather, M., Castellani, R. J., Geula, C., Mesulam, M.-M., Misharin, A. V., Gefen, T., and Grant, R. (2025, July). *SuperAging is associated with reduced age-related cortical neuroinflammation in the absence of neuropathology*. Poster to be presented at the 2025 Alzheimer's Association International Conference (AAIC), Toronto, Canada.

Ross, D., Split, M., Kunicki, Z., **Keszycki, R.**, Prieto, S., Manoochchri, M., Huey, E. D., and Barker, M. (2025, July). *Neuropsychiatric Symptoms in Comorbid Alzheimer's Disease Neuropathologic Change and Frontotemporal Lobar Degeneration*. Poster to be presented at the 2025 Alzheimer's Association International Conference (AAIC), Toronto, Canada.

Split, M., Ross, D., Kunicki, Z., **Keszycki, R.**, Prieto, S., Manoochehri, M., Huey, E. D., and Barker, M. (2025, July). *Features that Influence Fast Disease Progression in Behavioral Variant Frontotemporal Dementia*. Poster to be presented at the 2025 Alzheimer's Association International Conference (AAIC), Toronto, Canada.

**Keszycki, R.**, Dion, C., Prieto, S., Emrani, S., Au, R., Libon, D., and Thompson, L. (2025, March). *Digital Clock Drawing Performance is Associated with Neuroimaging Biomarkers of Alzheimer's Disease and Cerebrovascular Disease in Cognitively Healthy Older Adults*. Poster presented at the 53rd Annual Meeting of the International Neuropsychological Society (INS), New Orleans, LA, February 2025. Poster presented at the 27<sup>th</sup> annual Mind Brain Research Day at Brown University, Providence, RI.

**Keszycki R.**, Kawles A., Minogue G., Zouridakis A., Macomber, A., Weintraub S., PhD, Mesulam MM., MD, Castellani RJ., MD, Gill N., PhD, Geula C., PhD, Gefen T., PhD. (2024, September). *Differential Vulnerability of the Amygdala to 3R versus 4R FTLT-tauopathies*. Poster presented at the 14th International Conference for Frontotemporal Dementias (ICFTD), Amsterdam, Netherlands.

Kawles, A., **Keszycki, R.**, Zouridakis, A., Minogue, G., Macomber, A., Weintraub, S., Jamshidi, P., Castellani, R.J., M.-M., Geula, C., and Gefen, T. (2024, September). *Activated Microglia in FTLT-TDP Type C*. Poster presented at the 14th International Conference for Frontotemporal Dementias (ICFTD), Amsterdam, Netherlands,

Minogue, G., Macomber, A., Mather, M., Gutstein, D., Gill, N., Zouridakis, A., Kawles, A., **Keszycki, R.**, Jamshidi, P., Castellani, R. J., Mesulam, M.-M., Geula, C., and Gefen, T. (2024, September). *Hippocampal Vulnerability and Cognitive Impact of TDP-43 in SuperAgers*. Poster presented at the 14th International Conference for Frontotemporal Dementias (ICFTD), Amsterdam, Netherlands.

Zouridakis, A., Minogue, G., Kawles, A., **Keszycki, R.**, Macomber, A. Jamshidi, P., Castellani, R. J., Mesulam, M.-M., Geula, C., and Gefen, T. (2024, September). *White Matter Integrity in Primary Progressive Aphasia due to 4R FTLT-tauopathies*. Poster presented at the 14th International Conference for Frontotemporal Dementias (ICFTD), Amsterdam, Netherlands, September 2024.

## Honors & Awards

Mind Brain Research Day Second Prize Clinical Psychology Resident Award, 2025

National Register Internship Travel Scholarship, 2024

Conference Travel Grant, Department of Psychiatry and Behavioral Sciences, Northwestern University, 2024



# Digital Clock Drawing Performance is Associated with Neuroimaging Biomarkers of Alzheimer's Disease and Cerebrovascular Disease in Cognitively Healthy Older Adults

Rachel Keszycki, Catherine Dion, Sarah Prieto, Sheina Emrani, Rhoda Au, David Libon,  
and Louisa Thompson

**Objective:** Clock drawing is a classic neuropsychological test with two conditions: drawing a clock showing “10 past 11” given a set of instructions (“command”) and copying a pre-drawn model clock (“copy”). Improvements from command to copy (i.e., making fewer errors in the copy than command condition), or lack thereof, helps distinguish underlying cognitive deficits. Previous studies report that digitized clock drawing test (dCDT) metrics can distinguish between normal aging, mild cognitive impairment, and dementia, and are associated with neuroimaging biomarkers of Alzheimer's disease (AD) and cerebrovascular disease (CVD). However, previous studies have mainly used smaller samples and focused on symptomatic individuals. We used a proprietary machine learning-derived scoring system to identify and compare dCDT features associated with hippocampal volume and white matter hyperintensity volume, two MRI metrics that could help identify individuals at risk for AD and/or CVD, in large sample of older adults without dementia.

**Participants and Methods:** Participants included 840 individuals (383 males, 457 females) from the Framingham Heart Study, a community-based cohort study of epidemiology and risk factors for cardiovascular disease. Individuals with dementia were excluded. Mean age was 70.76 years (SD = 6.75), and ~24% carried an APOE-e4 allele. Clock drawing performance was collected with a digital pen. Variables were generated using the DCTclock™ machine-learning-based scoring algorithm. For both test conditions, we examined age-adjusted composite indices of drawing efficiency, simple motor planning, information processing, and spatial reasoning. We also examined difference scores from command to copy condition for each composite variable. Hierarchical linear or logistic regressions controlling for sex, age, and education examined relationships between dCDT indices or difference scores and hippocampal volume controlling for total intracranial volume (hippocampal TICV) or white matter hyperintensity (WMH) volume, respectively. WMH volume was binarily split between high (> mean +1 SD) or low (≤ mean +1 SD).

**Results:** Greater hippocampal volume was associated with better performance across all indices (all  $p < .05$ ), most notably command information processing ( $\beta = .130$ , SE = .000,  $p < .001$ ) and copy spatial reasoning ( $\beta = .100$ , SE = .000,  $p < .01$ ). Lower WMH volume was associated with better spatial reasoning scores on the command ( $\beta = -1.309$ , SE = .605,  $p < .05$ ) and copy conditions ( $\beta = -1.709$ , SE = .624,  $p < .01$ ) but not with scores on other variables. Lower WMH volume was also associated with improved performance from command to copy across all indices (all  $p < .01$ ), particularly drawing efficiency ( $\beta = -1.796$ , SE = .534,  $p < .001$ ) and spatial reasoning ( $\beta = -1.778$ , SE = .532,  $p < .001$ ).

**Conclusions:** Metrics of dCDT performance may differentially relate to AD- and CVD-related neuroimaging biomarkers. Larger hippocampal TICV was related to better scores on all indices from both conditions but not changes in performance between them. Lower WMH volume was associated with better command and copy spatial reasoning performance and improved performance from command to copy across all indices. Generalizability is limited by the minimal racial, ethnic, and educational diversity in our sample. Future studies will examine potential moderating effects of blood-based biomarkers and APOE status.

**Mindy Kibbey (Emily Gathright, PhD and Carly Goldstein, PhD.)**

**Publications**

Farris, S. G., **Kibbey, M. M.**, Derby, L., Keller, B., Hoyt, D., Brinkman, H. R., Alderman, B. L., & Leyro, T. M. (in press). Tailoring Interoceptive Exposure for Patients With Medical Comorbidities. *Cognitive and Behavioral Practice*.

Farris, S. G., Derby, L., & **Kibbey, M. M.** (2025). Getting comfortable with physical discomfort: A scoping review of interoceptive exposure in physical and mental health conditions. *Psychological Bulletin*, 151(2), 131.

Farris, S. G., **Kibbey, M. M.**, Derby, L., Keller, B., Leyro, T. M., Alderman, B. L., ... & DiBello, A. M. (2025). A Confirmatory Factory Analysis of the Exercise Sensitivity Questionnaire (ESQ). *Journal of Cardiopulmonary Rehabilitation and Prevention*, 10-1097.

Farris, S. G., **Kibbey, M. M.**, Keller, B., Derby, L., Leyro, T. M., Alderman, B. L., ... & Abrantes, A. M. (2024). Behavioral exposure for interoceptive tolerance (BE-FIT): A stage II randomized clinical trial protocol. *Contemporary Clinical Trials*, 147, 107706

**Presentations**

Farris, S.G., **Kibbey, M. M.**, Derby, L., Keller, B., Leyro, T. M., Alderman, B. L., Steinberg, M. B., Abrantes, A. M., & DiBello, A. M. (2024, September). *A Confirmatory Factory Analysis of The Exercise Sensitivity Questionnaire (ESQ)*. Talk selected for JCRP 2024 Featured Science Manuscript at the Annual Convention of the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), Anaheim, CA.

**Kibbey, M. M.**, Goldstein, C. M., Gathright, E. C., DeAngelis, J., Breault, C., Buckley, M.L., Pierce, J. F., & Wu W. (2025, March). *High Fall Risk Older Adults Improve Functional Capacity in Cardiac Rehabilitation: Examining Risk Factors, Patient Characteristics, and Impact on Engagement and Outcomes*. Poster presented at the Warren Alpert Medical School of Brown University Department of Psychiatry and Human Behavior 27<sup>th</sup> Annual Mind Brain Research Day, Providence, RI.

**Kibbey, M. M.**, Goldstein, C. M., Gathright, E. C., DeAngelis, J., Breault, C., Buckley, M.L., Pierce, J. F., & Wu W. (2025, June). *High Fall Risk Older Adults Improve Functional Capacity in Cardiac Rehabilitation: Examining Risk Factors, Patient Characteristics, and Impact on Engagement and Outcomes*. Poster submitted to the Warren Alpert Medical School of Brown University Department of Medicine Annual Research Forum, Providence, RI.

**Kibbey, M. M.**, Gathright, E. C., Goldstein, C. M., DeAngelis, J., Breault, C., Buckley, M.L., Pierce, J. F., & Wu W. (2025, September). *Fall Risk Among Older Adults In Cardiac Rehabilitation: Articulating Risk Factors, Prevalence, Patient Characteristics, Engagement, And Outcomes*. Presentation submitted to the 40<sup>th</sup> Annual Meeting of the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), Palm Beach, FL.

## **Honors & Awards**

G. Terence Wilson Outstanding Graduate Student Research Award 2025

## Fall Risk Assessment and Outcomes in Cardiac Rehabilitation

Mindy Kibbey, MS, Emily Gathright, PhD, and Carly Goldstein, PhD

Many cardiac rehabilitation (CR) patients have risk factors for falls, including conditions and medications that cause syncope, dizziness, or poor postural control; gait and balance difficulties from musculoskeletal or neurological conditions; visual, neuropathic, or cognitive impairment; or frailty and sarcopenia. Falls are associated with increased morbidity, frailty, and mortality. CR programs are well-situated to assess fall risk and deliver tailored, supervised exercise prescriptions, thereby reducing fall risk during exercise while improving cardiovascular health, increasing functional capacity, and improving frailty. However, fall risk prevalence among CR patients is not well-documented, and there is a gap in literature describing CR adherence and outcomes for patients at elevated risk for falls. This retrospective observational study reviewed fall risk variables, CR engagement, and functional capacity outcomes as reported in electronic health record data from all patients aged 65 and older enrolled in a high-volume outpatient CR program during 2023. Patients' intake assessment included fall risk evaluation, demographics, medical history, and self-reported psychosocial questionnaires. CR engagement was determined by number of CR sessions completed and whether patients continued their prescribed exercise program until a pre-determined exit date. Functional capacity change was evaluated via either pre-post CR change in metabolic equivalents (METs) estimated using a maximum effort exercise tolerance test or pre-post change in distance scores on 6-Minute Walk Test. Participants' ( $N=387$ , 70% male, 89% white) mean age was 74.24 years old (range = 65 to 93). Roughly one quarter of the sample ( $n = 99$ ) was identified as "high fall risk." These patients had higher rates of admission for heart failure and valve repair/replacement surgery, had higher incidence of type 2 diabetes, renal disease, and pulmonary disease, and were more often considered high risk by the AACVPR stratification algorithm. Most patients reported low general anxiety symptoms. However, high fall risk patients were more likely to endorse fear of falling (37% versus 1%). Among high fall risk patients, the most frequently endorsed risk factors included balance disturbance ( $n = 71$ ), gait disturbance ( $n = 67$ ), use of an assistive device ( $n = 65$ ), visual difficulty ( $n = 51$ ), fear of falling ( $n = 37$ ), dizziness ( $n = 35$ ), and past 6 months fall ( $n = 35$ ). Though high fall risk patients were less likely to complete their CR program (35% dropout versus 19% dropout), the difference between conditions in total number of sessions attended was relatively small, with high fall risk patients attending an average of 23.80 sessions, and low fall risk patients attending 26.53. The most common reason for dropping out prior to predetermined program end date was illness: 14% of high fall risk patients versus 4% of low fall risk patients failed to complete due to illness. Importantly, despite noted discrepancies in engagement, there was no significant difference between the two groups in functional capacity gains (i.e., change in METs or 6-Minute Walk Test scores). This is the first study to examine fall risk incidence and outcomes in CR patients aged 65 and older. Roughly 25% of patients at a high-volume comprehensive CR program were identified as high fall risk, largely driven by gait and balance disturbances, use of assistive devices for ambulation, and visual impairments. Though these patients completed slightly fewer CR sessions on average and were more likely to drop out due to illness, they still completed an average of 24 CR sessions and were just as successful as low fall risk patients in improving functional capacity from CR participation. These findings support hypotheses that high fall risk patients are as likely to benefit from CR participation as lower risk patients. In fact, resultant functional capacity gains are especially valuable for these individuals given their increased vulnerability to morbidity, frailty, and mortality. Continued efforts to identify and mitigate fall risk to ensure equitable CR participation for these patients is essential to support their cardiovascular health and physical functioning.

**Samantha Klaver (Jennifer Wolff, PhD. and Katherine Tezanos, PhD.)**

**Publications**

Burr, E.K., Dvorak, R.D., De Leon, A.N., **Klaver, S.J.**, Peterson, R., Hayden, E.R., Maynard, M.H., Almeyda, S., & Medina, A. (under review). Sensitivity to punishment by sensitivity to reward differentially influence the relationship between eating expectancies and loss-of-control eating.

Peterson, R., Dvorak, R.D., Woerner, J., De Leon, A.N., **Klaver, S.J.**, Burr, E.K., Maynard, M.H., & Hayden, E.R. (under review). Invariance testing and associations between the Sexual and Negative Dating Inventory (SANDI): Predictive validity of adverse sexual experiences in a sample of sexual and gender minorities.

Burr, E.K., Dvorak, R.D., De Leon, A.N., **Klaver, S.J.**, Peterson, R., Hayden, E.R., Maynard, M.H., Almeyda, S., & Medina, A. (in press). Understanding loss of control eating through the lens of expectancies and reinforcement sensitization. *Psychiatry: Interpersonal and Biological Processes*.

Kudapa, D., **Klaver, S.J.**, Peterson, R., Burr, E.K., De Leon, A.N., Leary, A.V., Maynard, M.H., Hayden, E.R., Kramer, M.P., & Dvorak, R.D. (2024). A Deviance Regulation Theory Intervention Affects the Association between Narcissistic Traits and Alcohol Harm Reduction Strategies in College Students. *Substance Use & Misuse*.

Leary, A.V., Dvorak, R.D., Burr, E.K., De Leon, A.N., **Klaver, S.J.**, Lynch, G., Toth, E., Diaz, M.J., Martin, S. (2024). Effects of a Brief Safe Drinking Intervention on Negative Affect: Examining Potential Side Effects of Deviance Regulation Theory Interventions. *Journal of Drug Education: Substance Use Research and Prevention*.

Dvorak, R.D., Paulson, D., Dunn, M., Burr, E.K., Maynard, M.H., De Leon, A.N., **Klaver, S.J.**, Leary, A.V., Hayden, E., Allen, Q., & Toth, E. (2024). Effects of Medical Cannabis Use on Physical and Psychiatric Symptoms Across the Day Among Older Adults. *Psychiatry Research*.

Tezanos, K.M., **Klaver, S.J.**, Affleck, K., Hunt, J., & Wolff, J.C. (under review). Moving Beyond Crisis Stabilization: Utilizing Patient Perspectives of Adolescent Inpatient Psychiatric Hospitalization to Better Inform Care.

Magri, T.D., De Leon, A.M., **Klaver, S.J.**, Hayden, E., Burr, E.K., Almeyda, S., Bilagi, N., Nguyen, M., Wang, C.L., Dunn, M., Meshesha, L.Z., & Dvorak, R.D. (under review). I'm Not Thinking When I'm Drinking: The Interaction of Mood and Rumination Across Drinking and Non-Drinking Days.

Leary, A.V., Burr, E.K., De Leon, A.N., **Klaver, S.J.**, Hayden, E.R., Akil, S., & Dvorak, R.D. (under review). Development and Validation of the COVID Beliefs Scale (CBS).

## **Presentations**

Euline, T., Collao, I., **Klaver, S.J.**, Paitan, S., Dvorak, R.D. (2025, April). *The Prospective Associations Between Adverse Childhood Experiences and Substance-Related Problems Via Emotional Instability is Moderated by Distress Tolerance*. Poster presented at the 11<sup>th</sup> Annual UF CARE Symposium, Gainesville, FL.

**Klaver, S.J.**, Coons, H., Palumbo, A., Zelakiewicz, E., Tezanos, K.M, Affleck, K., & Wolff, J.C. (2025, March). *Understanding Youth and Caregiver Expectations of Inpatient Psychiatric Care for Suicidal Adolescents: A Qualitative Analysis*. Poster presented at Brown University Mind Brain Research Day, Providence, RI.

# Understanding Youth and Caregiver Expectations of Inpatient Psychiatric Care for Suicidal Adolescents: A Qualitative Analysis

Samantha J. Klaver, M.S., Hailey Coons, B.A., Amy Palumbo B.S., Elle Zelakiewicz, B.S., Katherine Tezanos, Ph.D., Katelyn Affleck, Ph.D., & Jennifer C. Wolff, Ph.D.

## **Abstract:**

**Introduction:** Inpatient psychiatric hospitalization is commonly considered the "default" intervention for youth at risk of suicide. This intervention aims to provide short-term stabilization, assessment, and intervention, most commonly via the incorporation of milieu treatment and individual, family, and group therapy. Despite the widespread use of these therapeutic components, current models of inpatient psychiatric care were developed without robust empirical evidence or substantial input from critical parties, including the impacted youth and their families. Consequently, there is a pressing need for an evidence-based care framework that integrates these perspectives. This study sought to evaluate the experiences of youth and their caregivers in inpatient psychiatric care, particularly examining their expectations and whether these expectations were met.

**Methods:** Child-caregiver dyads ( $n = 46$ ) were recruited from an adolescent inpatient unit located in the Northeast. Adolescents ( $M_{age} = 14.4$ ,  $SD_{age} = 1.69$ ) and their caregivers completed open-ended self-reports about their expectations and beliefs about hospitalization. A subset of caregivers ( $n = 15$ ) completed semi-structured qualitative interviews focused primarily on the caregivers' expectations of care and the extent to which these expectations were met or unmet throughout their child's hospitalization.

**Results:** Results from a rapid qualitative analysis of the qualitative interviews and short responses indicated that, while youth and caregivers felt that the inpatient setting effectively facilitated short-term stabilization, the inpatient setting fell short in several key ways. Notable concerns included a lack of continuity of care post-discharge, inadequate communication between providers and families, and a need for more individualized treatment. Youth expressed dissatisfaction with the limited development of coping skills, while caregivers emphasized the need for better discharge planning and post-discharge support.

**Conclusion:** The findings underscore the importance of incorporating youth and caregiver perspectives into the development of inpatient care models. Importantly, the findings highlight the need for a more personalized, family-centered approach to inpatient psychiatric care that acknowledges the unique needs of youth and their families, including cultural differences, to enhance treatment efficacy and promote long-term recovery.

**Ilana Ladis (Lauren Weinstock, PhD.)**

**Presentations**

**Ladis, I.,** Rabasco, A., Choi, J., Gaudiano, B. A., Weinstock, L., Boudreaux, E. D., Camargo, Jr., C. A., & Miller, I. (2025, March). *Outpatient mental health treatment utilization in a sample of adults with suicidality recruited from U.S. emergency departments*. Poster presented at Brown University Mind Brain Research Day, Providence, RI.



## Outpatient mental health treatment utilization in a sample of adults with suicidality recruited from U.S. emergency departments

Ilana Ladis, M.A., Ana Rabasco, Ph.D. Jihoon Choi, B.S., Brandon A. Gaudiano, Ph.D., Lauren Weinstock, Ph.D., Edwin D. Boudreaux Ph.D., Carlos A. Camargo, Jr., M.D., Dr.PH., & Ivan Miller, Ph.D.

Nearly one-quarter of adults in the U.S. struggle with mental illness (Reinert et al., 2024). However, relatively few individuals receive adequate mental health treatment due to several factors, such as disparities in healthcare access and utilization (Cook et al., 2019). For example, Black individuals are more likely to access mental health care via emergency services than through outpatient treatment relative to their White counterparts (Primm et al., 2009; Samnaliev et al., 2009). Other demographic characteristics correlate with mental health treatment utilization at the outpatient level. For instance, identifying as female, having more education, and being insured are associated with increased outpatient treatment utilization (Roberts et al., 2018; Terlizzi & Zablotzky, 2020; Walker et al., 2015), while older adults are less likely than younger adults to access mental health services (Karlin et al., 2008). The present study describes outpatient treatment utilization across several key demographic factors. This project is a secondary analysis of the Emergency Department Safety Assessment and Follow-up Evaluation study (ED-SAFE; Boudreaux et al., 2013; Miller et al., 2017), which evaluated a universal suicide screening and suicide intervention for individuals recruited from eight U.S. emergency departments ( $N = 1,376$ ) and who had past-week suicidal thoughts or behaviors. For the present study, the outcome variable was the self-reported number of outpatient mental health visits in the past six months, assessed at baseline prior to the ED-SAFE intervention(s). Descriptive statistics were calculated, and a negative binomial model was fitted to examine the association between factors of interest (e.g., age, sex, race/ethnicity, education level, insurance status, sexual orientation) and the number of mental health visits. Tukey's post-hoc correction was applied when evaluating pairwise comparisons across demographic categories. Baseline demographic and outpatient mental health visit data were available for 996 participants ( $M_{\text{age}} = 37.8$ ;  $SD_{\text{age}} = 13.3$ ; 60% female; 71.3% non-Hispanic White). Across this subsample, the mean number of past six-month outpatient mental health visits was 10.2 ( $SD = 18.2$ ), while the modal number of visits was 0 ( $n = 205$ ). Means and standard deviations for the number of visits across each demographic and clinical category are also presented. Factors that were significantly associated with *more* mental health visits included being female (relative to male;  $B = .27$ ,  $SE = .09$ ,  $z = 2.97$ ,  $p = .003$ ), White (relative to non-White;  $B = .19$ ,  $SE = .10$ ,  $z = 1.96$ ,  $p = .050$ ), having insurance (relative to not having insurance;  $B = .54$ ,  $SE = .11$ ,  $z = 4.84$ ,  $p < .001$ ), and not reporting sexual orientation (relative to identifying as bisexual;  $B = .94$ ,  $SE = .34$ ,  $z = 2.74$ ,  $p = .021$ , or straight;  $B = 1.06$ ,  $SE = .31$ ,  $z = 3.47$ ,  $p < .001$ ). Factors that were significantly associated with *fewer* mental health visits included identifying as 65+ (relative to 18 - 24 years old;  $B = -.98$ ,  $SE = .33$ ,  $z = -2.98$ ,  $p = .034$ , or 35 - 44 years old;  $B = -1.18$ ,  $SE = .33$ ,  $z = -3.62$ ,  $p = .004$ ) and being a vocational/tech training graduate (relative to all other education levels;  $B_s < .91$ ,  $SE_s < .31$ ,  $z = -3.29$ ,  $p_s < .013$ ). Our results replicated extant findings in the literature, such as increased outpatient mental health utilization among individuals who are female, non-Hispanic White, and insured, and decreased use among those who are older and with less education. This descriptive work is part of a larger project examining demographic and clinical factors associated with inpatient hospitalization and emergency department visits among the ED-SAFE sample (Rabasco et al., in prep). Future research can build upon this descriptive data by clarifying the reasons for outpatient mental health utilization (or under-utilization) in this high-risk population.

**Rafael Leite (KayLoni Olson, PhD.)**

**Publications**

Llabre, M. M., Timpano, K. R., Broos, H. C., **Leite, R. O.**, & Saab, P. G. (2024). Lessons from a longitudinal community-based investigation of adherence to guidelines and intent to vaccinate during the COVID-19 pandemic. *Vaccine*, 42(24), 126265. <https://doi.org/10.1016/j.vaccine.2024.126265>

**Presentations**

**Leite, R. O.**, Panza E., Lillis, J., Chen, T., Sawyer, K., & Olson, K. (2025, March). *A Systematic Review of Interventions Targeting Weight Bias Internalization: Considerations for Advancing Health Equity*. Poster presented at The Warren Alpert Medical School of Brown University's Mind Brain Research Day, Providence, RI.

Schneider, J., **Leite, R. O.**, St. George, S. M., Larsen, B., & Arredondo, E. (2025, March). *Lessons learned using technology to engage Latinx youth in obesity prevention and health promotion interventions*. Poster presented at the 46th Annual Meeting for the Society of Behavioral Medicine, San Francisco, CA.

Ozmeral, A., **Leite, R.O.**, Klein, K., & Kruse, J. (2024, August). *Pre-doctoral health psychology internship panel and Q&A session*. Symposium presented at the American Psychological Association Annual Convention, Seattle, WA.

**Honors & Awards**

National Register Internship Travel Scholarship, American Psychological Foundation, 2024

# **A Systematic Review of Interventions Targeting Weight Bias Internalization: Considerations for Advancing Health Equity**

Rafael Leite, Emily Panza, Jason Lillis, Tina Chen, Kelsey Sawyer, and KayLoni Olson

**Introduction:** Weight bias internalization refers to the application of negative stereotypes about weight to oneself that subsequently leads to self-devaluation. Weight bias internalization has been strongly associated with adverse mental and physical health consequences. Weight bias internalization is understudied among marginalized populations, but preliminary work points to greater prevalence of weight bias internalization among individuals with minoritized identities (e.g., individuals from many racial, ethnic, and sexual minority groups). There is a growing body of research focused on interventions for weight bias internalization and thus a need for synthesis of extant studies to inform future treatment development. This systematic review aims to use a health equity lens to examine the state of the literature on interventions addressing weight bias internalization and to synthesize 1) intervention characteristics (e.g., theoretical framework, modality, frequency), 2) equity considerations in intervention development and evaluation, and 3) effects of interventions on weight bias internalization and biopsychosocial correlates.

**Methods:** This ongoing systematic review will be conducted following the Cochrane Handbook for Systematic Reviews of Interventions, reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, and registered through PROSPERO. The review includes studies testing psychological interventions targeting adults with weight bias internalization, with a measure of weight bias internalization as an outcome. The databases include Ovid MEDLINE, Embase, Web of Science, APA PsychInfo, CINAHL, and ProQuest Theses and Dissertations. Two reviewers will independently screen titles, abstracts, and full-text articles using the Covidence software tool designed to manage article screening. Disagreements will be resolved through discussion or with a third reviewer. The PROGRESS-Plus framework will be used to assess equity-relevant data collected across studies. We will extract and display sample sociodemographic characteristics, study design, intervention description, outcome measures, effect sizes, and major findings from each study. We will assess risk of bias to evaluate the methodological rigor of studies reviewed.

**Preliminary Results:** Given the ongoing status of this systematic review, we plan to present the state of the project at the time of presentation. The database search was conducted in January 2025 and 1,411 articles were identified for initial screening. Title and abstract reviews are ongoing with an anticipated completion date of April 2025. Full-text reviews and data extraction will be completed in May 2025.

**Discussion:** Understanding extant weight bias internalization intervention approaches and their efficacy can inform the optimization of future interventions and their ability to be disseminated for widespread use. This systematic review can elucidate gaps in considerations of diversity, equity, and inclusion principles in the current literature. Examining the extent to which diversity factors were considered in these interventions (e.g., comprehensive reporting of sample demographic characteristics, cultural tailoring of interventions) can help ensure that shortcomings are addressed so that the next generation of interventions are developed and evaluated more equitably. The results of this systematic review will be of interest to intervention scientists and clinicians to guide evidence-based decisions in their clinical assessment and intervention for weight bias internalization.

**Alina Lesnovskaya (Athene Lee, PhD.)**

**Publications**

Oberlin, L, Wan, L, Kang, C, Romano, A, Aghjayan, S, **Lesnovskaya, A**, Ripperger, HS, Drake, J, Harrison, R, Collins, AM, Molina-Hidalgo, C, Grove, G, Huang, H, Kramer, AF, Hillman, CH, Burns, JM, Eric Vidoni, ED, McAuley, E, Kamboh, I, Jakicic, J, & Erickson, KI (2024). Cardiorespiratory Fitness is Associated with Cognitive Function in Late Adulthood: Baseline Findings from the IGNITE Study. *British Journal of Sports Medicine*, 59, no. 3 (2025): 167-176.

Ripperger, HS, Reed, RG, Kang, C, **Lesnovskaya, A**, Aghjayan, S, Huang, H, Wan, L, Sutton, B, Oberlin, L, Collins, A, Burns, J, Vidoni, ED, Kramer, AF, McAuley, E, Hillman, C, Grove, GA, Jakicic, J, & Erickson, KI (2024). Cardiorespiratory Fitness, Hippocampal Subfield Morphology, and Episodic Memory in Older Adults. *Frontiers in Aging Neuroscience*, 16, 1466328.

**Lesnovskaya, A**, Reed, R, Stillman, CM, Flory, JD, Erickson, KI, Marsland, AL, Wright, AG, Muldoon, M, & Manuck, SB. (under review). Cardiometabolic Risk Accounts for Associations Between Personality and Cognition in Midlife.

Jain, S, Solis-Urra, P, **Lesnovskaya, A**, Wan, L, Molina-Hidalgo, C, Kang, C, Kamarck, T, Reed, R, Marsland, A, Ripperger, HS, Huang, H, Grove, G, Jakicic, JM, Kramer, AF, Hillman, CH, McAuley, E, Burns, J, Vidoni, E, Sutton, B, & Erickson, KI. (under review). Associations between white matter lesions, adiposity, and systemic inflammation in late adulthood: results from the IGNITE study.

**Presentations**

**Lesnovskaya, A.**, Demos, K., Harrison, T., Lovato, L., Richardson, K., Rolon, F., Bawden, S., McManus, C., Oh, H., Lee, A. (2025, March). *Relation Between Markers of Systemic Inflammation, White Matter Lesions, and Cognitive Performance in Late Adulthood*. Poster session presented at the 27th annual Mind Brain Research Day, Department of Psychiatry and Human Behavior and the Carney Institute for Brain Science, Brown University, Providence, RI.

**Lesnovskaya, A**, Jain, S, Wan, L, Molina-Hidalgo, C, Huang, H, Marsland, A, ... & Erickson, KI (2025, March). *Regional White Matter Hyperintensities, Cardiorespiratory Fitness, and Cognition in Late Adulthood*. Paper presented at the annual meeting of the Society for Biopsychosocial Science and Medicine, Seattle, WA.

Jain, S, **Lesnovskaya, A**, Wan, L, Molina-Hidalgo, C, Huang, H, Marsland, A, ... & Erickson, KI (2024, July). *Relation Between Markers of Systemic Inflammation, White Matter Lesions, and Cognitive Performance in Late Adulthood*. Poster session presented at the Alzheimer's Association International Conference, Philadelphia, PA.

**Honors & Awards :**

Society for Biopsychosocial Science and Medicine (SBSM) Travel Award for MacLean Scholars 2025

University of Pittsburgh Graduate and Professional Student Government Travel Award, April 2025

## **Lifestyle moderators of the association between white matter hyperintensities and cognition in the U.S. POINTER study**

Alina Lesnovskaya<sup>1,2</sup>, Katheryn Demos<sup>2</sup>, Theresa Harrison<sup>3</sup>, Laura Lovato<sup>4</sup>, Hwamee Oh<sup>2</sup>, Athene Lee<sup>2</sup>,  
for the U.S. POINTER Study Group

<sup>1</sup>*Department of Psychology, University of Pittsburgh*

<sup>2</sup>*Department of Psychiatry and Human Behavior, Brown University Alpert Medical School*

<sup>3</sup>*Department of Neuroscience, University of California Berkeley*

<sup>4</sup>*Department of Biostatistics and Data Science, Wake Forest University School of Medicine*

**Background:** Cognitive resilience refers to the propensity to maintain cognitive functioning despite the presence of aging-related brain pathology. White matter hyperintensities (WMHs) are well-established indicators of cerebrovascular disease, co-occur with Alzheimer's disease pathology, and their presence and extent predict cognitive decline in late adulthood. Though growing evidence suggests that lifestyle factors such as physical activity, sleep quality, nutritional diet, and social engagement can reduce risk of aging-related cognitive decline, it is unclear whether these variables promote cognitive resilience in the face of high WMH burden.

**Objective:** To test whether modifiable lifestyle factors, specifically physical activity, sleep quality, diet, and social engagement, statistically moderate associations between WMH volume and cognitive performance in older adults at heightened risk for cognitive decline.

**Methods:** Baseline data will be derived from the *U.S. Study to Protect Brain Health Through Lifestyle Intervention to Reduce Risk* (U.S. POINTER), a 2-year randomized controlled trial evaluating the effects of a multimodal lifestyle intervention in older adults (60-79 years) at risk for cognitive decline, as well as the U.S. POINTER Neuroimaging ancillary study. Analyses will include participants (N = ~900) who completed structural brain imaging, the Neuropsychological Test Battery modified for POINTER, and self-report inventories for four lifestyle variables – physical activity engagement, sleep quality (Pittsburgh Sleep Quality Index), adherence to the MIND diet (MIND diet score), and social engagement. Composite variables of global cognition and three sub-domains (executive function, memory, and processing speed) were previously calculated. Global WMH volume will be log-transformed and adjusted for intracranial volume.

**Analytic Plan:** Four series of regression models will test associations between a *global WMH volume* × *each lifestyle variable* interaction term and global cognition. Analyses will then be repeated for each cognitive sub-domain. Each model will include age, education, gender, ethnoracial identity as covariates. Simple slopes will be calculated for all statistically significant interactions with interactions probed at one standard deviation units above and below the mean.

**Predicted Results:** We hypothesize that engagement in healthy lifestyle habits will attenuate the association between greater WMH volume and poorer performance across cognitive domains. Specifically, we predict that the relationship between greater global WMH volume and poorer cognitive performance will be weakest among participants with greater engagement in physical activity, better sleep quality, greater MIND diet adherence, and greater social engagement. **Implications:** Ultimately, we hope that the findings of this study will shed light on gaps in the cognitive resilience literature, inform future longitudinal investigations of cognitive decline related to cerebrovascular disease, and help identify promising modifiable lifestyle targets for future interventions.

**Rachel McDonald (Petia Radoeva, MD, PhD.)**

**Publications**

Terroso, S. R., McKenney, E. E., Brunwasser, S. M., Richards, J. K., Day, T. C., Kofner, B., **McDonald, R. G.**, Gillespie-Lynch, K., Kang, E., Lerner, M.D., & Gotham, K. O. (2024). Longitudinal Relationships Between Depressive Attributional Style and Internalizing Symptoms in an Autism-enriched Sample of Incoming College Students. *Autism in Adulthood*.

**McDonald, R.G.**, Cargill, M.I., Khawar, S., & Kang, E (2024). Emotion dysregulation in Autism: A meta-analysis. *Autism*, 29(12). doi: 10.1177/13623613241257605.

Mahmud, F., Kang, E., **McDonald, R. G.**, Wallace, D., Masia, C. (under review). Disentangling the association between cognitive flexibility and anxiety in autistic youth: Real-world flexibility versus performance-based task switching. *Frontiers in Psychiatry*.

**McDonald, R.G.**, Radoeva, P.D., Elizardo, C., Li, E.A., Legere, C.H., Saletin, J., M., Hunt, J.I., Deoni, S.C.L., Sheinkopf, S.J., Mazefsky, C.A., Philip, N.S., Dickstein, D.P. (under review). Relationship between Food Selectivity, Sleep Problems and Emotional Reactivity in Autistic Youth. *Pediatrics*.

**McDonald, R.G.**, Lynch, E., Cargill, M.I., Khawar, S., Freden, C., & Kang, E. (under review). Linking Emotion Dysregulation to Autistic Traits Across Neurodiverse Samples. *Journal of the American Academy of Child and Adolescent Psychiatry*.

**Presentations**

Kang, E., **McDonald, R. G.**, Ahmad, R., & Wallace, D. (2025, May). *Neural Correlates of Cognitive Flexibility Differences in Autistic and Allistic Youth*. In E. Kang (Chair), Executive function development in autism: Multimodal insights into early indicators, neural mechanisms, and outcomes. Panel accepted to the International Society for Autism Research (INSAR) Annual Meeting, Seattle, WA.

Radoeva, P.D., Elizardo., C., **McDonald., R.G.**, Hunt, J.I., Deoni, S.J., Sheinkopf, S.J., Mazefsky, C.A., Dickstien, D.P., Philip, N.S. (2025, May). *White Matter Microstructural Organization Associated with Depressive Symptoms in Autistic Children in the ABCD Study*. Presentation accepted to the International Society for Autism Research, Seattle, WA, United States.

Baker, J.K., Fenning, S., Erath, A., Messinger, S., **McDonald, R.G.**, Lynch, E., Cifuentes, N., Garcia, H., Ahmad, R., Castillo, A., Kang, E., Radoeva, P.D., Elizardo., C., McDonald., R.G., Hunt, J.I., Deoni, S.J., Sheinkopf, S.J., Mazefsky, C.A., Dickstien, D.P., Philip, N.S., Emezie, A., Kamel., R., Dunphy, M., Youn, A., Nuske, H.J., & Siegel, M. (2025, May). *Physiological Indicators and Neural Mechanisms of Dysregulated Emotional Profiles in Autistic Youth*. **R.G. McDonald (Chair)**. Panel accepted to the International Society for Autism Research, Seattle, WA, United States.

**McDonald, R.G.**, Lynch, E., Cifuentes, N., Garcia, H., Ahmad, R., Castillo, A., & Kang, E. (2025, May). *Emotion Dysregulation: Examining the Predictive Utility of Delta Beta Correlations in Autistic*

*Youth. In R.G. McDonald (Chair), Physiological Indicators and Neural Mechanisms of Dysregulated Emotional Profiles in Autistic Youth. Presentation accepted to the International Society for Autism Research, Seattle, WA, United States.*

**McDonald , R.G.**, Rosen, T.E., & Kang, E. (2024, November). *Impact of emotion dysregulation on multiple mental health conditions in autistic youth. In R. G. McDonald & E.Kang (Chairs), Impact and treatment of emotion dysregulation in autistic people across the lifespan. Symposium accepted at the 58th Annual Convention of the Association for Behavioral and Cognitive Therapies, Philadelphia, PA, United States.*

**McDonald, R.G.**, Rosen, T.E., Kang, E., Kushner, R., Holbrook, C., Hendrix, N., Pickard, K., Conner, C.M., Beck, K., White, S., Mazefsky, C., Libsack, E.J., Kukaj, G., Brennan, E., Keinan, E., Chen, J.H., Pepa, L., Bal, V., Chu, B.C., & Keefer, A. (2024, November). *Impact and treatment of emotion dysregulation in autistic people across the lifespan. R. G. McDonald & E. Kang (Chairs). Symposium accepted at the 58th Annual Convention of the Association for Behavioral and Cognitive Therapies, Philadelphia, PA, United States.*

Cifuentes, N., Ahmad, R.F., Castillo, A.C., Garcia, H., **McDonald, R.G.**, & Kang, E. (2025) *Exploring the predictive utility of emotion regulation strategies on behaviorally expressed emotion dysregulation. To be presented at the Montclair State University Student Research Symposium, Montclair, NJ, United States*

Ahmad, R.F., Peters, A., Valentine. S., Cifuentes. N., **McDonald, R.G.**, & Kang, E. (2025). *ADHD Symptoms and Neural Correlates of Executive Functioning in Autistic and Non-autistic Youth. To be presented at the Montclair State University Student Research Symposium, Montclair, NJ, United States.*

Elizardo, C., **McDonald, R.G.**, Hunt, J.I., Deoni, S.C.L., Sheinkopf, S.J., Mazefsky, C.A., Dickenson, D.P., Philip, N.S., Padoeva, P.D. (2025, June) *Association between Structural Connectivity and Depressive Symptoms in Autistic Children in the Adolescent Brain Cognitive Development StudySM. Poster to be presented at the RI IDEa Symposium.*

Elizardo, C., **McDonald, R. G.**, Saletin, J. M., Dickstein, D. P., Philip, N. S., Radoeva, P. D. (2025, March). *Relationship Between White Matter Microstructural Organization and Sleep Problems in Autistic Youth in the Adolescent Brain Cognitive Development SM (ABCD) Study. Poster presented at the 27<sup>th</sup> Annual meeting of the Mind Brain Research Day, Warren Alpert Medical School of Brown University, Providence, RI.*

Lynch, E., Lynch, H., **McDonald, R.G.**, & Kang, E. (2025) *SRS- The Role of Emotion Dysregulation in Adaptive Functioning Associated with Internalizing Symptoms Among Neurodiverse Youth. To be presented at Montclair State Student Research Symposium, Montclair, NJ, United States.*

Garcia, H., **McDonald, R.G.**, Castillo, A.C., Cifuentes, N., Kang, E. (2025) *Associations of emotion dysregulation and quality of life in neurodiverse youth and their parents. Poster accepted to the Montclair State University Student Research Symposium, Montclair, NJ, United States.*



Castillo, A.C., **McDonald, R.G.**, Garcia, H., Cifuentes, N., & Kang, E. (2025) *Emotion Dysregulation and its Relationship to Peer Victimization and Aggression Among Neurodiverse Youth*. Poster accepted to the Montclair State University Student Research Symposium, Montclair, NJ, United States.

Garcia, H., **McDonald, R.G.**, Castillo, A.C., Cifuentes, N., Kang, E. (2025) *Associations of emotion dysregulation and quality of life in neurodiverse youth and their parents*. Poster accepted to the Association for Behavioral and Cognitive Therapies (ABCT), New Orleans, LA, United States.

Castillo, A.C., **McDonald, R.G.**, Garcia, H., Cifuentes, N., & Kang, E. (2025). *Emotion Dysregulation and its Relationship to Peer Victimization and Aggression Among Neurodiverse Youth*. Poster accepted to the Association for Behavioral and Cognitive Therapies (ABCT), New Orleans, LA, United States.

**McDonald, R.G.**, Elizardo, C., Li, E.A., Legere, C.H., Saletin, J.M., Hunt, J.I., Deoni, S.C.L., Sheinkopf, S.J., Mazefsky, C.A., Philip, N.S., Dickstein, D.P. & Radoeva, P.D. (2025). *Association between Food Selectivity, Sleep Problems and Irritability in Autistic Youth*. Poster presented at the Mind Brain Research Day at Brown University, Providence, RI, United States.

Peters, A.W., **McDonald, R.G.**, Khawar, S., Lynch, E., McSorely, N., Houston, S., Bixter, M. T., Kang, E. (2025, April 30 - May 3) *Emotional Dysregulation as a Mediator of Task-based and Day-to-Day Executive Functioning in Adolescents*. Poster presented at the International Society for Autism Research (INSAR), Seattle, Washington, United States.

Mahmud, F., **McDonald, R.G.**, Bsharat, W., Shahin, S., Wallace, D., Masia, C., Kang, E. (2025, May). *Exploring the relationship between cognitive flexibility and anxiety in autistic youth*. Poster presented at International Society for Autism Research, Seattle, WA.

Cifuentes, N., Garcia, H., Ahmad, R., Castillo, A.C., **McDonald, R.G.**, & Kang, E. (2025). *Examining Emotion Dysregulation Profiles in Relation to Reward Positivity and Feedback-Related Negativity in Autistic and Non-Autistic Youth*. Presentation accepted at International Society for Autism Research (INSAR), Seattle, WA, United States.

Radoeva, P.D., **McDonald, R.G.**, Elizardo, C., Li, E.A., Legere, C.H., Saletin, J.M., Hunt, J.I., Deoni, S.C.L., Sheinkopf, S.J., Mazefsky, C.A., Philip, N.S., Dickstein, D.P. (2025). *Relationship between Food Selectivity, Sleep Problems and Emotional Reactivity in Autistic Youth*. Poster accepted to the International Society for Autism Research (INSAR), Seattle, WA, United States.

Castillo, A.C., **McDonald, R.G.**, Lynch, H., Cifuentes, N., Khawar, S., & Kang, E. (2025). *Examining the Relationship Between Treatment Usage and Executive Functioning Among Autistic Youth*. Poster accepted at International Society for Autism Research (INSAR), Seattle, WA, United States.

Lynch, E, House, M., Bsharat, W., **McDonald, R.G.**, & Kang, E. (2024) *The Utility of the EFCT within the Autism Population*. To be presented at Montclair State Student Research Symposium, Montclair, NJ, United States.

Cifuentes, N., **McDonald, R.G.**, & Kang, E. (2024). *A phenotypic examination of executive functioning challenges in children with autism and attention deficit hyperactivity disorder*. Accepted to MSU Research Symposium, Montclair, NJ, United States.

Castillo, A.C., **McDonald, R.G.**, & Kang, E. (2024). *Examining the Relationship Between Profiles of Anxiety and IQ*. Presented at Montclair State University Student Research Symposium, Montclair, NJ, United States.

Ahmad, R.F., **McDonald, R.G.**, & Kang, E. (2024). *Differences in Social Behavior within Neurodiverse Youth*. Presented at the Montclair State University Research Symposium, Montclair, NJ, United States.

Cifuentes, N., **McDonald, R.G.**, & Kang, E. (2024, November). *Examining the predictive utility of facets of executive functioning on anxiety symptom profiles in autistic and non-autistic youth*. Presented at Association for Behavioral and Cognitive Therapies (ABCT), Philadelphia, PA, United States.

Castillo, A.C., **McDonald, R.G.**, Lynch, E., & Kang, E. (2024, November). *Examining the Role of Emotion Dysregulation and Intolerance of Uncertainty in the Manifestation of Restricted and Repetitive Behaviors*. Presented at Association for Behavioral and Cognitive Therapies (ABCT), Philadelphia, PA, United States.

Lynch, E., **McDonald, R.G.**, & Kang, E. (2024, November). *Relationships between Executive Functioning and Social Behaviors in Neurodiverse Youth using a Novel EF Measure*. To be presented at Association for Behavioral and Cognitive Therapies (ABCT), Philadelphia, PA, United States.

Filstein, T., **McDonald, R.G.**, Polanco, C., & Kang, E. (2024, November). *Impact of Social Skills and Theory of Mind on Internalizing Symptoms*. Poster submitted to Association for Behavioral and Cognitive Therapies (ABCT), Philadelphia, PA, United States.

Ahmad, R.F., **McDonald, R.G.**, Hollender, A., & Kang, E. (2024, November). *The Mediating Role of Restricted and Repetitive Behaviors on Social-Neurocognitive Processes in Neurodiverse Youth*. To be presented at Association for Behavioral and Cognitive Therapies (ABCT), Philadelphia, PA, United States.

## Honors & Awards

ABCT 2024 Student Travel Award (11/2024): \$500

# Association between Food Selectivity, Sleep Problems and Irritability in Autistic Youth

Rachel G. McDonald, MPS, MA, Catrina Elizardo, BS, Elizabeth A. Li, BA, Christopher H. Legere, BA, Jared M. Saletin, PhD, Jeffrey I. Hunt, MD, Sean C.L. Deoni, PhD, Stephen J. Sheinkopf, PhD, Carla A. Mazefsky, PhD, Noah S. Philip, MD, Daniel P. Dickstein, MD, Petya D. Radoeva, MD, PhD

## Abstract

### Background and Objectives:

Autistic children present more frequently with food selectivity (Mari-Bauset et al., 2014), higher rates of sleep problems (Krakowiak et al., 2014), and more severe irritability (McDonald et al., 2024) as compared to neurotypical children. However, to the best of our knowledge no prior research has examined the associations amongst these domains within the same group of autistic children. Our study examined the relationship between food selectivity, sleep difficulties and irritability in autistic children and adolescents. We hypothesized that more prominent food selectivity, would be associated with greater sleep difficulties which in turn would be linked to more severe irritability in this sample.

### Methods:

Twenty-seven autistic children and adolescents were enrolled in an IRB-approved study. Parents completed the following questionnaires: Brief Autism Mealtime Behavior Inventory (BAMBI), Patient Reported Outcomes Measurement Information System (PROMIS) Sleep Disturbance and Sleep-Related Impairment, and the Emotion Dysregulation Inventory (EDI). The variables of interest were BAMBI food selectivity sum score, PROMIS Sleep Disturbance t-score, PROMIS Sleep Impairment t-score, and the EDI emotional reactivity t-score. Shapiro-Wilk tests of normality were utilized to evaluate the distribution of these variables. Pearson correlations were carried out to assess the relationship between pairs of variables (for normally distributed variables).

### Results:

The following correlations were observed: BAMBI food selectivity sum scores were positively associated with PROMIS sleep-related impairment t-scores ( $r=0.42, p<0.05$ ) and with EDI emotional reactivity t-scores ( $r=0.49, p=0.01$ ). PROMIS sleep disturbance and sleep-related impairment t-scores were both positively associated with EDI emotional reactivity t-scores ( $r=0.63, p<0.001$  and  $r=0.52, p<0.01$ ). The correlation between BAMBI food selectivity sum score and PROMIS sleep disturbance t-score did not reach statistical significance ( $r=0.27, p=0.19$ ).

### Conclusions:

Our results imply greater food selectivity and sleep problems are linked to greater emotional reactivity in youth with autism. Future larger and longitudinal studies could characterize further the relationship (including direction of effects) between difficulties in feeding, sleep, and emotional reactivity in autistic youth, which could inform the design of targeted treatments.

**Celina McDowell (Seth Margolis, PhD. and Jennifer Davis, PhD.)**

**Publications**

**Pluim McDowell, C.**, Martinez, J. E., Giudicessi, A., Munera, D., Vila-Castelar, C., Guzmán-Vélez, E., Ramirez-Gomez, L., Duffy, J. F., Cronin-Golomb, A., & Quiroz, Y. T. (in press). Risk factors for poor sleep quality and subjective cognitive decline in older adults living in the United States during the COVID-19 pandemic. *Healthcare*.

Mukadam, N., Kinger, S. B., Neargarder, S., Salazar, R., **Pluim McDowell, C.**, Wall, J., & Cronin-Golomb, A. (in press). Changes in subjective cognition and social functioning in Parkinson's disease from before to during the COVID-19 pandemic. *Healthcare*.

**McDowell, C.**, Giudicessi, A., Martinez, J. E., Badillo-Cabrera, A. L., Bonillas Félix, N. A., Martinez, L., Munera, D., Vila-Castelar, C., Schwab, N., Ramirez-Gomez, L., Saldana, D. G., Gonzalez Catalan, M., Amariglio, R., Duffy, J. F., Cronin-Golomb, A., & Quiroz, Y. T. (2024). Sleep apnea risk, subjective cognitive decline, and cognitive performance: Findings from the Boston Latino Aging Study (BLAST). *Dementia and Geriatric Cognitive Disorders*, 1-14.

**Presentations**

**Pluim McDowell, C.**, Anzai, J. A. U., Martinez, J. E., Munera, D., Garza-Naveda, A. P., Vila-Castelar, C., Guzmán-Vélez, E., Ramirez-Gomez, L., Bustin, J., Serrano, C. M., Babulal, G. M., Okada de Oliveira, M., & Quiroz, Y. T. (2024, October). *Loneliness, purpose in life, and subjective cognitive decline in ethnoracially diverse older adults in the U.S.* Oral presentation at the Canadian Conference in Dementia: Hot Topics in Dementia biannual meeting. (virtual).

**Pluim McDowell, C.**, Margolis, S. A., De La Roca, A., DeMarco, A., Prakash, P., & Davis, J.D. (2025, March). *The experience of anxiety in early Parkinson's disease: A qualitative study*. Poster presented at annual Brown University Mind Brain Research Day, Providence, RI.

**Grant Submissions**

Brown Resident Grant Award, 2024-2025

Title: The Experience of Anxiety in Early Parkinson's disease: A Qualitative Study

## **The Experience of Anxiety in Early Parkinson's Disease: A Qualitative Study**

Celina Pluim McDowell, MA, Seth A. Margolis, PhD, Angelica De La Roca, BA, Alexis DeMarco, BS, Prarthana Prakash, MD, and Jennifer D. Davis, PhD

**Objective:** Anxiety is among the most common and most distressing nonmotor symptoms of Parkinson's disease (PD), affecting up to 55% of individuals. Anxiety is associated with poorer outcomes for persons with PD (PwPD), including worse health-related quality of life and increased mortality. Our group applied a commercially available online behavioral intervention that teaches anxiety self-management skills, the Unwinding Anxiety app, in early-stage PwPD. This pilot study of 19 participants (14 of whom completed the Unwinding Anxiety program) showed reduction in overall anxiety and worry symptoms. Although preliminary results are encouraging, one out of four participants did not complete the intervention despite elevated anxiety and an interest in anti-anxiety treatment, suggesting that the intervention is not adequately targeting anxiety-related concerns for all PwPD. In general, research on the experience of anxiety as told by PwPD is lacking, and there is a need to better characterize anxiety in this early-stage group and identify shortcomings of the Unwinding Anxiety app to more adequately address anxiety in PD. This study aims to characterize anxiety in early-stage PwPD and elicit perceptions and recommendations about the Unwinding Anxiety app's usability, relevance, and user satisfaction as well as recommendations for improvement.

**Method:** We composed a semi-structured interview to characterize anxiety and understand anxiety self-management strategy use following completion of the initial Unwinding Anxiety pilot study. Interview questions were generated based on prior studies examining anxiety qualitatively in PD, authors' clinical experiences treating this population, and suggested links between anxiety and other PD symptoms (e.g., sleep quality, stigma, subjective cognitive concerns) that have yet to be examined qualitatively. Interviews inquire about general experiences of anxiety, how anxiety relates to PD motor and nonmotor symptoms, design of the Unwinding Anxiety app, and areas of improvement for the app. We intend to recruit all 19 participants from the parent study.

**Discussion:** To date, we have completed 7/19 interviews. Emerging concepts regarding experiences with anxiety include: anxiety limiting ability to do previous activities and links between elevated anxiety and severity of PD motor and nonmotor symptoms (e.g., freezing, tremors, poor sleep). Emerging concepts about the Unwinding Anxiety app include: overall positive experiences with the intervention and ease of use of the app; improvement in the ability to recognize anxiety following participation in the intervention; and a desire for more live interaction with clinicians and/or other participants as part of the program. Given the prevalence of anxiety in PD and the varying ways that anxiety can manifest in this population, this study seeks to improve understanding of anxiety in early-stage PD and tailor the Unwinding Anxiety app to maximize benefits of anxiety treatment in PD. Garnering feedback from individuals who completed or started but did not complete this treatment will allow for iteration of this intervention using a participatory design more likely to target unique experience of anxiety in PwPD

**Lindsey Nichols (Kathleen Kemp, PhD.)**

**Publications**

Berny, L.M., **Nichols, L.M.**, Schweer-Collins, M.L., & Tanner-Smith, E.E. (in revision). Brief Drug Interventions Delivered in General Medical Settings: A Systematic Review and Meta-Analysis of Cannabis Use Outcomes.

Sheerin, K.M., Vieira, A., Williamson-Butler, S., Grant, M., **Nichols, L.M.**, Creamer, A., & Kemp, K.A. (in press). The landscape of randomized controlled trials for behavioral health-focused psychosocial interventions for youth in the juvenile legal system: A systematic review. *Clinical Psychology: Science and Practice*.

**Nichols, L.M.**, Brown, T.B., Allmendinger, A., Hennessy, E.A., & Tanner-Smith, E.E. (in press). Substance use recovery needs among college students seeking recovery services: A thematic qualitative analysis. *Addiction Science & Clinical Practice*.

Berny, L.M., **Nichols, L.M.**, Mojekwu, F., & Tanner-Smith, E.E. (2025). Can school and community connectedness buffer the relationships between mental health conditions and suicide risk? Findings from a clinical sample of adolescents. *Child Psychiatry & Human Development*, 1-13.

**Presentations**

**Nichols, L.M.**, Sheerin, K.M., Salazar Vega, E., & Kemp, K.A. (2025, March). *Changes in Substance Use and Mental Health Scores Pre- and Post-Legalization of Cannabis Among Juvenile Legal System-Involved Youth: Results from Two Screening Tools*. Poster presented at the 27<sup>th</sup> Annual meeting of the Mind Brain Research Day, Warren Alpert Medical School of Brown University, Providence, RI.

**Nichols, L.M.**, Sheerin, K.M., & Kemp, K.A. (2025, April). *Changes in CRAFFT and MAYSI-2 clinical scores pre- and post-legalization of cannabis among youth involved in the juvenile legal system*. Panel session The Juvenile Justice Behavioral Health Services Cascade: From Screening to Treatment Engagement at the annual meeting of Collaborative Perspectives on Addiction (CPA), Providence, RI.

# Changes in Substance Use and Mental Health Scores Pre- and Post-Legalization of Cannabis Among Juvenile Legal System-Involved Youth: Results from Two Screening Tools

Lindsey M. Nichols, Kaitlin M. Sheerin, Eileen Salazar Vega, & Kathleen A. Kemp

## Abstract

**Background.** Compared to youth in the general population, those who have juvenile legal involvement experience higher rates of behavioral health concerns, including substance use disorders — Grisso, 2008; Teplin, et al., 2002). Legalization of cannabis and broad policy changes may have significant impacts on these youth, but research regarding the topic is scarce. The purpose of this study is to examine two commonly used mental health and substance use screening tools in the juvenile legal system and identify whether youth identified as at-risk for substance misuse and mental health symptoms differ pre- and post-legalization of cannabis use in one New England state, as well as the frequency that diverted youth with first-time offenses fall into the clinical range (i.e., flag) on each measure.

**Method.** Participants ( $N = 3,273$ ;  $M$  age = 14.94 ( $SD = 1.62$ ); 62.6% male) represented youth participating in a northeastern juvenile diversion program between the years of 2020 and 2024. We conducted a chart review to extract scores from two screening measures used as part of standard procedures in the diversion program: Massachusetts Youth Screening Inventory-2 (MAYSI-2; Grisso and Barnum, 2006), a 52-item mental health and substance use screening tool with several clinical subscales) and the CRAFFT (Mitchell, 2014; a 6-item substance use screening tool that assesses substance-related risk).

**Results.** Results from a series of ANCOVAs suggested that the legalization of cannabis had a significant impact on both mental health and substance use flags as screened by the MAYSI-2, after controlling for gender and race. Specifically, these findings suggest that cannabis legalization impacted alcohol and drug use clinical flags,  $F(1) = 7.37$ ,  $p < .01$ , such that more clinical flags occurred pre-legalization compared to post. After controlling for gender and ethnicity, there was also a significant effect of cannabis legalization and gender on suicide ideation flags, such that a greater number of adolescents were flagged for suicide risk *prior* to legalization of cannabis. There was no evidence of effects of cannabis legalization on other clinical scales (depression/anxiety, thought disturbance, anger/irritability, somatic symptoms). Sum scores on the CRAFFT ranged from 0-6, with a mean score of 0.68 ( $SD = 1.40$ ), suggesting substantial variability in youth's substance-related risks. CRAFFT total risk scores were not significantly different pre- and post-legalization of cannabis,  $F(1) = 2.01$ ,  $p = .16$ . There were, however, significant differences in past-year alcohol and cannabis use pre- and post-legalization of cannabis among youth, such that *more* youth reported past-year alcohol use *prior* to legalization of cannabis, while past-year cannabis use was more frequent *post*-legalization.

**Discussion.** These findings suggest that the legalization of cannabis had a significant impact on both mental health and substance use risks as screened by the MAYSI-2, which identified juvenile legal system-involved youth at high risk for suicide ideation, alcohol, and cannabis use. Differences in the screening tools' ability to identify youth at risk for substance misuse, as well as past-year rates of substance use, will be discussed. A noteworthy limitation that will be further explored was the timing of the COVID-19 pandemic. Implications and future directions for youth and assessment practices in the juvenile legal system will also be discussed.

**Megan Parker (Elissa Jelalian, PhD.)**

**Publications**

**Parker, M. N.**, Kelly, N. R., Moore, A., Loch, L., Te-Vazquez, J. A., Bloomer, B. F., Nwosu, E. E., Lazareva, J., Yang, S. B., Courville, A. B., Moursi, N. A., Brady, S. M., Broadney, M. M., Olsen, C. H., Shank, L. M., Tanofsky-Kraff, M., & Yanovski, J.A. (In Press). Cognitive Fatigue Did Not Significantly Influence Youth's Total Energy Intake or Snack Food Consumption During a Randomized Trial. *Journal of Behavioral Medicine*.

Long, J., **Parker, M. N.**, Jumani, S., Ahmed, A., Huynh, V., Gomez-Lobo, V. (2025). Effect of lifestyle modifications on polycystic ovary syndrome in predominantly young adults: A systematic review. *Journal of Pediatric & Adolescent Gynecology*. S1083-3188(24)00342-5. doi: 10.1016/j.jpag.2024.11.003. Epub ahead of print. PMID: 39577757.

**Parker, M. N.**, Bloomer, B. F., Stout, J., Byrne, M. E., Schvey, N. A., Brady, S. M., Chen, K. Y., Nugent, A., Turner, S. A., Yang, S. B., Stojek, M. K., Waters, A., Tanofsky-Kraff, M. & Yanovski, J. A. (2024). A pilot randomized control trial testing a smartphone delivered food attention retraining program in adolescent girls with overweight or obesity. *Nutrients*. 16(20): 3456, 2024. PMC11510407

**Parker, M. N.**, Wiggins, S. P., Thornton, J. A., Sunderland, K. W., Brydum, R., Funk, W., Pav, V., & Klein. (Revise & Resubmit). Incidence and prevalence of polycystic ovary syndrome in adolescent and young adult US military dependents from 2018-2022.

Swinton, M., Kim, M., Klein, D. A., Thornton, J. A., Sunderland, K. W., Brydum, R., Funk, W., Pav, V. & **Parker, M N.** (Under Review). Incidence and prevalence of polycystic ovary syndrome in active duty service members.

**Parker, M. N.**, Tanofsky-Kraff, M., Loch, K. L., Haynes, H. E., Bloomer, B. F., Te-Vazquez, J. A., Moursi, N. A., Moore, A., Schvey, N. A., Brady, S. M., Yang, S. B., Turner, S. A., Yanovski, J. A. & Kelly, N. (Under Review). Effects of experimentally induced cognitive fatigue on energy intake: A comparison between youth with and without recent dietary restraint.

**Presentations**

**Parker, M. N.**, Jelalian, E., Richards, C. A., Thornton, J. A., Sunderland, K. W., Brydum, R., Funk, W., Pav, V., & Klein, D. A. (2025, March). *Rates of polycystic ovary syndrome and comorbid psychiatric conditions among United States military adolescent and young adult dependents*. Poster presented at the 27th Annual meeting of the Mind Brain Research Day, Warren Alpert Medical School of Brown University, Providence, RI.

Swinton M. K., Kim M. J., **Parker M. N.**, Thornton J. A., Sunderland K. W., Brydum R., Funk W., Pav V., & Klein D. A. (2025, March) *Incidence and Prevalence of Polycystic Ovary Syndrome in Active Duty Service* Paper presented at the Uniformed Services Academy of Family Physicians (USAFP). Las Vegas, NV



## **Grant Submissions**

Marion And Donald Routh Student Research Grant, APA Division 54 Society for Pediatric Psychology, 2025 (Funded)

Title: Psychiatric Diagnoses and Medication Prescription in Adolescents and Young Adults with Polycystic Ovary Syndrome

American Psychological Foundation Visionary Grant, 2025 (Submitted)

Title: Using Ambulatory Assessment to Identify the Acute Impact of Stigma on Health Behaviors Among Emerging Adults with Polycystic Ovarian Syndrome

The Obesity Society's Early Career Research Grant, 2025 (Submitted)

Title: Using Ambulatory Assessment to Develop a Theory of Real-Time Facilitators and Barriers of Health Behavior Engagement Among Emerging Adults with Polycystic Ovarian Syndrome and Obesity

## Rates of polycystic ovary syndrome and comorbid psychiatric conditions among United States military adolescent and young adult dependents

Megan N. Parker, Elissa Jelalian,, Cherie A. Richards Jennifer A. Thornton,  
Kevin W. Sunderland, Rick Brydum, Wendy Funk, Veronika Pav & David Klein

**Background:** Polycystic ovary syndrome (PCOS) is the most common endocrine disorder among people who menstruate and is associated with increased risk for developing several medical and mental health conditions. Adolescent and young adult (AYA) military dependents, a large, diverse subset of the United States population, have not been represented in prior reports of PCOS. The primary aim of this study was to estimate the incidence and prevalence of PCOS in AYA US military dependents. The secondary aim of this study was to describe the frequency of mental health diagnoses in the AYA military dependent population. **Methods:** This retrospective cohort study reviewed military electronic medical records and TRICARE insurance claims from the US Military Health System (MHS) from 2016-2023. Dependents with a gender marker indicating female sex at birth, aged 15-21 years, and with a PCOS diagnosis (International Classification of Diseases, 10<sup>th</sup> edition (ICD-10); code E28.2x) or undiagnosed PCOS (i.e., having an androgen excess and either amenorrhea or oligomenorrhea ICD-10 code within a 12-month period) who received care through TRICARE Prime were identified. The PCOS and undiagnosed PCOS groups were combined for all analyses. The yearly incidence and prevalence rates of combined PCOS and undiagnosed PCOS from 2018-2022 were computed. A two year “wash-out” period for new diagnoses was applied, therefore, data from 2016 and 2017 were excluded from incidence and prevalence counts. Data from 2023 were excluded from incidence and prevalence counts because data were not available for the entire calendar year. The total number of AYA female dependents (denominator for calculations) ranged from 178,010 – 186,928. For the secondary aim, AYA were considered to have a psychiatric diagnosis if they had one or more visits associated with each psychiatric diagnosis (e.g., mood disorders, anxiety disorders, eating disorders) during the entire 2016-2023 study period. **Results:** From 2016-2023, a total of 9047 AYA military dependents had a diagnosis of PCOS (n = 6911) or undiagnosed PCOS (n = 2,136). Of the identified AYA, 57% are ages 18-21y, 16% are white (70% unknown race), 25% are Hispanic (70% unknown ethnicity), 71% had a sponsor who was senior enlisted, and 42% had a sponsor in the Army. From 2018-2022, the average yearly incidence of PCOS was 59 per 10,000 person years (range 54-64). The average yearly prevalence was 182 per 10,000 person years (range 159-195). From 2016-2023, 67% (n = 6036) of AYA with PCOS had at least one mental health diagnosis. The percentage of AYA with PCOS with each mental health diagnosis was: 52% anxiety disorders (n = 4683); 43% mood disorders (n = 3929); 34% adjustment disorder (n = 3096); 10% post-traumatic stress disorder (n = 877); 8% bipolar disorder (n = 737,); 5% eating disorders (n = 459,); 4% personality disorders (n = 337); 3% conduct disorder (n = 309); 2% obsessive-compulsive disorder (n = 173), 2% psychotic disorder (n = 184), and 0.85% functional neurological disorder (n = 77). **Conclusion:** Rates of PCOS in AYA military dependents are comparable to rates estimated from medical record data in US civilian populations, but lower than rates estimated from studies of selected samples (e.g., case-control studies, AYA females presenting to a gynecology clinic). The overall rate of psychiatric conditions in this population is higher than among the general US civilian AYA population, which is estimated by the National Institutes of Mental Health as 36% of young adults and 50% of adolescents. Ensuring timely detection of PCOS might help connect AYA with prevention and early intervention programs for mental health symptoms. Providing adequate psychological and medical support for AYA military dependents with PCOS would improve the health of military dependents, thereby reducing stress on military families, increasing the deployability and readiness of active duty servicemembers.

**Emma PeConga (Christy Capone, PhD. and Erica Eaton, PhD.)**

**Publications**

**PeConga, E.**, Gauthier, G., Mattson, E., Coyne, A., Feeny N., & Zoellner, L. (under review). Attentional capacity and PTSD treatment response: Prolonged exposure alone or combined with sertraline.

Zoellner, L. A., Stocco, A., Gauthier, G. M., Lehinger, E. A., Pandey, S., **PeConga, E. K.**, & Bedard-Gilligan, M.A. (under review). Remembering and forgetting: A dynamic social retrieval model of posttraumatic stress. *Behavior Research and Therapy*.

Bentley, J. A., Feeny, N. C., Alsubaie, M., Ibrahim, S. H., Tubeec, A. M., Asim, A., Klein, A. B., Levine, D., Pandey, S., Payat, S., **PeConga, E. K.**, Wright, C. M., & Zoellner, L. A. (2025). Cultural Adaptions of Prolonged Exposure. In C. McLean & E. Goetter (Eds.), *Prolonged Exposure for PTSD: Innovations to Improve Access, Engagement, and Outcomes*. Springer Nature.

Gauthier, G.M., **PeConga, E.**, Mohr, J., Feeny, N., Zoellner, L. (2024). Prospective stability of memory for peritraumatic emotions: Replication and extension examining PTSD treatment modality and response. *Psychological Trauma: Theory, Research, Practice, and Policy*.

Zoellner, L., Bentley, J., Musa, K., Mohammed, F., Ahmed, L., King, K., **Islamic Trauma Healing (ITH) Clinical Team**, & Feeny, N. (2024). Lay-Led Intervention for War and Refugee Trauma: A Randomized Clinical Trial. *JAMA Network Open*.

**Presentations**

**PeConga, E.**, Gauthier G., & Zoellner, L. (2025, March) *The Impact of Attentional Deficit at Baseline on Symptom Improvement Over Treatment for PTSD*. Poster presented at the Mind Brain Research Day at Warren Alpert Medical School of Brown University, Providence, RI.

**Grant Submissions**

Dr. Christine Blasey Ford Grant, 2024  
American Psychological Foundation, Division 56  
Project Title: Memory and the #MeToo movement: Understanding cognitive mechanisms of risk for posttraumatic psychopathology following sexual assault

## **Honors & Awards**

Frank W. Putnam Trauma Research Scholars Award, International Society for Traumatic Stress Studies, 2024

## **Attentional Capacity and PTSD Treatment Response: Prolonged Exposure Alone or Combined with Sertraline**

Emma Peconga, Gabrielle Gauthier, and Lori Zoellner

Preliminary evidence suggests sustained attention is associated with dropout and reduced responsivity to cognitive therapies for PTSD (Crocker, et. al. 2018; Falconer, et. al., 2018), and previous research has shown that augmenting CBT with a form of executive control training has been associated with a greater reduction in PTSD symptoms compared to a control condition (Kuckertz et al., 2014) and increased treatment completion rates (Fals-Stewart & Lam, 2010; Grohman & Fals-Stewart, 2003). However, little is known about whether baseline attention deficits impact the effectiveness of exposure-based treatments or pharmacological interventions that may rely on fewer cognitive resources than traditional cognitive therapies. In this analysis, participants were 134 men and women with PTSD completed the Flanker task (Eriksen & Eriksen, 1974), measuring participants' inhibitory attentional control, prior to receiving either PE or PE in combination with sertraline. At baseline, higher attention deficit was not associated with age, PTSD severity, nor any PTSD sub-scale. Multi-level modeling explored change in PTSD symptoms from baseline to post-treatment. Results suggest that, when controlling for age and treatment type, worse attentional deficit at pre-treatment ( $M = 9.08$ ,  $SD = .56$ ) moderated symptom PTSD reduction ( $\beta = 6.97$ ,  $sig = .011$ ). This effect did not vary significantly between treatment types (PE with and without sertraline) ( $\beta = -3.28$ , ns). Of symptom subscales, worse attentional deficit at pre-treatment only significantly moderated change in reexperiencing symptoms ( $\beta = 2.51$ ,  $sig = .019$ ). These findings suggest that attention deficit may negatively impact the effectiveness of PE, specifically improvement in re-experiencing symptoms, and that pharmacological interventions may not mitigate this effect. Thus, executive control training for exposure-based treatments should be researched further. Research must be done to understand the mechanism through which attention deficits impair treatment response to develop interventions that enhance treatment.

**Alexa Raudales (Heather Schatten, PhD. and Leslie Brick, PhD.)**

**Publications**

**Raudales, A. M.,** Kiefer, R., Newberger, N. G., Ferguson, J., Contractor, A. A., & Weiss, N. H. (in press). Emotion dysregulation and posttraumatic stress symptom severity: The influence of cortisol reactivity following idiographic emotion inductions. *Psychological Trauma: Theory, Research, Practice, and Policy*.

**Raudales, A. M.,** Wallace, G. T., Kiefer, R., Brick, L. A., Schatten, H. T., & Weiss, N. H. (under review). Momentary dynamics of intimate partner violence and posttraumatic stress symptoms among women: The influence of positive emotion dysregulation.

Mehrotra, K., **Raudales, A. M.,** Epshteyn, G., Dixon-Gordon, K. L., Peters, J. R., & Weiss, N. H. (in press). Prospective relationships between positive emotion dysregulation and borderline personality disorder features among women experiencing intimate partner violence. *Personality Disorders: Theory, Research, and Treatment*.

Brick, L. A., Wallace, G. T., **Raudales, A. M.,** Iyer, R., & Weiss, N. H. (in press). Heterogeneity across idiographic network associations among emotion dysregulation, alcohol use, posttraumatic stress symptoms, and intimate partner violence. *Journal of Traumatic Stress*.

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. (in press). Examining concordance between emotion-dependent risk-taking in the laboratory and in the real world. *Behaviour Research and Therapy*.

Jacka, B., Lin, N., Kiefer, R., Forkus, S. R., **Raudales, A. M.,** Thomas, E. D., Samuels, E. A., Marshall, B. D. L., & Weiss, N. H. (in press). Risk and protective factors associated with posttraumatic stress disorder among layperson responders to opioid overdose incidents. *Psychological Trauma: Theory, Research, Practice, and Policy*.

**Presentations**

**Raudales, A. M.,** & Holzhauer, Cathryn G. (2025, June). *The influence of posttraumatic stress symptoms on daily associations between perceived stress and alcohol cravings among women with lived experiences of trauma*. Poster to be presented at the 48th Annual Research Society on Alcohol (RSA) Convention, New Orleans, LA.

**Raudales, A. M.,** Brick, L. A., Schatten, H. T., & Weiss, N. H. (2025, March). *The role of posttraumatic stress symptoms in co-occurring opioid use and suicide*. Poster presented at the Mind Brain Research Day, Providence, RI.

**Raudales, A. M.,** Brick, L. A., Schatten, H. T., & Weiss, N. H. (2025, April). *The role of posttraumatic stress symptoms in co-occurring opioid use and suicide*. Poster presented at the 13th Annual Collaborative Perspectives on Addiction Convention, Providence, RI.

Baer, M., Vanzhula, I., Borgogna, N., Brockdorf, A., Bullock, W., Huang, J., **Raudales, A. M.,** Weiss N. H., & Tull, M. T. (2025, April). *Idiographic networks of alcohol use disorder mechanisms and suicide crisis syndrome symptoms*. Poster presented at the 13th Annual Collaborative Perspectives on Addiction Convention, Providence, RI.

Weiss N. H., Schick, M. R., **Raudales, A. M.,** Kiefer, R., Sullivan, T. P. (2024, November). *Emotion dysregulation modulates the relation between emotional intensity and biological stress dysregulation among community women experiencing intimate partner violence*. Poster presented at the 58th Annual Convention for the Association for Behavioral and Cognitive Therapies Annual Convention, Philadelphia, PA.

Jacka, B. P., Lin, N., Kiefer, R., Forkus, S. R., **Raudales, A. M.,** Thomas, E. D., Samuels, E. A., Marshall, B. D. L., & Weiss, N. H. (2024, October). *Risk and protective factors associated with posttraumatic stress disorder among layperson responders to opioid overdose incidents*. Poster presented at the 12th annual convention for the International Conference on Health and Hepatitis in Substance Users (INHSU), Athens, Greece.

**Raudales, A. M.,** Contractor, A. A., Kiefer, R., Newberger, N. G., Meade, E. A., & Weiss, N. H. (2024, September). *The influence of positive emotion dysregulation on daily associations between sexual intimate partner violence and posttraumatic stress disorder: A dynamic structural equation modeling approach*. Poster presented at the 40th annual convention for the International Society for Traumatic Stress Studies (ISTSS), Boston, MA.

Wallace, G. T., Brick, L. A., **Raudales, A. M.,** & Weiss, N. (2024, November). *Clinical takeaways differ across nomothetic to idiographic models: Comparing networks of PTSD symptoms, emotion dysregulation, and alcohol use in women experiencing interpersonal violence*. In De Nadai, A. & Crenshaw A. (Chairs) Novel Methods in CBT Research and Practice. Symposium presented at the Association for Behavioral and Cognitive Therapies Annual Convention, Philadelphia, PA.

Schick, M. R., **Raudales, A. M.,** Kiefer, R., Newberger, N., Sullivan, T. P., & Weiss, N. H. (2024, September). *Positive emotion regulation modulates the relation between intensity of positive emotions and stress dysregulation among women experiencing partner violence*. In N. H. Weiss (Chair), Beyond good and bad: Cutting-edge approaches to understanding health correlates of positive emotional responding among marginalized trauma populations. Symposium presented at the 40th annual convention for the International Society for Traumatic Stress Studies (ISTSS), Boston, MA.

Kiefer, R., Schick, M. R., Newberger, N. G., Ferguson, J. J., **Raudales, A. M.,** Sullivan, T. P., Weiss, N. H. (2024, September). *Concordance of PTSD symptoms assessed via retrospective report versus experience sampling methods in community women experiencing intimate partner violence*. In D. M. Johnson (Chair), Intimate partner violence in high-risk populations: Implications for assessment and

intervention. Symposium presented at the 40th annual convention for the International Society for Traumatic Stress Studies (ISTSS), Boston, MA.

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. (2023, November). *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.

### **Grant Submissions**

Brown Predoctoral Seed Money Research Grant, 2024-25

Title: Discrimination as a Unique Risk Factor for Suicide among Psychiatric Inpatients from Systemically Marginalized Backgrounds

### **Honors & Awards**

International Society for Traumatic Stress Studies (ISTSS) Outstanding Student Achievement Award, 2025

Peter Merenda Prize in Research Methodology, 2025



# THE ROLE OF POSTTRAUMATIC STRESS SYMPTOMS IN CO-OCCURRING OPIOID USE AND SUICIDE

Alexa M. Raudales, M.A.,<sup>1</sup> Leslie A. Brick, Ph.D.,<sup>2</sup> Heather T. Schatten, Ph.D.,<sup>3</sup> & Nicole H. Weiss, Ph.D.<sup>1</sup>

<sup>1</sup>Department of Psychology, University of Rhode Island, Kingston, RI, USA

<sup>2</sup>Department of Psychiatry and Human Behavior, Brown University, Providence, RI, USA

<sup>3</sup>Butler Hospital, Providence, RI, USA

**Background:** Opioid use and suicide frequently co-occur, with rates rising despite widespread efforts. Consistent with the self-medication model, posttraumatic stress symptoms (PTSS) may be a proximal risk factor for individuals turning to opioid use and suicidal thoughts and behaviors (STBs) as a way to cope with trauma-related distress. This study is the first to examine PTSS as a trigger for co-occurring opioid use and STBs using real-time methods.

**Methods:** This study applied community-based participatory research (CBPR) methods to center individuals with lived experiences of opioid use. Participants were 52 trauma-exposed community members (*M*<sub>age</sub> = 45.2 years; 81% white; 72% disabled; 57% men; 38% without stable housing) using opioids and experiencing STBs. Participants self-reported on PTSS, opioid cravings and use, and STBs twice daily for 14 days. Dynamic Structural Equation Modeling was used in Mplus.

**Results:** Significant contemporaneous effects were found for PTSS and opioid cravings (Fixed Effect Estimate = 0.23, 95% CI[0.10, 0.34]) as well as for PTSS and STBs (Fixed Effect Estimate = 0.17, 95% CI[0.04, 0.37]), but not for PTSS and opioid use (Fixed Effect Estimate = 0.12, 95% CI[-0.13, 0.34]).

**Conclusion:** Results indicate that moments of elevated PTSS co-occurred with opioid cravings and STBs, but not opioid use. Findings appear to align with the self-medication model for individuals turning to both opioids and STBs when experiencing PTSS. This study shows promise for just-in-time adaptive interventions targeting PTSS for opioid use/suicide. Further clinical implications will be discussed in the context of sample demographics (e.g., disability status).

**Jennifer Schild (Jennifer Freeman, PhD. and Erin O'Connor, PhD.)**

**Presentations**

**Schild, J.S.** & Langer, D.A. (2025, March). *What are the choices for hearing their voices?: a review of treatment options for selective mutism and considerations for shared decision-making*. Poster session presented at the annual Mind Brain Research Day of Brown University, Providence, RI.

## **What Are the Choices for Hearing Their Voices?: A Review of Treatment Options for Selective Mutism and Considerations for Shared Decision-Making**

Jennifer Schild, MS, David Langer, PhD, ABPP

Collaborative treatment planning strategies have been shown to result in positive treatment process outcomes (e.g., treatment adherence, satisfaction; Fiks & Jimenez, 2010) by centering a patient's values, preferences, and goals. Such approaches may be especially useful when there are many evidence-based treatment options (or variations within treatment options) available. This is the case for treatments for youth with selective mutism (SM). To facilitate shared decision-making (SDM) for youth with SM, clinicians and families must be informed of the various treatment modalities and packages for SM, as well as the choices that can be made within each approach. This review summarizes the treatments that have been reported in the SM treatment literature and clarifies the choices that are available to clinicians and families at the start of and throughout treatment. A literature search was conducted using relevant terms and databases to identify peer-reviewed articles reporting on SM treatment. This search produced 354 unique results, of which 39 articles written in a language other than English were excluded. An additional 84 results (review articles; letters to editors/responses; articles on mutism unrelated to SM; articles on SM assessment or conceptualization and clinical characteristics that did not discuss treatment) were excluded, leaving 231 results. The literature reflected utilization of primarily behavioral and cognitive behavioral approaches. Psychodynamic approaches, systems interventions, and psychopharmacological intervention were also reported in the literature but were less common. Within the reported treatment approaches are various treatment programs (e.g., parent-child interaction therapy adapted for SM, social communication anxiety treatment, video self-modeling; Bork & Bennett, 2020; Cornacchio et al., 2019; Klein et al., 2017), as well as multiple decision points (e.g., individual vs. group therapy, weekly vs. intensive treatment, teacher involvement, home/school/clinic setting, sequencing of treatments). This poster will present the various available treatments and options that clinicians and families may consider in treatment planning. Through communication and knowledge of these options, patients and families can be empowered to voice their preferences and values for treatment and to collaborate in decisions about their care. Furthermore, this review may highlight overlooked areas for inclusion of families in decision-making and can facilitate clinician awareness and utilization of more collaborative practice in treatment planning.

**Kate Shirley (Brandon Gaudiano, PhD. and Jane Metrik, PhD.)**

**Publications**

Clauss, K., **Shirley, K.**, Cameron, D. C., Sano, E., Maye, J., Jak, A., Williams, R., Pagulayan, K., Turner, A., Twamley, E., & O'Neil, M. E. (under review). Clinically meaningful change following Compensatory Cognitive Training in Veterans with a History of Mild Traumatic Brain Injury: A Brief Report.

O'Neil, M. E., Clauss, K., **Shirley, K.**, Krushnic, D., Hannon, S., Baker-Robinson, W., Cameron, D., Cook, L., Niederhausen, M., Cheney, T. P., Pappas, M., Kaplan, J., & Morasco, B. (under review). Harmonizing FITBIR data to explore associations between TBI, alcohol, and substance use.

**Shirley, K.**, O'Neil, M. E., Boyd, S., & Loftis, J. M. (2025). Differences in rates of impairment in adults who use methamphetamine using two sets of demographically corrected norms. *Applied Neuropsychology: Adult*, 32(1), 216–224.

**Presentations**

Metrik, J., **Shirley, K.**, Bolts, O., Pinto, L., & Gaudiano, B. A. (2025, May). *Veteran and provider perspectives on the Mood and Substance Use Disorder Treatment Adherence Program*. Poster presented at the Providence VA Research Week, Providence, RI.

**Shirley, K.**, Sano, E., Loftis, J. M., Twamley, E., & O'Neil, M. E. (2025, April). *Feasibility, acceptability, and preliminary efficacy of Compensatory Cognitive Training for Addictions via telehealth in Veterans with alcohol use disorder*. Poster presented at the Collaborative Perspectives on Addiction Annual Meeting, Providence, RI.

Metrik, J., **Shirley, K.**, Bolts, O., Pinto, L., & Gaudiano, B. A. (2025, April). *Veteran and provider perspectives on the Mood and Substance Use Disorder Treatment Adherence Program*. Poster presented at the Collaborative Perspectives on Addiction Annual Meeting, Providence, RI.

**Shirley, K.**, Sano, E., Loftis, J., Twamley, E., & O'Neil, M. E. (2025, March). *Optimizing Compensatory Cognitive Training for Addictions to the telehealth format*. Poster presented at the Brown University Mind-Brain Research Day, Providence, RI.

**Shirley, K.**, Sano, E., Adams, J., Clauss, K., Cameron, D., Twamley, E., & O'Neil, M. E. (2024, August). *An investigation of the validity and reliability of the Portland Cognitive Strategies Scale*. Poster presentation at the APA Convention, Seattle, WA.

Adams, J. G., O'Neil, A. S., Pierce, K., Cameron, D., Sano, E., **Shirley, K.**, Clauss, K., O'Neil, M. E., & Denneson, L. M. (2024, August 8-10) *Examining the buffering effect of social engagement for rural Veterans with a recent suicide attempt*. Poster presented at the APA Convention, Seattle, WA.

## **Honors & Awards**

American Psychological Association Division 19 Student Travel Award, 2024

## *Optimizing Compensatory Cognitive Training for Addictions to the telehealth format*

Kate Shirley, MA, Emily Sano, MA, Jennifer Loftis, PhD, Elizabeth Twamley, PhD,  
Maya E. O'Neil, PhD

Most adults with alcohol use disorders (AUDs) experience cognitive deficits during recovery from addiction. Cognitive dysfunction is associated with increased relapse rates, decreased treatment compliance, and poorer treatment outcomes. The current study piloted a telehealth version of Compensatory Cognitive Training for Addictions (CCT-A), a group-based cognitive rehabilitation intervention developed as an adjunctive treatment for adults who report subjective cognitive concerns during recovery from addiction. CCT-A addresses multiple concerns that interfere with recovery from addiction: cognitive impairments, neuropsychiatric symptoms, and lifestyle patterns that increase risk of cognitive impairment, poor health, and relapse. Study aims were to examine feasibility, acceptability, and preliminary efficacy of CCT-A delivered via telehealth in adults in initial and early remission from alcohol use. The intervention was piloted in three groups of Veterans at the VA Portland Healthcare System (n=19). The intervention was well-received by participants with most participants (>90%) reporting the quality of the service as “excellent.” Retention was high at post-treatment follow-up (>80%). Although small sample size limited power to detect significant differences between pre- and post-treatment measures, preliminary analyses yielded encouraging effect sizes and significant ( $p<0.05$ ) findings on several neuropsychological assessment and self-report measures. Results from this pilot study support that CCT-A via telehealth is feasible and acceptable among Veterans with AUD and cognitive concerns. Findings provide future directions for further enhancing CCT-A to the telehealth format, such as utilizing visual whiteboards and interactive tools to enhance group participation and digitizing the treatment manual to allow all study and group materials to be accessible electronically.

**Jamilah Silver (Lindsay Huffhines, PhD.)**

**Publications**

Vidal-Ribas, P., Krebs, G., **Silver, J.**, Tseng, W.L., Ford, T., Leibenluft, E., Stringaris, A. (2025). The hidden burden: self-reported irritability in adolescent girls signals higher psychiatric risk. *BMC Public Health*.

**Silver, J.**, Carlson, G., Farquarhson, W., Atlas, J., & Klein, D.N. (2025). Development and Validation of a Multi-Informant Scale for Assessing Youth Tonic and Phasic Irritability. *Research on Child and Adolescent Psychopathology*.

Lawhead, C., **Silver, J.**, Olino, T., Labache, L., Juhng, S., H. Schwartz, A., Klein, D. (2025). Longitudinal Clustering of Psychiatric Diagnoses Across Childhood and Adolescence: An Approach Toward Developmentally-Based Classification. *Clinical Psychological Science*.

Harrison, T. J., **Silver, J.**, Calentino, A., Mackin, D., Finsaas, M., Carlson, G., Davila, J., Olino, T. M., & Klein, D. N. (2025). Irritability and stress: Prospective, bidirectional relationships in adolescence. *Journal of Affective Disorders*, 372, 598-607.

**Silver, J.**, Huffhines, L., Parade, S., Martin, S., Hunt, J., Spirito, A., Klein, D. N., & Boekamp, J., (Submitted). Irritability Among Young Children in a Partial Hospitalization Program: Exploring and Assessing Child Irritability through Observational and Parental Perspectives.

**Silver, J.**, Calentino, A., Lawhead, C., Olino, T., Dougherty, L., Bufferd, S., Finsaas, M., Goldstein, B., Mackin, D., Carlson, G., & Klein, D.N. (Submitted). Homotypic and heterotypic continuity of psychiatric disorder from early childhood to late adolescence.

**Presentations**

**Silver, J.** & Klein, D.N (2025, April). *The Developmental Course of Youth Psychopathology: Prevalence and Homotypic and Heterotypic Continuity from Early Childhood through Late Adolescence*. Poster presented at the 27<sup>th</sup> Annual meeting of the Mind Brain Research Day, Warren Alpert Medical School of Brown University, Providence, RI.

**Silver, J.** (2024, September). *Development and validation of a measure to assess phasic and tonic irritability*. Symposia presented at the Congress on Pediatric Irritability and Dysregulation. Burlington, VT.

**Silver, J.** & Klein, D.N (2024, October). *The Developmental Course of Youth Psychopathology: Prevalence and Homotypic and Heterotypic Continuity from Early Childhood through Late Adolescence*. Society for Research in Psychopathology (SRP) 2024 Annual Meeting. Montreal, Canada.

Sorcher, L.K., **Silver, J.**, Carlson, G.A., Dougherty, L.R., & Klein, D.N. (2024, November). *Irritability Across Adolescence: Examining Longitudinal Trajectories, Stability, and Associations with*

*Psychopathology and Functioning at Age 18*. Poster presented at the Association for Cognitive and Behavioral Therapies Annual Convention, Philadelphia, PA, United States.

### **Grant Submissions**

NICHHD – NIH

Title: Understanding and Assessing Pediatric Irritability: Developmental Trajectories, Convergent Validity, and Multi-level Risks.

Brown University

Title: Evaluating Pediatric Partial Hospitalization: Symptom Change, Mood Trajectories, and Risk Factors in Young Children.

### **Honors & Awards**

2024 Smadar Levin Award Finalist, Society for Research in Psychopathology

2024 Shortlisted for the ACAMH Awards Best Paper Award - Journal of Child Psychology and Psychiatry Award



# **The Developmental Course of Youth Psychopathology: Prevalence and Homotypic and Heterotypic Continuity from Early Childhood through Late Adolescence**

Jamilah Silver, M.A., Alison E. Calentino, M.A., Connor Lawhead, B.S., Thomas M. Olino, Ph.D., Lea R. Dougherty, Ph.D., Sara J. Bufferd, Ph.D. Megan C. Finsaas, Ph.D. Brandon L. Goldstein, Ph.D., Daniel

M. Mackin, Ph.D., Gabrielle A. Carlson, M.D., & Daniel N. Klein, Ph.D.

**Objective:** Mental disorders in youth exhibit high prevalence and homotypic and heterotypic continuity. However, studies have not followed children from preschool through late adolescence.

**Method:** We followed a community sample (N=609) at three-year intervals from ages 3-18. We tracked the prevalence and continuity of common mental disorders and broadband internalizing and externalizing categories using semi-structured diagnostic interviews.

**Results:** By age 18, estimated cumulative prevalence rates were 34.9% for depression, 56.1% for anxiety, 22.8% for disruptive behavior disorders (DBD), 19.2% for attention deficit hyperactivity disorder (ADHD), and 11.9% for substance use disorders (SUD). Rates of depression and anxiety rose with age; DBD declined in early childhood; ADHD peaked at age 12; and SUD sharply increased at age 18. The estimated cumulative prevalence of any mental disorder by age 18 was 72%. There was substantial homotypic and heterotypic continuity, although the latter was much greater within, rather than between, internalizing and externalizing domains. Early ( $\leq$  age 6) psychopathology substantially increased risk of mental disorders through age 18.

**Conclusion:** This is the first prospective longitudinal study of the development and continuity of common mental disorders from preschool throughout adolescence. Results underscore the significant burden of mental disorders in youth.

## **Jess Smith (Jared Saletin, PhD.)**

### **Publications**

Jusko, M. L., **Smith, J. N.**, Hayes, T., Campezo-Pardo, M., Timmons, A. C., Morrow, A. S., Lozano, C., Fosco, W. D., Little, K., Villodas, M., & Raiker, J. S. (in press). An application of time series analysis to single-case designs in an intensive behavioral intervention for ADHD. *Journal of Attention Disorders*.

Kofler, M., Soto, E., Singh, L., Harmon, S., Jaisle, E., **Smith, J. N.**, Feeney, K., & Musser, E. D (2024). Executive function deficits in attention-deficit/hyperactivity disorder and autism spectrum disorder. *Nature Reviews Psychology*, 3(10), 701-719.

Jusko, M. L., Piscitello, J., Villodas, F. M., Renaud, M., Morrow, A. S., Lozano, C., Merrill, B. M., Campezo-Pardo, M., **Smith, J. N.**, Raiker, J. S., & Villodas, M. T. (2024). The after-school treatment program: A school-based adaptation of the summer treatment program. *Evidence-Based Practice in Child and Adolescent Mental Health*, 1-16.

### **Presentations**

**Smith, J. N.**, Mason, G. M., Kupka, G., Mayew-Sherman, C., Moyles, S. M., Dionisos, V. O., Christiansen, T. G., Barker, D. H., Dickstein, D. P., Carskadon, M. A., & Saletin, J. M. (2025, June). *The influence of sleep restriction on vigilance among youth with inter-individual differences in ADHD, anxiety, and psychological stress*. Poster presented at the 39th Annual Meeting of the Associated Professional Sleep Societies.

**Smith, J. N.**, Mason, G. M., Kupka, G., Mayew-Sherman, C., Moyles, S. M., Dionisos, V. O., Christiansen, T. G., Barker, D. H., Dickstein, D. P., Carskadon, M. A., & Saletin, J. M. (2025, March). *The influence of ADHD, anxiety, and psychological stress on vigilance and reaction time variability after sleep restriction in adolescents*. Poster presented at the 27<sup>th</sup> Annual meeting of the Mind Brain Research Day, Warren Alpert Medical School of Brown University, Providence, RI.

### **Honors & Awards**

Mind-Brain Research Day “First Prize” Research Poster Award, Clinical Psychology Resident category – Department of Psychiatry and Human Behavior/Carney Institute for Brain Science & The Warren Alpert Medical School of Brown University, 2025.

## The Influence of ADHD, Anxiety, and Psychological Stress on Vigilance and Reaction Time Variability after Sleep Restriction in Adolescents

Smith, J. N.,<sup>1,2</sup> Mason, G. M.,<sup>2,3</sup> Kupka, G.,<sup>3,4</sup> Mayew-Sherman, C.,<sup>3</sup> Moyles, S. M.,<sup>3</sup> Dionisos, V. O.,<sup>3</sup> Christiansen, T. G.,<sup>5</sup> Barker, D. H.,<sup>3,4</sup> Dickstein, D. P.,<sup>6</sup> Carskadon, M. A.,<sup>2,3,4</sup> & Saletin, J. M.<sup>2,3,4</sup>

**Institutions:** <sup>1</sup>Florida International University Department of Psychology; <sup>2</sup>The Warren Alpert Medical School of Brown University Department of Psychiatry & Human Behavior; <sup>3</sup>E. P. Bradley Hospital Sleep Research Laboratory; <sup>4</sup>Bradley Hospital COBRE Center for Sleep and Circadian Rhythms in Child and Adolescent Mental Health; <sup>5</sup>The University of Iowa; <sup>6</sup>Harvard Medical School Department of Psychiatry

**Introduction:** Sleep restriction compromises vigilance. While adolescents commonly experience sleep loss, attention-deficit/hyperactivity disorder (ADHD) may expose vulnerability. Reaction time variability (RTV) is a cardinal deficit of ADHD, yet it is relatively understudied as a sleep loss phenotype compared to lapses. As vigilance may further contribute to mental health in ADHD, we investigated how ADHD and mental health symptoms interact with the effect of sleep restriction on vigilance and response time variability in youth.

**Method:** Fifty-five adolescents in R01HD103665 (29F; ages: 12.3±1.2yrs, range: 10-15yrs) completed two crossover conditions: sleep optimization (5 nights of 10h time-in-bed anchored to optimal risetimes) and sleep restriction (5 nights at 7.5h time-in-bed; equally delaying bedtime and advancing risetime). After each condition, participants completed a 10-minute psychomotor vigilance task (PVT) yielding lapse (RTs>500ms) and reciprocal reaction time (1/RT [RRT]) variables. We then separated gaussian and exponential components of the RT distribution and estimated RTV via sigma (gaussian variability) together with mu and tau (means of gaussian and exponential components). Conners-3 parent T scores indexed ADHD symptoms in inattention (58.0±14.0; range: 40-90) and hyperactivity/impulsivity (60.6±16.4; range: 41-90) domains. Mental health symptoms were measured on PROMIS scales for child-reported anxiety (47.8±9.0; range: 35.6-66.2) and anger (45.1±8.9; range: 31.5-61.6) as well as psychological stress (parent-report 47.8±14.9; range: 4-71.1; child-report: 50.1±8.1; range: 39.5-68.8). Separate linear mixed models examined how sleep condition (restriction vs. optimization) and each symptom interact in explaining PVT performance.

**Results:** Sleep restriction moderated the effect of inattention on RTV ( $b=0.51$ ,  $SE=0.24$ ,  $p=.042$ ). Higher inattention was associated with more variable RTs (sigma) only in sleep restriction. For lapses, we identified a main effect of condition ( $b=12.68$ ,  $SE=4.74$ ,  $p=.010$ ) and an interaction with psychological stress ( $b=-0.21$ ,  $SE=0.095$ ,  $p=.032$ ); worse psychological stress was associated with fewer lapses after sleep restriction. No other analyses were significant.

**Conclusions:** These data indicate that ADHD and mental health symptoms may differentiate vigilance and response time variability after sleep restriction. The well-established association between ADHD symptoms and response time variability was only observed in sleep restriction; optimizing sleep schedules may mask ADHD sequelae. We will continue to probe the origin and consequence of these inter-individual differences.

**Elinor Waite (Jessica Peters, PhD.)**

**Publications**

Dixon-Gordon, K. L., **Waite, E. E.**, Denning, D. M., Isbell, L., Schoenfeld, E., Soares, W., Dehon, E., & Kalmakis, K. (in press). An experimental examination of patient psychiatric status on emergency department provider attitudes: Predictors and effects on care in hypothetical vignettes. *Stigma and Health*.

O'Brien, C., **Waite, E. E.**, Denning, D. M., Haliczzer, L. A., & Dixon-Gordon, K. L. (2025). Exploring the role of self-defective beliefs in the relation between sexual orientation and nonsuicidal self-injury in young women. *Suicide and Life-Threatening Behavior*.

**Waite, E. E.**, Savalia, T., Cohen, A. L., Haliczzer, L. A., Huffman, S. & Dixon-Gordon, K. L. (2024). Borderline personality disorder and learning: The influences of emotional state and social versus nonsocial feedback. *Journal of Affective Disorders*.

**Presentations**

**Waite, E.E.**, Stumper, A., Rabasco, A., Fydenkevez, M. A., Yu, Y., Eisenlohr-Moul, T. A., & Peters, J. R. (2025, March). *Perceived Premenstrual Dysphoric Disorder and Premenstrual Exacerbation in Borderline Personality Disorder*. Poster presented at the Brown University Mind Brain Research Day, Providence, RI.

Dixon-Gordon, K. L., **Waite, E. E.**, Huffman, S. E., Constantino, M. J., Martell, C., Gratz, K. L., Hazlett, E. (2024, November). *Mapping treatment components to targets in dialectical behavior therapy*. In S. E. Huffman and K. L. Dixon-Gordon (Co-chairs), Pinpointing Mechanisms and Moderators of Treatment for Borderline Personality Disorder. Symposium presented at the 58th annual convention for the Association for Behavior and Cognitive Therapies (ABCT), Philadelphia, PA.

**Waite, E.E.**, Stumper, A., Rabasco, A., Fydenkevez, M. A., Yu, Y., Eisenlohr-Moul, T. A., & Peters, J. R. (2024, November). *Perceived Premenstrual Dysphoric Disorder and Premenstrual Exacerbation in Borderline Personality Disorder*. Poster presented at the 58th annual convention of the Association for Behavior and Cognitive Therapies (ABCT), Philadelphia, PA.

**Waite, E.E.**, Huffman, S.E., Gratz, K., Constantino, M., Martell, C., Hazlett, E., & Dixon-Gordon, K. L. (2024, November). *Intrapersonal and Interpersonal Emotion Regulation and Interpersonal Problems in Borderline Personality Disorder*. Poster presented at the 58th annual convention of the Association for Behavior and Cognitive Therapies (ABCT), Philadelphia, PA.

**Grant Submissions**

NIH F32, submitted April 2025

Title: Addressing Challenges in Diagnosis of Premenstrual Disorders through Data Driven Approaches.

## **Perceived Premenstrual Dysphoric Disorder and Premenstrual Exacerbation in Borderline Personality Disorder**

Elinor Waite, Allison Stumper, Ana Rabasco, Megan A. Fydenkevez, Yunshu Yu, Tory A. Eisenlohr-Moul, & Jessica R. Peters

*Background:* Borderline personality disorder (BPD) is characterized by emotional, interpersonal, and behavioral instability. Sensitivity to flux in ovarian steroid hormones across the menstrual cycle has been linked to a wide range of psychopathological and neurobiological symptoms, including affective and cognitive dysfunction. Premenstrual dysphoric disorder (PMDD) is diagnosed when at least 5 symptoms, including at least one core mood symptom, onset in the luteal phase and remit to non-clinical levels within the follicular phase. However, no current DSM diagnosis captures premenstrual exacerbation (PME), wherein symptoms demonstrate substantial and impairing luteal worsening, but persist at clinical levels across the menstrual cycle. PME may be more common than PMDD, likely occurring at high (>50%) rates for numerous affective disorders including BPD. The current study aims to examine the prevalence of both perceived PMDD and PME in participants with and without BPD, using diagnostic interviews modified to capture PMDD and PME.

*Methods:* As part of an ongoing larger study, a sample of menstruating, assigned female at birth participants recruited for difficulties in affect regulation and interpersonal relationships (current  $N = 108$ ,  $M_{\text{age}}=27.80$ ,  $SD_{\text{age}}=8.00$ ; 20% gender-diverse; 43% minority race/ethnicity) completed diagnostic interviews (SCID-5, SCID-BPD). The SCID PMDD module was modified to assess PME in addition to PMDD, both based on retrospective participant report.

*Results:* In the overall sample, 104 (96%) participants met criteria for at least one current psychiatric diagnosis. In terms of BPD specifically, 34 (32%) participants met criteria for BPD ( $\geq 5$  symptoms), 30 (28%) were categorized as subthreshold BPD (3-4 criteria), and 44 (41%) did not meet criteria for BPD (0-2 criteria). While perceived PMDD was reported by a significantly greater percentage of those without BPD (36%) than those with subthreshold BPD (23%) or BPD (9%;  $\chi^2=7.97$ ,  $p=.019$ ), the pattern was reversed for perceived PME, with significantly greater percentages of PME reported among those with BPD (68%) than those with subthreshold BPD (47%) or without BPD (21%;  $\chi^2=17.75$ ,  $p<.001$ ). Updated analyses will be presented, given that data collection is ongoing.

*Discussion:* These findings first provide support for assessing PME, as it may capture a wider range of symptoms relating to menstrual cycle hormone sensitivity than PMDD alone. Further, the findings may suggest hormone sensitivity may be particularly relevant for those with BPD, and cycle related changes in symptoms may explain mixed findings seen in research on BPD symptom expressions. Given the SCID only assesses perceived PMDD and PME, and these rates may include false positives, next steps include examining prospective daily symptom ratings across two menstrual cycles to examine rates of definitive PMDD and PME in those with BPD.

**Sajida Yasmeen (Kirsten Langdon, PhD.)**

**Presentations**

**Yasmeen, S.,** Tangney, J. P., & Stuewig, J.B., (2025, March 25). *A longitudinal examination of the relationship between religious participation and substance dependence among previously incarcerated individuals*. Poster presented at the Brown University Mind Brain Research Day, Providence, RI.

**Grant Submissions**

Direct Action Visionary Grants, American Psychological Foundation, 2025-2026

Title: Digitally delivered mental contrasting and implementation intentions (MCII) to prevent substance use disorder relapse

Decision: Not funded

# **Longitudinal Examination of Relationship Between Religious Participation and Substance Dependence Among Previously Incarcerated Individuals**

Sajida Yasmeeen, June P. Tangney, Jeffrey B. Stuewig  
George Mason University

**Background:** Religiosity and substance use are negatively correlated across numerous cross-sectional studies (Park et al., 2017; Walton-Moss et al., 2013). The few longitudinal studies that have attempted to determine the causal relationship have been mostly conducted with community youth and young adults and provided mixed results (Crank, & Teasdale, 2019; Hoffmann, 2014; Jang et al., 2008; Benda, 2002). Results from a longitudinal study of juvenile delinquents suggested a unidirectional relationship from religiosity to decreased substance use (Jang, 2018). To our knowledge, the current study is unique in examining this relationship in a high-risk sample of adults-- previously incarcerated people.

**Methods:** Participants were 328 individuals (66% men) interviewed at 1 (Time 1), 4 (Time 2), and 7-years (Time 3) post-incarceration. They reported whether or not they participated in religious services in the last 12 months. Alcohol and drug dependence (i.e., marijuana, cocaine, opiate) was assessed using the TCU Residential Treatment Form (Simpson & Knight, 1998).

**Results:** Path analysis with cross-lagged effect by means of structural equation was conducted. We ran separate analysis for alcohol dependence and other drugs dependence (combined all drugs such that highest dependence score was used). Findings support a unidirectional relationship from religious participation to alcohol dependence. No relationship, in either direction, between religious participation and drug dependence was found.

**Conclusion:** Religious participation appears to serve as a protective factor for alcohol dependence post-incarceration. Religious participation might affect alcohol use via increased participation in 12-step program. Future research should examine participation in 12-step program as a mediator of the relationship between religious participation and subsequent reduced alcohol dependence.