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Welcome Address

Dear Conference Participants,

Welcome to the 32nd Annual UCLA Psychology Undergraduate Research Conference (PURC), sponsored by the UCLA Department of Psychology! The Psychology Undergraduate Research Conference was created in 1992 by Dr. Elizabeth Bjork, with the goal of creating opportunities for undergraduate students to develop their presentation skills and share their research efforts with their peers and colleagues. During this day-long event, diverse students from UCLA and across the world will present their research through posters and 5-minute data blitz talks.

As we gather here today, we recognize the indispensable role undergraduates play in the research enterprise and celebrate their remarkable achievements. We will come together and share our knowledge, insights, and experiences across all sub-disciplines of psychology. This conference will also be a chance for us to learn from one another, to engage in meaningful conversations, and to spark new ideas.

On behalf of the UCLA faculty, graduate sponsors, and administration, I want to extend my sincere gratitude to all the participants who are presenting their work today. Your passion for psychology and dedication to your work has truly impressed us all. I would also like to express my thanks to the mentors, family, and friends who have supported and encouraged these students in their academic endeavors. Your guidance and mentorship have been invaluable for shaping their work and shaping their careers.

Finally, I wish all the participants the best of luck as they present their research. Thank you again for joining us today. I hope you enjoy the conference!

Sincerely,

David Clewett, Ph.D.
Assistant Professor of Psychology
Faculty Sponsor
Acknowledgments

The UCLA Psychology Department expresses its deepest appreciation to the following individuals for their valuable help and creative input. Many individuals, not all of whom are listed here, made the 32nd Annual UCLA Psychology Undergraduate Research Conference possible.

**PURC Coordinator:** Jessica Helfond

**Graduate Assistants:** Ashley Chen, Erin Morrow

**Faculty Sponsor:** Dr. David Clewett

**Department Chair:** Dr. Annette Stanton
# Data Blitz Presenters

## Social
- Christian Beltran
- Samantha Garcia
- Asha Jotwani
- Jacqueline Kamei
- David Tzu-Chien Lin
- Alexa Lopez
- Noah Miller

## BNS/Health/Quantitative
- David Berin
- Anusha Fatehpuria
- Sophie Lawrence
- Serenity Owens
- Reginald Vaughn
- Liyang (Julia) Zhou

## Cognitive
- Daniel Chen
- Riley Cox
- Kathleen Rae Deguzman
- Kai Xuan (Amber) Gan
- Jiayang (Janys) Li
- Luis Parada Ramirez
- Kaycee Stiemke
- Jiexiao "Jacob" Wu

## Clinical
- Leyla Boyar
- Kimberly Brown
- Apurva Chaturvedi
- Alyssa De Los Santos
- Danielle Hight
- Aleeza West

## Developmental
- Madison Bachelor
- Anvi Brahmbhatt
- Yue Chen
- Elizabeth Gottesman
- Urvi Shah
Data Blitzes: Social

"Tell the Truth, Are You Lying?": How Compassion and Framing Drive Prosocial Lies

Christian Beltran, Megan Weber, Eugene Caruso
University of California, Los Angeles

Prosocial lying is a common ethical dilemma that arises when honesty conflicts with the desire to prevent harm. Although feelings of compassion may lead to prosocial lying, they could also lead to greater honesty (e.g., telling a hard truth). Because of this, the present research investigates whether the framing of a request ("tell the truth" vs. "don’t lie") can affect one’s expectations of honesty and inclination to act truthfully in prosocial lying dilemmas. We propose that “telling the truth” implies a request for the whole truth, whereas “not lying” could imply avoiding only direct lies, potentially giving leeway for other deceptive behaviors (e.g., lies of omission). We investigate how compassion and request framing affect prosocial lying behavior, perceptions of lying, and the moral acceptability of prosocial dishonesty in two studies. In study 1 (n=600), experimentally-induced compassion led to greater prosocial lying in a minimally harmful dilemma (p = .01). In study 2 (n=402), prosocial lies of omission (in vignettes) were deemed more morally acceptable (p = .03) and perceived as less of a lie (p = .03) following the “don’t lie” request versus “tell the truth”. Compassion also predicted moral acceptability (p < .001). The findings from this research expand upon various motivations of prosocial lying, compassion’s effect on moral judgment, and explore possible consequences of discouraging dishonesty, which can act as a linguistic loophole for deception.

Ally Identity’s Role in Confronting Discrimination

Asha Jotwani, Samantha Garcia
University of California, Santa Barbara

Acts of discrimination are witnessed daily. Previous research has shown that in order to confront a discriminatory comment, people must first recognize that the remark is discriminatory toward their own group, decide if it necessitates a confrontation, take responsibility to confront the remark, and decide the manner of confrontation (Ashburn-Nardo et al., 2008). When individuals witness discrimination against a group to which they do not belong, they may find it even more difficult to follow these steps for confrontation. For these potential allies, or outgroup members acting in support of a targeted disadvantaged group, a factor that may influence their decision to confront is their identification with the targeted group. The current study examines the role of ally identity in confrontation behavior. In this study, 193 undergraduate students who identify as heterosexual witnessed a
discriminatory remark towards the queer community and were given the opportunity to respond. Participants reported their identification with the queer community, as well as their emotional reactions to the remark. We hypothesize that individuals who identify more with the queer community will be more likely to recognize the remark as discriminatory, will feel more anger and outrage in response to the remark, and will be more likely to confront the remark. The data from this study are currently undergoing analysis, but will be completed by the time of the conference.

Compassion is comprehending that the human experience includes suffering, perceiving others’ feelings, empathizing with them, and responding to reduce their negative feelings (Strauss, et al., 2016; Kanov, et al., 2004). With recent increases in callous acts such as mass shootings, racial hatred, misogyny, and intense political divisions, compassion continues to be an essential, fundamental building block for a well-functioning society. Studies revealing how compassion may be taught through training programs (Leiburg, et al., 2011; Jazaieri, et al., 2013) provide hope for potential increases in societal compassion. This experiment compares three learning styles: auditory, visual, and kinesthetic (Fleming, 1995). The study investigates whether listening to compassion stories, watching compassionate behavior, or practicing compassion cultivates the highest levels of compassion and compassionate love for humanity in college students. It is expected that the students who practiced compassion will exhibit the highest levels of compassion and compassionate love according to their scores on the Compassion Scale (Pommier, et al., 2020) and the Compassionate Love Scale stranger-humanity version (Sprecher & Fehr, 2005). These results have implications for how educational settings, media, and parenting practices could cultivate more compassionate individuals who love humanity as a whole.

Loneliness, or perceived social isolation, is known to have negative effects on physical and mental health, possibly due to its effect of increasing vigilance for threats and threat responding (Cacioppo, 2009). Indeed, research has shown that loneliness can alter the fear-response system, inducing stress and anxiety and leading to poor health outcomes (Heinrich, 2006; Hornstein, 2022). However, the mechanisms through which loneliness affects fear processes
are still unclear. This study explores the effect of loneliness on the acquisition of new fears, specifically whether high-lonely individuals exhibit augmented fear acquisition, an effect that may consequently augment perceptions of fear in daily life. Participants are healthy young adults recruited on the UCLA campus, who complete the UCLA Loneliness Scale and undergo in-lab Pavlovian fear conditioning procedures. Participants view neutral images on a computer screen, some of which are consistently paired with a mild electric shock, while their skin conductance response is collected to measure conditional fear acquisition. Based on our hypothesis that loneliness augments fear learning, we expect to find that high-lonely individuals acquire stronger fear in terms of magnitude compared to low-lonely individuals. This research has the potential to provide a better understanding of the relationship between loneliness and fear learning and contribute to the bigger picture of the role of social connection during fear learning.

Low-socioeconomic status (SES) ethnic minority students first entering college are at risk of experiencing discrimination based on their SES or their identity as a member of ethnic minority groups. Frequent discrimination is associated with harmful effects on students’ well-being, including an increase in negative mental health symptoms (Hwang & Goto, 2008) and a decrease in sense of belonging in their college environment (Hussain and Jones, 2021). Discrimination is also associated with greater perceptions of cultural mismatch (Feasel et al., 2023), a term used to describe when a student’s home culture does not match their university culture. Cultural mismatch also negatively impacts college students’ sense of belonging (Phillips et al., 2020). Given these similar effects of both discrimination and cultural mismatch on belonging, the current research hypothesizes that cultural mismatch mediates the relationship between SES discrimination and the sense of belonging in low-SES and racial/ethnic minority college students. We found support for this mediational model in a prior longitudinal data set. Students who experienced more frequent SES and racial discrimination perceived greater cultural mismatch, and in turn experienced a decrease in belonging during their first three years of college. In a follow-up study, these results were replicated in a cross-sectional study with low-SES college students using a more robust measure of SES discrimination.
When two people speak in conversation, their brain activity will correlate in both space and time. Similar structures will become active in both members of a conversation, and this phenomenon is called “neural synchrony” (Nam et al., 2020). This effect is most prominent in a network of structures known as the Default Mode Network (DMN), which shows high levels of activity during perspective taking, imagination, and mind wandering (Buckner et al., 2008). It is also highly active while listening to music (Reybrouck et al., 2018). Long-term experience with music shows several structural and functional changes within this network (Keenan et al. 2001; Gaser & Schlaug 2003; Halwani et al., 2011; Leipold et al., 2021), but previous research has not explored differences in the way musicians may recruit the DMN during social interaction. To test this, we will place participants in both an affiliative and aversive social condition. As music is a highly rhythmic skill of nonlinguistic communication, we hypothesize that musicians will display higher levels of neural synchrony in the DMN. Based on the importance of this network and previous findings suggesting higher rates of depression in musicians (Gross & Musgrave, 2017), we also expect this heightened neural synchrony to correlate with measures of social receptivity and mood.
Data Blitzes: BNS/Health/Quantitative

The Role of Alcohol Use as a Moderator Between Relationship Status and Satisfaction of Sexual Life Among College Students

David Berin, Joni Brown, Michelle Tang, Patrick Wilson
University of California, Los Angeles

College students who have sex with a main partner report greater sexual pleasure compared to college students who have sex without a main partner (Wilson et al., 2020). Additionally, research suggests that drinking with a partner is related to higher relationship satisfaction (Testa et al., 2022). However, little is known about whether alcohol use moderates the association between relationship status and satisfaction with sexual life for college students. Based on existing literature, we hypothesize that being in a committed relationship will be associated with greater sexual satisfaction, and that higher levels of alcohol use will strengthen this association. We will analyze data from the Sexual Health Initiative to Foster Transformation (SHIFT) study, which examined sexual experiences among undergraduate students (N=420). Whether participants were in a committed relationship was measured using a single item on relationship status, sexual satisfaction was measured using the Sexual History and Adjustment Questionnaire (Lewis et al., 1998), and alcohol use was measured using the Alcohol Use Disorders Identification Test (Babor et al., 2001). Multiple regression analysis will be used to examine the association and test for moderation. Investigating the role of alcohol use in the link between relationship status and sexual satisfaction can improve our understanding of the sexual experiences of undergraduate students and help target sexual health interventions.

Stroke-Induced PTSD Risk: Thematic Analysis of Responses to an In-hospital Trauma Interview

Anusha Fatehpuria, Corinne Meinhausen,

Strokes and transient ischemic attacks (TIAs), a leading cause of death and disability, often occur suddenly and can lead to posttraumatic stress disorder (PTSD) development (Edmondson, 2014). Qualitative research has been used to identify linguistic patterns in recalling traumatic events that are associated with PTSD, including a high degree of somatic and emotional details (Crespo & Fernández-Lansac, 2016). However, it is unknown whether an individual's subjective description of the stroke/TIA event in its acute aftermath predicts recovery and PTSD risk. In the present study, patients hospitalized with suspected stroke/TIA (N=98) completed an in-hospital standardized trauma interview with questions about the event (e.g., Did you have any injuries?; During the stroke/TIA event, how helpless did you feel?). Three researchers performed a theory-based thematic analysis of
Interview responses and developed a codebook and scoring protocol for themes related to the stroke experience that may be relevant to PTSD risk. Interview transcripts were scored by two raters and averaged to obtain a final score. In this study, we present a descriptive analysis of these scores to characterize the types of responses to these medical events. To our knowledge, this is the first qualitative analysis of trauma interviews of patient experiences in the acute period following a stroke/TIA event. Future research will examine whether coded responses predict stroke-induced PTSD and course of disease.

**Moving Art and Awe: The Effect of Visual Art on Emotional Well-Being**

Awe is a complex emotion made up of a combination of feelings such as reverence, fear, wonder, and surprise. Though most people have experienced this feeling, research on the subject is still in its adolescence. Awe-inspiring experiences have been linked to increases in general happiness, gratitude, and academic performance, and decreases in stress, inflammation, and even symptoms in patients with PTSD (Anderson et al., 2018; Nelson-Coffey, et al., 2019; Stellar et al., 2015). Thus, there is the potential for such interventions to be used therapeutically. The current study aims to evaluate the effect of the virtual immersive program of Moving Art by Louie Schwartzberg on measures of awe and well-being of undergraduate students at the University of California, Los Angeles. In three residence halls on the UCLA campus, large screens will display selections from Schwartzberg’s film library of nature scenes. Participants will complete a modified version of the Arts Impact Measurement System (AIMS) before and after their experience in order to assess the effect of the program on facets of emotional well-being such as positive affect, affect valence, and social connectedness (Lee et al., 2001; Russell et al., 1989; Watson & Clark, 1994). Items from validated awe measurement scales will also be administered after the program in order to measure the degree to which participants experienced the feeling of awe (Krenzer, 2018; Shiota, 2006; Yaden et al., 2018). Findings are predicted to implicate visual awe-inspiring interventions as accessible and effective methods of improving well-being and general functioning in a multitude of contexts.

**Substance Use and Motivation To Adhere to Treatment**

Problematic substance use (SU) and mental health challenges are prevalent among justice-involved young adults (JIYA). Although myriad treatment programs exist, non-adherence to SU treatment continues to be a significant problem (Johnson & Tran, 2019).
Among Justice-Involved Youth

Serenity Owens, Jordan E. Parker, Michelle H. Tang, Patrick A. Wilson

University of California, Los Angeles

2020). Past interventions have identified extenuating environmental and systemic barriers to adherence (Belenko et al., 2017); however, few studies have examined the link between treatment motivation and adherence in this specific population. The present study investigates whether motivation to adhere to treatment is related to the frequency of SU among JIY A, and examines whether this association is moderated by social support. Data for the present study were collected as part of the randomized controlled trial for MoveUp, an intervention for JIY A to promote HIV testing/treatment and substance use reduction for JIY A, N = 321. SU, treatment motivation, and social support were measured using the AIDS Risk Behavior Assessment, TCU Treatment Motivation, and the Berlin Social Support Scales, respectively. Assessments used in this study were completed at baseline. Using multiple linear regression, we will test the hypothesis that higher frequency of SU will predict lower treatment motivation and that social support will buffer this association. The results of this study will enhance our understanding of the predictors of treatment adherence, which may provide insight for constructing effective treatment programs for JIY A.

The role of substance use as a mediator in the relationship between discrimination and ART adherence in HIV Positive Black Men who Have Sex with Men

Reginald Vaughn, Manuel F. Ramirez, David G. Figueroa, Patrick Wilson

-BMSM: Black men who have sex with men
-ART: Antiretroviral therapy; medication prescribed to HIV-positive patients

Black men who have sex with men (BMSM) are disproportionately affected by HIV in the U.S. While antiretroviral therapy (ART) prevents progression to AIDS among people living with HIV, discrimination and substance use contribute to poor adherence (Quinn & Voisin, 2020). However, less is known whether substance use mediates the relationship between discrimination (i.e., racial or sexual orientation-based discrimination) and adherence. Experiences of discrimination have been shown to contribute to substance use (Phillips, 2008), and substance use has been shown to undermine adherence. Thus, we hypothesize that greater discrimination will influence greater substance use, which would be associated with poorer ART adherence. Data were collected from 90 HIV+ Black MSM who completed measures assessing racial discrimination, sexual orientation-based discrimination, substance use, and ART adherence. I will conduct two mediation models using the SPSS PROCESS macro; both models will control for age, income, and education. The first model will test racial
Eating Your Emotions? Or Changing Your Emotions? The Moderating Effect of Emotion Regulation on Weight Stigma and Eating

Liyang (Julia) Zhou, Alejandra Lopez, Manuel F. Ramirez, A. Janet Tomiyama

University of California, Los Angeles

discrimination as the predictor. The second model will test sexual-orientation discrimination as the predictor. In both models, substance use and ART adherence will be inputted as the mediator and outcome, respectively. ART adherence is a significant challenge for HIV+ BMSM. Results from this study can inform interventions that address substance use and improve HIV-related outcomes in this population.

Weight stigma (i.e., social devaluation and discrimination of people with higher weight) is stressful and contributes to emotional eating. Such emotional eating is theorized to initiate a vicious cycle that leads to weight gain and more weight stigma (Tomiyama, 2014). Extensive research shows that emotion regulation—the ability to modify one’s emotional experiences—can reduce emotional eating and thus reduce the risk for eating disorders (Torres & Nowson, 2007). However, no study has examined the protective role of emotion regulation on emotional eating in the context of weight stigma. Further, no study has examined this with experimental methods and ecological momentary assessment (EMA) which allows for causal inference and increases ecological validity. Thus, I hypothesize that (1) participants exposed to weight stigma will eat more food compared to a control group (no weight stigma), and (2) participants with better emotion regulation abilities will eat less than participants with worse emotion regulation abilities. Two-hundred participants from the community (current N = 86) with a BMI of 28 or higher will be randomly assigned to either the weight stigma or control group. Food consumption will be objectively measured in-lab, and subjectively with a food journal during the EMA. This study could reveal the protective role of emotion regulation, and pave the way to the development of new interventions enhancing emotion regulation abilities.
### Data Blitzes: Cognitive

#### Naturalistic Observations of Chat GPT Usage

Daniel Chen, Riley Cox, Tal Waltzer, Gail Heyman  
University of California, San Diego  

ChatGPT is an interactive chatbot that is rapidly gaining traction due to its capabilities as a large-scale language model available for public use. As present-day artificial intelligence continues to evolve, we aim to use this study to better understand socio-cognitive implications of ChatGPT in the educational system as a predominantly adolescent population adapts through navigating this resource in a variety of academic contexts. Specifically, our project recorded naturalistic observations of everyday discussions regarding ChatGPT and its uses (largely in educational contexts). Twenty-eight trained researchers recorded weekly observations of any instances in which they witnessed people (e.g., friends, family, professors) verbally mention or physically demonstrate the usage of ChatGPT. Observers recorded descriptions of the events, direct quotes, dates, and identities of the interlocutors (e.g., peer, friend). A total of 189 weekly reports have been collected so far, of which 70 (~37%) had observations involving ChatGPT. Preliminary analyses of the observational data suggest that ChatGPT is a popular topic among adolescents as a tool of educational assistance, providing shortcuts to completion of various academic assignments – homework, essays, and even exams. Furthermore, when assessing overall sentiments regarding said software, our observations suggest that students demonstrated much more positive reception than instructors.

#### ELA and Exploratory Behaviors in Emerging Adults

Kathleen Rae Deguzman, Elizabeth Gaines, Natalie Saragosa-Harris, Jennifer Silvers  

Exploratory behaviors promote emotional wellbeing, especially during the transition to adulthood as individuals gain independence and navigate novel environments. In recent studies, individuals with a history of early life adversity (ELA) explored novel computerized environments less than those with limited ELA exposure. Given the negative link between exploratory behaviors and mental health, this has implications for psychosocial functioning in ELA-exposed individuals, who are at heightened risk for developing psychopathology. While the present literature suggests a general association between ELA and exploration levels, it remains unclear how this association differs between different types of adversity (such as abuse versus neglect), or how it relates to other features of one’s early caregiving environment (e.g., parental unpredictability).
According to the threat-deprivation framework, neurobehavioral development differs depending on the type of adversity experienced. In line with this framework, we will examine whether exploration levels differ between individuals who have experienced childhood abuse versus neglect in a sample of emerging adults (ages 18 to 25, target N = 300). Participants will complete questionnaires regarding ELA and caregiving unpredictability, and play a computerized task designed to measure exploratory behavior. We hypothesize that a) those who have suffered significant abuse would have lower exploration patterns than those who have suffered significant neglect, and b) unpredictability of the caregiving environment will be associated with lower exploration levels. The results of this study will be valuable as it will provide insight on treatments and interventions for those with a history of adverse childhood experiences.

We tend to prioritize more valuable information at the expense of less valuable information to optimize the use of our limited memory capacity. Past research has largely been conducted by pairing word stimuli with arbitrary values (Castel et al., 2002). However, information often naturally varies in value, such as art. Few studies have examined the effect of predicting the value of information on memory. Therefore, the present study investigated the effect of predicted value and actual value on memory. A total of 110 participants studied art pieces and made predictions about whether they were high or low value. Then, each art piece was presented with a randomly paired high or low price value (i.e., defined as the actual value). Participants were then given a recognition test on the art pieces and were asked to recall their exact prices. Analyses revealed a significant interaction between predicted value and actual value on recognition. When the predicted value was low, art pieces with higher actual value were better remembered than those with low value. In contrast, when the predicted value was high, that effect was not significant. These results build on our understanding of value-directed remembering, and suggest that even predicting information to be high in value can influence memory. These findings also have broader implications on learning in educational and other settings.

Recent studies on trauma and depression show that clinical symptoms are associated with inflexible, context-inappropriate
Symptom Profiles Relate to Dynamic Emotional States Evoked by Music

Jiayang (Janys) Li, Mason McClay, David Clewett

University of California, Los Angeles

expression of emotions. However, research has yet to investigate the relationship between the frequency and intensity of clinical symptoms and the ability to transition flexibly between dynamic emotional states. Here, we examine how depression and trauma intensity relate to emotional transitions evoked by musical arrangements. To measure continuous fluctuations in felt emotions, we developed the Emotion Compass, a novel mobile web application that provides a 2D touch-mediated platform with coordinate-based visualization of continuous valence and arousal levels. Preliminary data analysis reveals that depression and trauma symptomatology significantly correlate with the temporal variability in subjective emotion ratings during music listening. Future analyses will leverage machine learning methods to characterize distinct profiles of depression and anxiety across participants. We hypothesize that participants with higher depression and trauma symptom profiles will show decreased probability of transitioning between specific emotional states evoked by music, as measured by the Emotion Compass. These findings would be a strong proof-of-concept that the Emotion Compass can be used to assess meaningful individual differences in emotional flexibility as well as their potential relevance to the diagnosis and treatment of mental health disorders.

Reframing Bilingualism and Investigating Cognitive Performance in Relation to Linguistic Distance

Luis Parada Ramirez, Jiexiao "Jacob" Wu

University of California, Irvine

Whether and how bilingualism is associated with cognitive advantages has been a long-debated question with mixed results in cognitive studies. Recent studies introduced bilingual profiles, the linguistic feature of first and second language, as possible moderators for the ambiguous findings, while highlighting the importance of not generalizing task-specific findings. The current research aims to explore how language profiles could differentially influence inhibitory control (IC), cognitive flexibility and working memory. 124 bilingual participants (mean age = 21, SD = 4.17, 79% female, 58% Hispanics) participated in a two-part remote study and completed demographic surveys and a series of executive function tasks: AX-CPT, Antisaccade, Flanker, Stroop, TOVA, Category Switch Task, Updating Numbers, and Working Memory Span. By tracing the back linguistic root of first and second languages, participants were divided into groups that speak languages from the same family (close linguistic group) or languages from different families (distant linguistic group). Preliminary results indicate that the close linguistic group had a significantly faster reaction time on the Updating Number task.
than the distant linguistic group (F(1, 109) = 6.91, p < 0.01), but not in any other tasks. These findings support the task-specific association between bilingualism and cognition, while suggesting a new way of classifying bilingualism to better understand underlying mechanisms.

Exploring Causality in Productive and Performative Activism

Kaycee Stiemke, Hunter Priniski, Keith Holyoak

University of California, Los Angeles

Millions of Instagram users posted content to support the Black community using #BlackLivesMatter, during the George Floyd protests in the summer of 2020. With the increase in online activism, some people used the protests as an opportunity to gain social capital rather than help the movement. This study operationalizes performative and productive activism using quantitative methods to explore their causal relationship with social media engagement. One of the most criticized examples of performative activism is Blackout Tuesday, where thousands of Instagram users posted plain Black squares with #BlackLivesMatter or #BlackoutTuesday (Blair, 2021). Users participated in Blackout Tuesday to present as advocates but neglected the initial purpose of (productive) activism. This investigation uses #BlackoutTuesday to model whether performative activism causes a decrease in productive activism in social media engagement. Instagram users’ degree of benefit, or social capital, is operationalized by the number of likes and interactions posts containing this hashtag receive. Analyses of 376,987 Instagram posts with Black Lives Matter-related hashtags, specifically from April 25 to June 25, a month before and after George Floyd’s murder, revealed that performative activism significantly dilutes productive activism. Identifying the causal impact of performative activism can help prevent Black Lives Matter and future social movements from being co-opted by those with disingenuous intent.
Data Blitzes: Clinical

The Relationship Between Caregiver-Child Personality Mismatches and Psychotic-Like Experiences in Adolescents

Leyla Boyar, Rachel McKinney, Kristen Laulette, Katherine Karlsgodt

University of California, Los Angeles

Psychotic disorders often emerge in adolescence, but developmental risk factors are still being investigated. One known risk factor is family hostility or conflict, which has been linked to adolescent psychosis onset (Peris & Miklowitz, 2015). Caregiver conflict may result in children feeling misunderstood, and feelings of self-misunderstanding also predict psychosis onset (Nelson et al., 2012). Thus, it is critical to investigate the caregiver-child relationship. To do so, we used data from 1,087 youth in the Adolescent Brain and Cognitive Development study. We tested a potential interaction between the child and caregiver personality disposition measures and the Prodromal Psychosis Scale (PSS). We hypothesized that a greater mismatch (difference) in caregiver-about-child and child self-report personality measures would predict higher PSS scores. After calculating caregiver-child mismatches using 3 separate personality scores, preliminary analyses found no significant associations between PSS and the three mismatch scores (p=0.09, p=0.18, p=0.52). These results may suggest an increased caregiver-child mismatch in adolescence regardless of PSS scores, but also that there may be other unexplored resilience factors. Further analyses will investigate the relationship between more severe psychosis symptoms, rated as distressing, and caregiver-child mismatch. We will also test if mismatches correlate with other psychopathology such as internalizing and externalizing disorders.

Associations Between Childhood Emotional Maltreatment and Prodromal Symptoms of Psychosis

Kimberly Brown, Christine Bird, Lauren Ng

Sexual and physical maltreatment in childhood has been associated with the onset of prodromal psychosis, or the Ultra High-Risk (UHR) stage of psychosis in which positive (e.g., hallucinations) and negative (e.g., avolition) symptoms first arise (Broome et al., 2005). However, emotional maltreatment in childhood (e.g., emotional neglect and emotional abuse) has been largely ignored (Freitas et al., 2020; Stoltenborgh et al., 2015). Research has identified associations between emotional maltreatment and psychosis (see Bonoldi et al., 2013; Garcia et al., 2016) that are posited to develop via issues with emotional and social functioning (Garcia et al., 2016). This relationship suggests that an earlier association between emotional maltreatment and prodromal psychosis may exist. This study aims to identify potential associations through multiple regression analyses of
emotional maltreatment and prodromal symptoms of psychosis on data collected from a community sample of Peruvian women (N =2149). We hypothesize emotional maltreatment in childhood will be significantly associated with prodromal psychosis symptom severity, clinical cutoff scores for prodromal psychosis, and both positive and negative symptoms of prodromal psychosis. Understanding these associations could inform early intervention tactics, that could prevent or delay the development of full psychosis in UHR groups (Miller et al., 1999).

Sensory over-responsivity (SOR) is an extreme response to sensory stimuli and is a challenge for over 50% of people with Autism Spectrum Disorder (ASD). SOR relates to higher heart rate (HR) responses to sensory stimuli in ASD (Jung et al., 2021). Some ASD youth may control their behaviors with top-down regulation to cope with aversive stimuli. High levels of thalamic GABA, an inhibitory neurotransmitter, may help with this regulation (Wood et al., 2021). Current SOR measures do not distinguish youth who are regulating (reacting biologically to stimuli but lacking a behavioral response) from those who are unaffected. Our goal is to determine whether “regulators” may be identified by low SOR behavior with high HR during an observed sensory assessment and to examine if this mismatch in behavior and physiology relates to neural regulation markers. Preliminary results show diagnostic group differences in time spent regulating (high HR/low SOR) vs. unaffected (low HR/low SOR) vs. high responsivity (high HR/high SOR) (χ (2) = 5.85, p=.05). 90% of the TD group were regulators or unaffected, whereas the ASD group was evenly distributed across the three categories. Age correlated negatively with SOR behaviors and positively with total time regulating in the TD but not the ASD group, suggesting that regulation may naturally emerge with age in TD but not ASD. Further analysis will examine if thalamic GABA correlates with time regulating, which may inform intervention strategies.

Community therapists often report adapting evidence-based practices (EBPs), such as trauma-focused cognitive behavioral therapy (TF-CBT), when implemented into public systems of care (Barnett et al., 2018). Augmenting adaptations are defined as those that add to or tailor an EBP in some way, such as modifying the presentation of an EBP (Kim et al., 2020). Augmenting adaptations made by local community therapists have been
suggested to enhance the fit of EBPs to their diverse clients (Yu et al., 2022). Thus, it is important to understand what makes therapists more likely to make Augmenting adaptations. The current study examines client, therapist, and session factors associated with the likelihood of therapists making Augmenting adaptations in sessions of TF-CBT. Data are drawn from a sample of 46 therapists who provided 190 TF-CBT session audio recordings and surveys describing session and client characteristics for 82 youth clients. Observational coding was conducted to identify Augmenting adaptations. The client sample (Mage = 10.21 years; 61.11% = female, 38.89% male) was racially/ethnically diverse, with 97.78% of clients identifying as from a minoritized racial/ethnic group (70% Latinx). Logistic regression will be conducted to examine factors associated with therapist likelihood of making Augmenting adaptations in session. Understanding these factors enhances our knowledge of how to best translate EBPs into community mental health settings serving diverse communities.

Internal motivation and family involvement impact outcomes in Substance Use Disorder (SUD) treatment. However, the recovery process can strain relationships, which may lead to relapse or treatment discontinuation (Atadokht et al., 2015), and many patients may not have familial support. Internal motivation is a critical factor in successful treatment outcomes, and high levels of both internalized and external motivation improve treatment outcomes and attendance in SUD. However, low internal motivation tends to lead to poor outcomes regardless of external motivation (Ryan, et al., 1995). To further investigate the nexus between familial support and internal motivation, this study investigates whether an online recovery app, SPARx, supports recovery differently for individuals who are high/low in family support and high/low in internal motivation. The study examines the duration of program participation, the level of engagement during utilization, and proximal measures of recovery among four distinct groups of users with high/low family support and internal motivation. We hypothesize that individuals with high internal motivation would persist with the program longer, and do better, than those with low internal motivation, regardless of familial support. The findings could help play a role in enhancing addiction treatment outcomes in the absence of familial support.
and mitigating relapse risks that arise due to strained relationships during addiction recovery.

The Association Between General Anxiety Levels and College Major Amongst Undergraduate Students

In recent years mental illness has been on the rise in young adults, especially those of certain demographics. For example, recent work has found that one in three college students experience significant anxiety (Druckenmiller, 2022). However there is a gap in the literature, particularly when looking at the association between a college student’s major of study and anxiety symptoms. Our study plans to identify and establish general anxiety symptoms in the undergraduate UCLA community by surveying anxiety levels within different majors through the General Anxiety Disorder-7 scale (GAD-7; Spitzer et al., 2006). Participants (N=39; target N=100) fill out an anonymous online survey where they identify current college major and general anxiety levels. Preliminary frequency analyses comparing average GAD-7 scores of the major divisions (Humanities, Life Sciences, Physical Sciences, and Social Sciences) in SPSS provide support for the idea that anxiety symptom severity varies based on major and that Humanities has the lowest anxiety symptoms (Mean = 9.00). In contrast to our initial predictions, the data shows that Physical Science majors have the highest anxiety symptoms (mean= 10.33). With these results, studies in the future can investigate how to allocate resources appropriately and increase the mental health of college students based on defining characteristics such as major. Thus, this study has implications to address the ongoing mental health crisis among college students.

Aleeza West,
Umiiemah Farrukh, Qasim Farrukh,
Nathaniel Chen,
Brandon Ha,
Abigail Monroe,
Jay Seibold, Julia Davoudi,
Lilian Nguyen, Tamnna Bhargav,
Stephanie Huerta, Paolina Aguila, Idan Blank

University of California, Los Angeles
Data Blitzes: Developmental

Association of Parental Expressed Positive Emotion with Internalizing Symptoms in at Risk Youth

Madison Bachelor, Bridget Callaghan

University of California, Los Angeles

Foster youth have a higher risk of developing internalizing disorders like depression and anxiety. However, research suggests that strong parenting environments can ameliorate this risk. Therefore, this study looks at the interaction between exposure to foster care and subsequent caregiver expressed affect on youth internalizing symptoms. 38 parent-child dyads were examined for this study. Half of the dyads consisted of children who were previously in foster care and who were now in a stable caregiving arrangement (early life adversity, ELA group). The other half of the sample consisted of children and their biological parents (comparison group). Parents reported on youth internalizing symptoms using the Child Behavior Checklist, and parent-child dyads engaged in a video-recorded conflict and recovery conversation task. Youth and parent affect during the conversation task was coded using a second-by-second behavior and affect coding system called the micro-FIMS, though planned analyses will collapse across time to create a measure of frequency of parent positive affect. The relationship between the adversity exposure group and frequency of parent positive affect on youth internalizing symptoms will be analyzed with a two-way ANOVA. We predict that a higher frequency of parent positive affect will be associated with lower internalizing symptoms for children in the ELA group. This research will inform how positive parenting can improve outcomes in at-risk youth.

Sex Differences in Pragmatic Contexts and Acoustic Characteristics of Infant-Directed and Adult-Directed Adult Speech in Daylong Audio Recordings

Infant directed speech (IDS) is typically higher and more variable in pitch compared to adult directed speech (ADS). Furthermore, acoustic characteristics, or physical aspects of speech (i.e., pitch), in IDS and ADS differ based on a speaker’s communicative intent (pragmatic contexts) and sex. However, research has not examined the effect of sex differences and pragmatic contexts on acoustic characteristics of adult speech in everyday language environments. This study analyzed adult speakers’ mean pitch and pitch variability from daylong home audio recordings (Bergelson et al., 2019; MacDonald et al., 2020). Human listeners annotated adult speech audio clips (N = 3606) for adult speaker sex and pragmatic contexts: conversational basics, inform, reading, comfort, singing, imperative, questions, and babbling/vocal play. Using a logistic mixed effects model, we
Research suggests that children struggle with acquiring pronouns, especially reflexive pronouns when the object and subject use the same referent (e.g., herself/himself). The literature debates the age at which children have an adult-like understanding of reflexive pronouns. Some scholars with an innate perspective argue that in a naturalistic environment, children will have an adult-like understanding around 2-years-old or younger since it is purely based on syntactical cues, as the reflexive pronouns should only refer to the referents inside the sentences. However, other scholars argue that adult-like understanding develops around ages 5- to 7-years-old through environmental inputs. The current study examines the input of personal pronouns and reflexive pronouns in 2-year-olds' everyday interactions and their reflexive pronoun understanding. From the Science of Everyday Play corpus, we coded sixteen 2-hours naturalistic play video recordings and transcripts of children and their caregivers interacting in their homes (Tamis-LeMonda & Adolph, 2017). Preliminary results found that pronouns are context-bound. For example, parents used “he/himself” more frequently in book reading (22.45%) and “you/yourself” more during play context (48.98%). As a result, children showed more action or verbal responses to "yourself" than "himself," which provides naturalistic evidence that refutes the innate approach, which means the acquisition of reflexive pronouns is not purely syntactical.
teach an infant or adult audience. The older, but not younger, children, taught more complex information to adults and more basic information to infants, (OR = 2.03). Both ages overcame their own preference for complex information when teaching infants, (h = .45). Children’s reflections on why they made particular pedagogical choices did not predict audience-contingent teaching. The findings suggest that young children can infer what kind of information is suitable given a learner’s maturity, with a key developmental progression between ages 5 and 7.

Research suggests that children’s basic perspective-taking, or an understanding of what a person can or cannot see using context clues, is associated with greater cognitive and emotional understanding as well as caregiver use of mental state language—words concerning inner mental states or feelings. However, prior research shows conflicting results on which mental state language categories—cognition (e.g., think, know), emotion (e.g., happy), or desire (e.g., want)—facilitate children’s perspective-taking. The current study examines the relationship between caregiver mental state language and children’s perspective-taking. In this study, caregivers and their two-year-old children discuss a wordless picture book. We categorize three types of mental state language in caregiver’s speech: cognition, emotion, and desire. Children’s perspective-taking is assessed using a double-sided card task where children are tested on their understanding of what images are visible to them and the experimenter (Flavell et al., 1981). Preliminary results (N=11, projected 41) show that, on average, caregivers are using more cognition and emotion words per session than desire words and children are scoring at chance on the perspective-taking task. Differences between mental state language categories on children’s perspective-taking skills as well as individual variability will be analyzed. This study can inform future studies on how caregiver language can support children’s perspective-taking.
# Poster Presenters

## Cognitive

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Poster Presentations: Cognitive

Examining the Relationship between Access to Tutoring and Executive Function and Mathematical Skills in Aged Children

Isabelle Acosta Sanchez, Ariel Guicheng Tan, Susanne Jaeggi
University of California, Irvine

Executive function (EF) and academic performance are strongly linked, with EF enhancing mathematical achievement due its involvement with problem solving and attention skills (Fuhs et al., 2014). While previous studies showed that socioeconomic status influences one's executive functioning abilities (Ferguson, et al., 2007), tutoring, specifically, is an understudied factor in cognitive education studies. As a form of supplementary instruction outside of regular classroom instruction, tutoring frequency and availability are linked to both parents income and school district funding. The current research examines whether access and utilization of tutoring plays a role in elementary students’ EF and mathematics performance. Part of a larger project, we assessed 250 4th graders in Southern California utilizing gamified tasks on tablets. In addition, participants answered questions about their personal experience with tutoring. Data collection has been completed, and analysis is underway. We hypothesize that access and usage of supplemental tutoring will be associated with higher EF and mathematical skill performance. Findings will identify tutoring as a means to train EF and enhance mathematical skills, encouraging the creation of methods to make tutoring a more accessible option to improve cognition and academic achievement.

Revisiting Recall in Relation to Reward-Based Learning: An Investigation of the Testing Effect in Value-Directed Learning

Alejandro Carranza, Katie Silaj, Alan Castel

Pairing items with point values can benefit recall for high-value information, a phenomenon known as value-directed remembering (Castel et al., 2002). A recent paper paired point values with words based on category membership such that members of one category (e.g., mammals) would be paired with higher values than members of another category (e.g., birds) and found that point values can also support transfer of learning with task experience (i.e., value-directed learning; Silaj et al., 2023). Little is known about what mechanisms influence learning transfer in this new reward-based paradigm and further research is needed. In the current study, we investigate whether the values of studied items can be used to predict the values of related items on a later test and how the study method impacts performance. In a within-subjects design, 295 undergraduates studied lists of categorical word-value pairs and then either restudied the same words again or took a free recall test before being asked to predict
the value of related items. Based on literature regarding the testing effect, we hypothesized that participants would produce more accurate value predictions on trials where they engaged in a free recall test (McDaniel et al., 2007; Pan & Rickard, 2018). We found that accuracy improved with each list and this effect was stronger for recall compared to restudy trials. Our work has implications for future research at the intersection of reward-based learning and study strategies.

Sleep Quality and Memory in Older Adults

Among older adults, declining sleep quality and its potential effects is a common but understudied issue. Current literature on sleep indicates a positive relationship between sleep quality and memory consolidation (Walker, 2009), but the impact of decaying sleep quality on older adult memory is not well understood, as research suggests discrepancies between perceived sleep quality and objective data within this demographic (Li et al., 2018). The present study examines how sleep quality can impact memory through a within-subjects design. Healthy, right-handed adults between ages 65-85 participate in three laboratory sessions where they recall key elements from three parallel Wechsler Memory Scale-IV stories. Recall is tested after a 20-minute delay, as well as a remotely administered 24-hour and 1-week delay. After this 1-week washout period, the procedure is repeated two more times. Over the 3-week period, objective sleep quality data is collected the night before in-lab immediate recall through ambulatory electroencephalography signals, while subjective data is collected through self-report questionnaires derived from the Pittsburgh Sleep Quality Index. We hypothesize a positive relationship between both objective and subjective sleep quality and story element recall. Results will additionally explore the discrepancy between objective and subjective sleep quality and how it might influence memory consolidation. Data collection is ongoing.

Bilingual Advantage or Code-switching Advantage?

A consensus on bilingualism’s impact on cognitive processes like working memory (WM) and cognitive flexibility has not been reached. This study will also measure our participants' language background on a dimensional scale. Our research will focus on English-Spanish bilinguals as previous research suggests how they tend to use their two languages more interchangeably compared to bilinguals in other areas in the US (Verreyt et al., 2016). This study seeks to offer insights into the impact of the
unique code-switching habits of English-Spanish bilinguals on WM and cognitive flexibility while accounting for individual language backgrounds. 65 participants (current enrollment n = 7, age mean = 19.8, SD = 0.84, female = 6) will complete the Complex Corsi Task, Letter-Number Sequencing task, trail-making task, Bilingual Switching Questionnaire, and the Language and Social Background Questionnaire. We hypothesize that participants who report higher code-switching frequencies will demonstrate better performance in both verbal and visuospatial WM as well as cognitive flexibility as compared with their counterparts who report lower frequency habits. Our study will shed more light on the potential underlying mechanism that drives the association between bilingualism and executive functions. Data collection is ongoing.

In college courses, students may be biased in their evaluations of instructors based on the ‘way’ the instructor speaks or their accent (Murray et al., 2020). In the current study, we examine the effectiveness of an intervention designed to reduce accent-based biases in students’ evaluations of instructors. Participants were randomly assigned to watch a brief lecture narrated by either an instructor who speaks English with a Mandarin accent (n = 50) or an instructor who speaks English with an American accent (n = 50). Following the lecture, a multiple-choice assessment was given to evaluate their understanding of the material. After the assessment, half the participants listened to a one-minute video intervention aimed to decrease bias (Intervention Condition), and the other half proceeded directly to the evaluation form (Control Condition). Although there were no differences in learning from the two instructors, in the Control Condition participants evaluated the Mandarin-accented instructor less favorably than the American-accented instructor. In contrast, participants who were exposed to the intervention did not show evidence of bias and evaluated both instructors similarly. We are currently exploring whether a simplified version of this intervention might be equally effective in reducing bias. Taken together, this work contributes to our understanding of how instructors can reduce the negative impact of accent-based biases in the college classroom.

Transfer, a critical component of student learning, is the process of applying acquired knowledge to a new context or situation.
**Variability on the Transfer of Knowledge**

Julian Kim, Rachel N. Smith-Peirce, Andrew C. Butler

Washington University in St. Louis

Previous research suggests that retrieval practice as opposed to re-studying and variability in learning as opposed to repeated learning produces a greater transfer of knowledge (Butler et al., 2017). The present study aims to confirm the advantage of variability in practice as well as experimentally manipulating the spacing of the practice sessions, as spaced practice over time has been shown to produce greater learning. Eighty college students will be recruited as participants, and a mixed design will be implemented to test the effect of spacing (i.e., massed or spaced) and variability (i.e., variable or repeated) during practice. Participants will watch lecture-style videos on geological science concepts, and complete practice questions before taking a final test assessing transfer of knowledge. We hypothesize that spaced learning will produce greater transfer of knowledge compared to massed learning, while variability in learning will produce greater transfer of knowledge compared to repeated learning. Overall, a spaced and variable learning approach is expected to yield the greatest transfer of knowledge. Our findings will expand our understanding of how the combination of variability and spacing in practice affect the transfer of knowledge and inform the implementation of these learning strategies in educational settings.

**The Influence of Test Format on Group Interactions during Collaborative T/F Practice Testing**

Emily Marquez, Megan N. Imundo, Vaishali Denton, Jordan A. Barbic, Ramya Ramakrishnan, Elizabeth Ligon Bjork

Group testing can support content learning: As group members interact with one another, they may exchange ideas, negotiate consensus, and correct each other’s errors (LoGuidice et al., 2015). To what extent groups engage in such productive interactions, however, may be impacted by the format of the test. We hypothesize that test formats designed to spark broad retrieval of information may elicit more productive group interactions than those that may not do so to the same degree. Specifically, in this study, we compared group interactions while taking a “traditional” T/F-test or while taking a “competitive” T/F test – which contrasts target content with closely related content in a “this-not-that” format within each item (e.g., sable-colored (not roan-colored) ferrets have black-tipped hairs). UCLA undergraduate students are currently participating in this study via Zoom (partial data collection is complete). First, participants read two passages and then take a T/F test in small groups. Participants are randomly assigned to take a T/F test with either traditional or competitive items. During this test, their interactions are video-recorded for qualitative analysis. We predict that the
University of California, Los Angeles

**Diffusion Weighted Imaging of Intra- and Inter-hemispheric Fiber Bundles in Callosal Agenesis**

Jordi Martinez, Prarthna Chabria, Jason S. Nomi, Lucina Q. Uddin

University of California, Los Angeles

**Testing changes in brain complexity and connectivity measures in relation to auditory and somatosensory stimulation**

Maziyah Mayet, Helen Liu, Laura Mena, Autumn Haikal, Labiba

Competitive T/F items will elicit more productive group interactions, such as elaborative explanations, because these items offer more information to groups to create discussion and justify responses. This study may inform how to best structure group testing to optimize learning.

Diffusion weighted magnetic resonance imaging (diffusion MRI) tracks the movement of water molecules along axonal fibers. Increased water diffusion along these fibers measured using diffusion tensor imaging (DTI) is associated with healthier brain structure and better cognitive function. The current study builds on prior work tracking the fibers of a “split-brain” patient whose corpus callosum was surgically severed to alleviate epilepsy. The split-brain patient had greater water diffusion in the middle cerebellar peduncle (MCP) and superior cerebellar peduncle (SCP) compared with age matched controls (Nomi et al. 2019). These subcortical tracts may be responsible for interhemispheric information transfer and the retention of cognitive abilities. In callosal agenesis, individuals exhibit congenital rather than surgical absence of a corpus callosum. It is unclear if the same subcortical tracts in the split-brain study are also present in callosal agenesis. We hypothesize that there would be increased water diffusion in the MCP and SCP in an individual with callosal agenesis compared with age matched controls. This may demonstrate a compensatory route that permits interhemispheric information transfer in the absence of a corpus callosum, regardless of etiology.

Perturbational complexity index (PCI) can distinguish between states of consciousness and unconsciousness when using transcranial magnetic stimulation (TMS) evoked potentials (TEPs; Casali et al., 2013). In a previous study, DallaVecchia et al. (2021) tested healthy participants during different states of arousal and found that similar responses can be obtained using somatosensory evoked potentials (SEPs) and auditory evoked potentials instead of TMS-evoked potentials. This study aims to use PCI to measure changes in consciousness states during wakefulness and non-REM (NREM) sleep when using SEPs. Using a within-subjects design, left and right median nerve somatosensory evoked potentials were delivered during wakefulness and NREM sleep states and results were analyzed using a version of PCI from DallaVecchia et al. (2021). Preliminary
Sardar, Alessandra
DallaVecchia, Martin Monti
University of California, Los Angeles

Learning about Medical Conditions: Do Study Buckets Practice Tests Enhance Learning?

Ramya Ramakrishnan, Megan N. Imundo, Brendan Appold, Elizabeth Ligon Bjork
University of California, Los Angeles

Study Buckets is a new online learning tool that incorporates practice tests to help students distinguish between related medical diseases. On a Study Buckets Quiz screen, students view 10 to 20 informational blocks (e.g., dry mouth) color-categorized by type (e.g., symptoms) and a list of 3 to 5 medical conditions (e.g., Lambert-Eaton syndrome). Students match informational blocks to the medical conditions and can click “Check” for feedback. Given considerable evidence suggesting practice testing enhances long-term learning relative to restudying (Bjork, 1975; Roediger & Karpicke, 2006), I predicted students who restudied a medical passage would perform better on an immediate final test, but worse on a delayed final test, compared to students who practice tested using Study Buckets. I recruited 85 UCLA undergraduate participants who read a passage on neuromuscular junction (NMJ) disorders for 7 min. Afterward, participants either reread the passage or practice tested using Study Buckets for 7 min. Then, participants took a multiple-choice test 5 minutes or 1 day later. Surprisingly, no difference in immediate or delayed test scores arose between the restudy and Study Buckets conditions. I am currently running a second experiment that gives students the freedom to self-regulate how they restudy or use Study Buckets to examine if a learning benefit of practice testing using Study Buckets emerges when students can choose how and for how long to engage with the learning tool.

Neuromodulation of Trans-cranial Direct-Current Stimulation (tDCS) on Value

Every day, we encounter an excessive quantity of information and must resort to prioritizing the most important details, a phenomenon called “value-directed remembering” (VDR) (Castel et al., 2011). The present study investigates the effects of high-definition transcranial direct current stimulation (HD-tDCS) on the ventrolateral prefrontal cortex (VLPFC) in VDR. In Session 1, participants were presented with words paired with a “high” or
**Recognition and Selectivity**

Chloe Retika, Henri De Guzman, Sonya Ashikyan, Barbara Knowlton, Alan Castel, Jesse Rissman

University of California, Los Angeles

“low” point value, followed by a “remember (R)” or “forget (F)” cue. Session 2 involved a recognition task for R and F words. We hypothesize that participants receiving left VLPFC stimulation will exhibit increased recognition for low-value R words compared to those receiving right VLPFC control stimulation or no stimulation at all. Our data alludes to left VLPFC involvement in selectivity mechanisms, with the right VLPFC affecting recognition as a whole. We hope to discern a significant relationship as we collect data from 63 more participants (N=120). Additionally, preliminary results show that left stimulation significantly preserved selectivity for R words (but not F words) to support a dual process theory of selectivity: the distinction between effortful and automatic pathways in memory. Our findings on dissociable mechanisms of VDR will have applications in many different fields, whether by expanding our ability to create effective learning strategies meant to support academic success, or to supplement declining memory in aging adults.

**The Impact of Word Physiognomy on Memory**

Trinidad Sepulveda

University of Portland

Research on language processing has shown a non-arbitrary connection between certain language sounds and external sensory stimuli known as ‘sound symbolism’ (Westbury, 2005). The maluma-takete effect is one type of sound symbolism, which shows that some language sounds (e.g., /m/, /l/, /o/) are associated with rounded shapes, while other sounds (e.g., /t/, /k/, /e/) are associated with sharp shapes (Köhler, 1929). No research has directly examined whether these associations impact memory, though it has been demonstrated that words with uncommon letter or sound combinations (e.g., kiwi) require more conscious processing (Gound, Cerroti, & Nicolas, 2017) than those with simpler combinations. This study hypothesized that words with round-sounds would require less conscious processing, allowing longer rehearsal periods, therefore showing higher recall rates. A diverse sample of undergraduate students completed three memory tasks—free recall, recognition, and reconstruction. Each task involved roundsounds, sharp-sounds, and mixed-sounds. Results indicated that the maluma-takete effect does not impact free recall memory or reconstruction memory, but did show that round-sounds have significant impact on recognition memory.

**Predictors of Binge Eating Behavior: Stress**

Binge eating disorder (BED) has been shown to be associated with impaired decision-making, such that women with BED tend to make more risky decisions and show impairments in utilizing
Demographics, and Habits

Julieta Serobyan, Ovsanna Avetisyan, Corinna Franco, Barbara J. Knowlton

University of California, Los Angeles

feedback to alter response strategy compared to women without BED. Because stress has been found to positively relate to binge eating, and binge eating appears to be characterized by a habit-like responding, we sought to examine whether stress and habitual tendency predicted binge eating behaviors. To investigate these relationships, 96 UCLA undergraduate students completed an aversive instrumental learning task with a devaluation phase in order to measure habitual responding. Participants also completed questionnaires assessing perceived stress, anxiety, depression, and disordered eating including binge eating behavior. We originally hypothesized that stress and habitual responding would significantly predict binge eating. However, our results indicated that habitual responding did not predict binge eating behavior ($p > 0.299$), but binge eating behavior was positively predicted by stress ($b = 0.075$, $p = 0.023$) and gender ($b = 0.777$, $p = 0.020$) and negatively predicted by age ($b = -0.149$, $p = 0.036$). These findings indicate that binge eating does not necessarily relate to individual habitual tendencies, but that individuals experiencing greater stress, who are younger, and/or who identify as women are more likely to engage in binge eating behavior.

The Effects of Parietal TBS on Brain Oscillations

Tasha Bierling, Gina Spagarino, Jingshu Wu, Liberty Kolodny, Alessandra DallaVecchia, Martin Monti

University of California, Los Angeles

Theta Burst Stimulation (TBS) is a form of TMS that follows a pattern of stimulation derived from those used to induce neuroplasticity, which is favored over rTMS for its shorter time requirement and lower intensities. However, TBS has shown a high level of inter-individual variability; patients sometimes respond differently than expected or not at all. A better understanding of the effects of TBS on non-motor regions could improve reliability. While previous literature has analyzed changes in resting stage EEG recordings after TBS, few studies have analyzed the effect of stimulation over non-motor regions on resting state EEG and TMS-evoked potentials (TEPs). In this study, we use TMS-EEG to examine the effect of different TBS protocols on oscillatory activity in the superior parietal lobule (SPL). The resting state EEG and TEPs were recorded before and after continuous (cTBS) and intermittent (iTBS) stimulation of the left SPL. An 80% active motor threshold was used for both cTBS and iTBS. To record TEPs, 200 single TMS pulses were delivered at an ITI of 2.0-2.3 seconds (0.53-0.58 Hz). In a preliminary dataset (N=9), no differences were found in the alpha and beta bands for resting state EEG, but there were significant decreases and increases in
the TMS-evoked oscillations after cTBS and iTBS, respectively. These preliminary results suggest that changes in oscillatory brain activity before and after TBS can be seen only when the cortex is perturbed with TMS.

The Effect of Self-Explanation and Refutation on the Learning Styles Misconception

Tiffany Widjaja, Emma Geller

University of California, San Diego

Refutational texts have been shown to facilitate learning in math and science concepts by countering widely held misconceptions. Despite the efficacy of refutation text on learning, refutation can sometimes backfire and further entrench our beliefs in misconceptions we might have emotional attachments to. Recent work in this area has explored additional interventions that may improve the effect of refutation while avoiding the “backfire” effect, such as self-explanation. In this study, we ask students to self-explain a refutation text about the learning styles misconception. We speculate that students might have emotional attachments towards the learning styles misconception – a myth that advocates for individualized instruction tailored to the unique learning styles of students – because current literature suggests that individuals are more likely to be emotionally attached to a misconception(s) they believe to be particularly unique to them (Trevors et al., 2016). We hypothesize that participants who self-explain the refutation text, compared to participants who engage in non-guided note-taking (think aloud) and reread the passage, will display higher accuracy of post-test scores and change in learning style endorsement. Our investigation extends educational psychology literature exploring the science of learning and instruction.
Poster Presentations: Clinical

Characterizing Augmenting Adaptations Made by Community Therapists in Sessions of Trauma-Focused Cognitive Behavioral Therapy

Community therapists frequently adapt evidence-based practices (EBPs) when implemented into community mental health settings to meet the needs of diverse, racial/ethnic marginalized communities. For example, therapists describe making Augmenting adaptations that add to the EBP to enhance fit for their clients, such as modifying presentation, integrating content, or extending the EBP. Developing methods to characterize these adaptations is needed. In the current study, 46 community therapists in LA County provided 190 TF-CBT session audio recordings with 82 racially/ethnically diverse clients. An observer coding measure was developed to identify Augmenting adaptations that could be feasibly observed. Nine coders rated the occurrence and extensiveness (0=no occurrence, 6=great extent) of each adaptation type per session. 62 sessions (32.63%) were double coded to assess interrater reliability. Intraclass correlations for extensiveness ranged from good to excellent (0.65-0.96). Cohen's Kappas for occurrence ranged from moderate to almost perfect agreement (0.45-0.90). Descriptive statistics were conducted. Modifying Presentation was the most common adaptation and was made in 46.32% of sessions with a mean extensiveness of 2.95. Integrating adaptations were next most common and were made in 17.89% of sessions. Examples of adaptations from coders' notes will be presented. Findings of the current study hold value for improving the delivery of TF-CBT for diverse communities.

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Neurite density predicts weight gain in children

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Background: Childhood obesity has been and remains a significant public health concern, and its manifestation has been associated with psychological comorbidities and behavioral disorders, such as attention-deficit/hyperactivity disorder (ADHD; Rankin et al., 2016). One proposed mechanism for the link between ADHD and an increased risk for developing pediatric obesity is poor self-regulation, a skill that is often impaired in children with ADHD and is associated with the function of the dopaminergic (DA) system. DA system function has also been
documented to motivate eating behavior. Indeed, microstructural differences such as greater cellularity in the nucleus accumbens (NAcc), a target of dopaminergic neurons in the ventral tegmental area, have been linked with diet-induced weight gain and increases in waist circumference in typically developing adolescents (Rapuano et al., 2020). These authors proposed a particular mechanism: a hypersensitive DA system increases the probability of eating a high calorie diet, which is associated with an increased neuroinflammatory response. This response, indicated by increased glial cellularity in NAcc, is indirectly measured in vivo using the restriction spectrum imaging (RSI) modeling of diffusion-weighted imaging (DWI) data. However, the mechanisms underlying these associations remain unclear for high-risk children (such as those with ADHD). Further, we do not know whether such risk indicators can be detected earlier in development. Here, we examined the association between diet-induced weight gain and DA system neurite density in the NAcc in younger typically developing children and in children with ADHD.

Methods: The sample consisted of 71 typically developing 4-7-year-olds, and 85 4-7-year-old children diagnosed with ADHD. Children’s waist circumference and body fat percentage were measured, and they participated in an MRI scanning session, including behavioral assessments. ADHD diagnosis was confirmed by two clinicians and multiple raters (parents and teachers). We used restriction spectrum imaging (RSI) to measure restricted normalized signal fraction (RNT) from a diffusion-weighted imaging (DWI) scan, which provides an index for cellularity in the DA system regions of interest (replicating the method from Rapuano et al., 2020). To investigate the associations between RNT and the two outcome measures, waist circumference and percent body fat, we used a robust regression with a bootstrap of 10,000 replicates to calculate the confidence interval of the slope estimates.

Results: We replicated Rapuano’s main effect showing that neurite density in the NAcc region predicts waist circumference. For percent body fat, there was no main effect for NAcc, but there was an interaction effect such that RNT predicted percent body fat in the typically developing children, but not in children with ADHD. Conclusions: We demonstrated that greater neurite density in the NAcc was associated with the obesity measures of waist circumference and percent body fat in a large cohort of 4- to 7-year old children. This replicates the findings from Rapuano et al., 2020 in a younger
cohort of children using the same DWI acquisition and measures. Notably, we also found that, for the percent body fat measure, the association was not indicated for children with ADHD. The differential association between cellularity in microstructures involved in the dopaminergic system and varying obesity measures pathway suggests the possibility of a more complex mechanism of pediatric obesity in children with ADHD.

**HRV Mediation of Symptoms in Schizophrenia**

High heart rate variability (HRV) reflects healthy autonomic nervous system functioning, and HRV improvements have been observed following long-term cognitive training and long-term physical exercise. Across various psychiatric disorders, reduced HRV has also shown associations with cognitive impairment and other common symptoms of psychopathology. While extensive literature has observed significantly reduced HRV in individuals with schizophrenia, the relationships between HRV and specific symptom classes of schizophrenia (positive, negative, and cognitive) remain elusive. Here, we examined changes in HRV and associated symptom changes following a six month regimen of cognitive training and exercise. We hypothesize that the improvement in positive, negative, and cognitive symptoms accompanying this treatment protocol is partially mediated by improvement of HRV. Total scores from the Scale for the Assessment of Positive Symptoms (SAPS) and Scale for the Assessment of Negative Symptoms (SANS) were used to quantify severity of positive and negative symptoms respectively. Additionally, the Matrics Consensus Cognitive Battery (MCCB) was administered to assess cognitive function across multiple domains. Concurrent electroencephalogram (EEG) and electrocardiogram (EKG) data were collected during a five minute resting period. EKG data were used to obtain the root mean square of successive differences between normal heartbeats (RMSSD) as a measure of HRV. We will conduct a mediation analysis to determine if changes in HRV mediate symptom changes in positive, negative, and cognitive domains. If symptom improvement is significantly associated with changes in HRV, then HRV improvement may be a promising physiological target for the treatment of schizophrenia. Generally, this study could also have powerful implications for understanding brain-body interactions, and elucidating the biological mechanisms that underlie cognitive training and exercise interventions.
Anxiety and stress-related disorders are highly prevalent and associated with significant functional impairment. One of the most prominent mechanisms associated with therapeutic symptom reduction in anxiety and stress disorders is fear extinction. Fear extinction is learning that a cue that was previously a danger is now no longer dangerous. Fear extinction relies, in part, on working memory. Working memory is a short-term memory system involved in maintaining task goals in mind and inhibiting irrelevant information. This raises the possibility that improving working memory through computerized working memory training may also improve extinction learning. The aim of the present study is to compare working memory training to sham training on fear extinction learning measures while electroencephalography (EEG) and electrodermal activity are recorded in a sample of low to moderately anxious individuals. We hypothesize that those who receive working memory training will show reduced levels of fear indicated by lower electrodermal and EEG measures during extinction learning compared to those who receive sham training. The findings from the current project will help determine if enhancing working memory through computerized training shows the potential to enhance behavioral and neural markers of fear extinction, mechanisms that are integral to current anxiety and stress disorder treatments.

Emotional suppression is considered a maladaptive coping strategy that can leave young people vulnerable to mental health concerns, such as increased stress. Emotional suppression may be observed in the way young people express themselves through writing. For example, young people who endorse high emotional suppression may utilize fewer or more negative affective processes in their writing than others. In turn, affective processes may also have an impact on stress. This study explores direct and indirect effects of emotional suppression on stress via affect (positive and negative) among high achieving high school students. Emotion suppression and stress were assessed via self-report measures while affect variables were generated from linguistic analysis from an expressive writing task. Participants (N = 63) were high achieving Black adolescents who completed a survey and an expressive writing task. Preliminary results suggest that emotion suppression has a direct, positive effect on stress (β = .28, p = .034). Emotion suppression also has a direct, positive
effect on positive affect ($\beta = .30, p = .02$), while it did not have a significant effect on negative affect ($\beta = .12, p > .05$). Neither positive nor negative affect had a significant direct effect on stress. However, when these were included in the models, the effect of emotion suppression on stress became non-significant, suggesting that affect may be accounting for some of the variance in stress. Final analyses will examine the mediating role of affect on the relationship between emotion suppression and other mental health concerns (i.e., anxiety and depression). Sample quotes from the expressive writing task will also be included to exemplify these processes in action. Findings from this study will shed light on mechanisms through which emotional suppression may impact mental health concerns among high achieving youth of color.

**Substance Use and Risk-Taking Behavior in Adolescents on the Psychosis-Spectrum**

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Prior studies have established a relationship between substance use and increased risk-taking behaviors in patients with bipolar disorder (Holmes et al., 2009). The current study aims to expand upon existing research and examine the relationship between substance use and risktaking behaviors in 99 psychosis spectrum disorder patients (PSD) and 84 healthy control subjects (HC). We used the Youth Risk Behavior Survey (YRBS) to assess substance use and the Balloon Analogue Risk Task (BART), a computerized task that assesses several types of risktaking behavior, in both PSD and HC. We hypothesized that PSD would report more substance use compared to HC and that greater substance use would be significantly correlated with higher risk-taking tendencies in both populations. An independent samples t-test found that PSD reported significantly higher tobacco, tetrahydrocannabinol (THC), and other drug use than HC. Pearson correlation tests found significant correlations between THC use and Mean Adjusted Pumps ($r = 0.268, p = 0.014$) and THC use and Total Explosions ($r = 0.228, p = 0.037$) in PSD only. These findings indicate that substance use is more prevalent in PSD populations than in healthy youth and that THC use specifically may be associated with higher risk-taking tendencies in patient populations. Future analyses will look further into the relationship between THC use and risk-taking behaviors in PSD and how psychosis symptom severity may play a role in this relationship.

**The Importance of Family: A**

Positive perceived family support is a significant buffer against poor mental health (MH) outcomes among college students, 60%
Mixed-Methods Study Examining Perceived Parental Support Among Undergraduate Students

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of whom meet the criteria for at least one MH problem in the US (Abrams, 2022; Khallad & Jabr, 2016). Evidence suggests that racial/ethnic background, immigrant status, and MH problem severity can influence their views about familial support (Almeida et al., 2009). This mixed-methods study examines how race/ethnicity, immigrant status, and MH outcome severity affect perceived family support. Data from a larger study on the use of direct-to-consumer strategies to increase engagement in MH services was examined. 57 UCLA undergraduate students completed surveys and an interview. Students were predominantly women (n = 46; 81%), 21 years old (Mage = 20.90; SD = 2.97), racial/ethnic minorities (n = 48; 84%), and 26% (n=15) were foreign-born. On average, depression (M= 8.30; SD = 6.20) and anxiety scores (M = 7.56; SD = 6.22) were in the mild range. We expect that chi-square and qualitative results will demonstrate that racial/ethnic minorities, US-born students, and students with high levels of depression and anxiety will report less perceived family support. Findings from this study can inform how to deliver culturally informed care by understanding differences in perceived family support across marginalized communities, such as racial/ethnic minorities and immigrant families.

The Relationship Between Childhood and Adolescent Sexual Abuse History and Retention in a Study of Relationship Conflict in Daily Life

Sela Jasim, Akansha Magal, Megha Nagaswami, Gray Bowers, Lauren Ng

Survivors of adolescent sexual abuse (ASA) and childhood sexual abuse (CSA) are more likely to have high-conflict relationships than peers (Guiney et. al., 2022; Clements et. al., 2004). However, little research exists on retention of this population in relationship conflict studies. Participants with a history of ASA/CSA in these studies may feel distress reporting conflict in a present romantic relationship due to past trauma in a similar setting, potentially limiting their study participation (Jorm et. al., 2007). In this study (N=60), correlation between history of ASA/CSA and retention in a relationship conflict study will be assessed along with potential mediating roles of anxiety and depression symptoms. Retention will be measured through completion of the four stages of the research study and number of surveys completed through Ecological Momentary Assessment (EMA). A mixed methods approach using quantitative data on past ASA/CSA, anxiety and depression symptoms, and study retention, as well as qualitative reports of ASA/CSA experiences from baseline and exit interviews will be used to assess for differences in study retention. It is hypothesized that survivors of ASA/CSA will have lower study retention, and will report higher depression and anxiety.
The Relationship Between Ethnic-Racial Socialization Practices and Coping Mechanisms Among Black Youth by Gender

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Black American caregivers often engage in ethnic-racial socialization (ERS) practices, such as preparation for bias and promotion of mistrust, to prepare their children to survive within racially oppressive systems in America (Hughes et al., 2006). As a result, Black youth may develop specific coping methods, such as emotion suppression and unmodulated perseverance, in striving to overcome systemic racism to achieve academic and financial success. While these coping methods may be conducive to academic and financial success, they may be costly to personal well-being and normalize concealing emotions to persist through adversity (Doan et al., 2019). The current study examines how such coping methods may be related to preparation for bias and promotion of mistrust and whether these relationships vary by gender among Black youth. Data from a pilot trial of a mindfulness intervention was collected from Black high school students (n=63) who completed measures of ERS, emotion suppression, and unmodulated perseverance. Linear regression analyses will be conducted to examine these relationships. We hypothesize that ERS practices of promotion of mistrust and preparation for bias will be positively related to these coping methods and will vary by gender due to different social constructs of the male and female identity. Findings from this study are vital to improving mental health treatments and structural interventions to support Black youth striving to overcome systemic racism.

Racial Identity, Subclinical Psychosis, and Social Protective Factors

Candrha Lopez, Kristen Laulette, Mohan Gupta, Mary Rshtouni, Logan D.

Ethnoracial minorities are at a heightened risk of developing subclinical psychosis (Leaune et al. 2018). However, little is known about specific factors contributing to risk or resilience to psychosis, which is critical for intervention and prevention efforts. In our study, 149 UCLA undergraduates (38% Asian-American and Pacific Islander (AAPI), 28% Hispanic, and 26% non-Hispanic White (NHW)) completed the Community Assessment of Psychotic Experiences (CAPE), a scale capturing subclinical psychotic-like experiences (PLEs), and another measure testing academic and social engagement. We hypothesized that PLEs would be more prevalent amongst Hispanic and AAPI students due to factors...
such as cultural and religious beliefs, discriminatory experiences, and other intersecting identities, but factors such as social support and community engagement will act as moderators. Initial analyses showed only a marginal difference in overall PLEs for Hispanic and AAPI students (means=1.54 and 1.51) compared to NHW students (mean=1.42). However, follow-up analyses on CAPE subscores found that both Hispanic and AAPI groups display significantly higher levels of Magical Thinking (p=0.05 and 0.03, respectively) compared to NHW students. The AAPI group also displayed higher levels of Bizarre Experiences compared to Hispanic and NHW students (p=0.03). Ongoing analyses will determine if community, campus, and social engagement may act as resilience factors for PLEs experienced within each group.

The Relationship Between Symptom Severity and Cognitive Impairment in Early Psychosis

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Previous studies have revealed a relationship between psychotic symptoms and cognitive functioning (Jean et al., 1991), showing that higher negative symptoms had a higher association with cognitive impairment. However, whether the association continues to exist transdiagnostically in early psychosis patients remains unknown. The present study aims to examine the relationship between the symptom severity of early psychosis patients and cognitive functioning. In this study, we used a population of patients between the ages of 16-35 with psychotic spectrum disorders, including schizophrenia, bipolar disorder with psychotic features, and schizoaffective disorder diagnoses. Scores from the Positive and Negative Syndrome Scale (PANSS) and the NIH Toolbox Cognitive Function Battery (CFB) were assessed to determine the relationship between the total PANSS score and the total, fluid, and crystallized cognition scores. A Pearson correlation revealed that symptom severity exhibited a correlation with the total cognition score (p<0.002). In a linear regression analysis, a higher PANSS score significantly predicted a lower total cognition score, while controlling for sex and age (r² =0.139, F(3,95)=4.811, p<0.004). These findings contribute to our understanding of the correlation between the severity of psychotic symptoms and cognitive functioning. Further analyses will look at the role of age of onset in the established relationship between severity and cognitive impairment.

Coping with Loneliness

Loneliness—a subjective experience of social isolation—is a growing problem worldwide (Cacioppo & Cacioppo, 2018). The “loneliness epidemic” is a major public health concern, as loneliness
Among Autistic Adults

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correlates with mental and physical health problems, such as coronary heart disease, stroke, depression, and anxiety (Holt-Lunstad, 2017; Holt-Lunstad et al., 2017). Autistic people are at a high risk of experiencing loneliness likely due to difficulties forming social relationships and lack of social support (Schiltz et al., 2020). Such high rates of loneliness are found to have significant implications for quality of life and well-being in this population (Umagami et al., 2022; Hymas et al., 2022). However, little is known about how autistic adults cope with loneliness. This study will use focus groups and 1-on-1 interviews with autistic adults (n = 15), as well as autism researchers and clinicians (n = 15) to gather data about coping with loneliness and the effectiveness of coping strategies. Qualitative methods will be used to 1) identify strategies used by autistic adults to cope with loneliness, and 2) characterize the effectiveness of coping strategies. We hypothesize that autistic adults will use a variety of effective and ineffective strategies to deal with feelings of loneliness. The study can impact the community by identifying useful coping mechanisms that autistic people use to address loneliness, and to inform intervention efforts to improve autistic people’s quality of life.

Investigating the Effect of Experiences in Detention on Recidivism for Impulsive Youth

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Adolescents in the legal system are estimated to meet ADHD diagnosis at a rate five times higher than the general population, and impulsivity, a key ADHD feature, predicts rearrest. Detention centers rarely provide treatment targeting impulsivity, and impulsive youth struggle to follow strict detention rules, leading to increased disciplinary action. This study explores the mechanisms through which trait impulsivity increases likelihood of recidivism and assesses the role of detention experiences in this model. Using the Pathways to Desistance dataset of over 1,000 male, serious adolescent offenders aged 14-18 in Maricopa County, AZ, and Philadelphia, PA, we will conduct a mediation analysis using the following variables: self-reported baseline impulsivity, detention experiences measured through connection to staff while incarcerated, and recidivism at one-year follow-up. We hypothesize that higher impulsivity will indirectly predict higher rates of recidivism as mediated through detention experiences, such that 1) higher impulsivity will predict worse detention experiences, and 2) increased adverse detention experiences will predict higher recidivism rates. Findings may shift cultural perceptions of legal system-involved youth and
challenge pervasive acceptance of the revolving prison door for adolescents. Understanding the impact of detention experiences on recidivism may lead to better facility staff training on interacting with individuals exhibiting high impulsivity.

**Assessing the Interaction Between Sex and Rumination in the Prediction of Cortisol Awakening Response**

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Alterations to cortisol awakening response (CAR) and rumination are known risk factors of psychopathology, such as depression. Rumination is characterized by negative, self-focused, past-oriented thoughts. CAR is a measure of increases in cortisol levels upon awakening, and is indicative of physiological stress reactivity. Increased rumination has been shown to predict heightened CAR. Rumination and CAR levels are affected by sex differences individually; however, the relationship between sex and rumination in predicting CAR has not been thoroughly examined. Previous research suggests that there are sex differences in rumination in the context of depression, with female participants reporting a higher tendency to ruminate than males. However, evidence relating sex and CAR is conflicting and warrants further investigation. The present study will examine whether sex moderates the relationship between rumination and CAR using a sample of 270 participants (mean age = 17.06). Rumination will be defined by scores on a 21-item Response Style Questionnaire and CAR will be computed using salivary cortisol samples collected at multiple times across several days. Assessing for moderation using a regression approach in R, we expect to find a significant interaction between sex and rumination in prediction of CAR. These projected findings may expand our understanding of the relationship between rumination and CAR, and clarify the role of sex in the biological mechanisms of depression.

**ACEs and Posttraumatic Cognitions: The Role of Help-Seeking**

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Adverse Childhood Experiences (ACEs) have been linked to many negative outcomes, including posttraumatic cognitions. Previous research has also shown that help-seeking can help reduce potential negative outcomes. However, there is limited research on the relationship between ACEs, posttraumatic cognitions, and help-seeking. Therefore for the current study, we hypothesized that help-seeking would mediate the relationship between ACEs and posttraumatic cognitions, such that those who experience ACEs and seek help will report fewer negative posttraumatic cognitions than those who do not seek help. Conducting a mediation analysis, the results did not reveal a significant indirect
effect \( (b = .025, t = .356) \). However, the direct effect of ACEs on posttraumatic cognitions in the presence of help-seeking was found significant \( (b = 5.277, p = .000) \), as well as the direct effect of help-seeking on posttraumatic cognitions was found significant \( (b = -.704, p = .022) \). These findings extend previous work that ACEs contribute to posttraumatic cognitions and that help-seeking can reduce posttraumatic cognitions. Furthermore, it suggests that there may be other important factors to consider when looking at the relationship between ACEs, help-seeking, and posttraumatic cognitions.

**Client-Therapist Gender Match On Youth Engagement In Therapy**

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Therapy engagement among young people is a significant concern in the United States (Merikangas et al., 2011). One proposed way to enhance engagement is through client-therapist identity matching, which has been found to improve treatment outcomes (Wintersteen et al., 2005). Despite this, little research has focused on how gender matching impacts youth engagement specifically. This study seeks to fill this gap by exploring the relationship between youth-therapist gender match and youth engagement in therapy. Data came from a larger study of youth engagement in school-based mental health services in Los Angeles County and South Carolina. The study included 1640 youth assigned to 151 therapists. Youth and therapists completed surveys that collected demographic information. Youth engagement was measured using the self-rated My Thoughts About Therapy scale (Chorpita & Becker, 2022). 2x2 ANOVA will be used to examine the impact of therapist and youth gender on engagement. Based on previous research (e.g. Bhati, 2014), it is hypothesized that there will be a main effect of gender such that female-identifying youth overall will report higher engagement as will youth with a female-identifying therapist. Findings will inform how gender matching may improve youth engagement in therapy and thus be an effective form of personalized mental health treatment for young people.

**The Relationship between Parental Relationships, Family Environment, Aggression, and**

Parental relationships and family environments may have a strong and early influence on the aggressiveness and impulsiveness of youth. Although there is well-established research exploring the general impact of family environment on child social-emotional adjustment, the population of serious juvenile offenders lacks systematic study. As aggressiveness and impulsivity strongly correlate with offending and delinquent
Impulse Control in Adolescent Offenders

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behaviors, it may be crucial to understand the role family environment plays in impulse control of junior offenders. The present study aims to examine the association between parental hostility and warmth and youth impulse control and aggression in a population of serious juvenile offenders (N=1,351) using the Parental Warmth and Hostility Questionnaire (Conger et al., 1994) and the Weinberger Adjustment Inventory (Weinberger et al., 1987). It is hypothesized that the warmer and less hostile the parents are rated, the more likely the child will have a greater impulse control and suppression of aggression. Results may help to identify the youth population with high risk of aggression so support can be implemented to reduce risk for initial delinquent behaviors. Further research may investigate the effectiveness of the developing family-based interventions to address parenting skills and impulse control to assist in adolescents' re-entry and reduce recidivism.

Microdosing Psychedelics and Mental Distress Levels in College Students

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Psychedelic drugs have been extensively researched at therapeutic dosages, but few studies have been conducted on the effects of microdosing psychedelics. Since standard doses of psychedelics have promising effects on anxiety, depression, addiction, and other mental ailments in clinical settings, microdosing may provide similar benefits (Grinspoon, 2021). Our study focuses on the relationship between microdosing psychedelics and mental distress levels in college students. An anonymous survey will collect demographic information, Everyday Feeling Questionnaire (EFQ) scores, and drug use history to identify potential correlations (Uher & Goodman, 2010). We predict that UCLA college students that have microdosed a serotonergic psychedelic in the past six months will have lower levels of mental distress than those who have not, indicated by lower EFQ scores. We predict an additive effect such that students with past experience with recreational doses of serotonergic psychedelics will exhibit lower EFQ scores than students with no experience, regardless of whether the students microdosed in the last year. We will conduct a multivariate regression analysis to observe how this relationship will vary depending on participant characteristics. This study may encourage more researchers to determine the directionality and causality of this relationship, which will further our understanding of the possible implications and risks of recreational and therapeutic use of psychedelics.
### Influence of Emotional Neglect on White Matter Integrity and Prosocial Behavior in Adolescence

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Previous studies of young-adults have identified emotional neglect as a risk factor for disengagement in prosocial behavior. One potential explanation for this is that adverse experience may hinder empathetic mechanisms that are supposed to elicit altruistic motivation (Chen et al., 2022). However, the specific neurological processes underlying the influence of childhood neglect on prosocial behavior are unknown, and this relationship has yet to be examined within an early developmental population. The present study utilizes publicly available baseline data from 11,878 9-10 year old adolescents obtained through the longitudinal Adolescent Brain and Cognitive Development Study. Chi-squared analyses revealed that the presence of emotional neglect, as quantified by ratings from the Children’s Report of Parental Behavior Inventory, significantly correlated with low prosocial behavior ratings on the Strengths and Difficulties Questionnaire ($\chi^2 = 174.74$, p<0.001). Future analyses will employ diffusion tensor imaging (DTI) data to characterize how the integrity of white matter tracts implicated in empathy, namely the inferior longitudinal fasciculus and the inferior fronto-occipital fasciculus, play a role in this relationship. These findings contribute to our understanding of the development of social cognition and can further aid in our understanding of symptoms of psychopathology, emphasizing the importance of studying the impacts of adverse childhood experiences on development.

### Allostasis Efficiency and Childhood Uncertainty in Young Adults

Elena Chan, Rory Simpson, Siyan Nussbaum, Paul W. Savoca, Bridget Callaghan

Allostasis is the process by which the brain anticipates the needs of the body and attempts to meet them before they arise to maximize physiological efficiency. The control of allostasis is thought to be wired through early life experiences and particularly affected by childhood adversity. Through this relationship, we predict to see differences in visceromotor control associated with inconsistent childhood care. We intend to explore this hypothesis through a study of undergraduate UCLA students (n=70). They will complete questionnaires, including the Questionnaire of Uncertainty in Childhood (QUIC), as a measure of consistent early life care. To measure psychophysiological regulation, we will record their electrodermal activity (EDA) as participants watch affectively salient videos which repeat to measure predictive capabilities. While allostasis can be measured
through regulatory functions that involve both parasympathetic (PNS) and sympathetic (SNS) autonomic nervous systems, we focus mainly on measuring EDA as eccrine sweat glands provide inputs exclusively from the SNS. We hypothesize that more consistency of care will be associated with greater absolute change in skin conductivity responses between the two viewings due to more efficient internal model updating. This work intends to provide additional understanding about the relationship between allostatic efficiency and early childhood experiences.

**Children’s Use of Social Categories When Thinking of Viral Transmission**

Kaylee Chan, David Menendez, Danielle Labotka, Susan Gelman

Viral transmission is a biological process but throughout history, marginalized social groups tend to be at a greater risk due to structural inequalities (Athni et al., 2021). The COVID-19 pandemic in the United States is no different, having disproportionately affected Black and low-income communities (Vasquez Reyes, 2020). We were interested in whether children understand that the COVID-19 pandemic affected some social groups more than others, and whether they attribute these differences to structural or biological factors. We interviewed 172 5- to 12-year-old children through Zoom and asked whether they thought members of different social groups (in terms of age, race, income, gender) were more likely to contract COVID-19. Generally, children thought that older adults were more likely to get sick than younger adults, and this increased with child’s age, \( p = .004 \). Most children thought this difference was because of biological factors like their immune system being weaker. For categories based on race and income, children did not think that there would be a difference, but when said there was a difference, they thought that the marginalized group (Black people, or poor people) was more likely to get sick. Ongoing analyses are examining when children start to use structural explanations. Overall, our study suggests that children sometimes use social categories when thinking about illness, but only attribute these differences to structural differences as they get older.

**Children’s Learning About Vision Over Video Chat**

Alexa Duran, Banso Nguyen,

In real life, people see using their eyes. In contrast, video chat users see through a webcam, though their eyes are on-screen. Also, most video chat software shows a “self-view”, which displays what the other person sees. Can children adjust their understanding of visual access, and learn that people over video chat do not see through the eyes on-screen? In two experiments, 4-year-old children were asked to block an experimenter from
seeing them (Exp 1, N=40, Meanage=4.5 years) or show them toys (Exp 2, N=68, Meanage=4.5 years) over video chat. If children use the self-view to learn about their partner’s visual perspective, then when the self-view is on, they should more often succeed in blocking their view (Exp 1) and showing them toys (Exp 2), instead of e.g. showing objects to their partner’s eyes on screen. In Exp. 1, we found that some but not most children spontaneously succeeded in blocking their partner’s view by covering the webcam (16%). In Exp. 2, children more often succeeded in showing toys to the webcam when the self-view was on (27% of the trials) vs. when self-view was off (4.5%). This shows that children use the self-view to guide their interactive behavior. Older 4-year-olds also performed better, with younger children showing the toy to the partner’s eyes on-screen (67%). These data show evidence of developmental change in children’s understanding of vision over video chat, and suggest that the self-view may play an important role in this learning process.

**Stress in the Stomach: Does Early Life Adversity Predict a Maladaptive Gastric Stress Response in Adulthood?**

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Early life adversity (ELA), exposure to chronic or severe stressors in childhood, affects 40-50% of children internationally (Duffy et al., 2018) and is robustly associated with gastrointestinal (GI) issues. The stress sensitization theory postulates that individuals exposed to ELA are hyper-responsive to stressors later in life, but this research has not yet been applied to ELA and the gastric response to stress, as the physiological relationship between ELA and the GI system is less understood. Electrogastrography (EGG), a non-invasive method to record the electrical impulses of gastric activity, may be an indicator of the gastric response to stressful stimuli. Research suggests that acute stressors and emotional states alter both the amplitude and frequency of gastric waves. In this ongoing study, we predict to find a maladaptive gastric stress response in adults exposed to higher levels of ELA as compared to those exposed to lower levels of ELA, thus extending the stress sensitization theory to the physiological response to stress. Electrophysiology was recorded during a 3-block procedure. In the baseline block, participants watched a neutral video. In the task block, participants completed the Montreal Imaging Stress Task. Following the task, participants watched another neutral video. Results will further the knowledge of the relationship between ELA and the GI system and may also provide the foundation for treatment of GI issues in those who have experienced ELA.
Socioemotional development in early childhood is rapid, characterized by changing social environments and a child’s numerous interactions with those around them. Variations in such development can be attributed to temperament – individual differences in emotional reactivity and self-regulation. One significant facet of temperament is irritability, defined as intense anger that stems from frustration, which itself is a response to the inability to achieve a goal. Current research finds discrepancies in understanding the neural circuits that underlie irritability in children, especially in social contexts. This study aims to address this gap by utilizing both behavioral and fMRI data to investigate pediatric social frustration. Overall, 151 preschool-aged children and their parents/caregivers were recruited from the local community, but only 73 children will be retained for the final analysis following quality assurance. Caregivers completed the Child Behavior Questionnaire (CBQ) and The Multidimensional Assessment of Preschool Disruptive Behavior (MAP-DB). The children played a version of the Frustrative Emotion Task for Children (FETCH), and fMRI data was collected as they played. The fMRI data will be analyzed using general linear modelling (GLM), in which brain blood oxygen-level dependent (BOLD) responses are regressed on predictor variables (events of the task). Regressors included the win and loss outcomes, as well as emotional ratings collected during the task.

Affectionate, responsive parenting behaviors early in development are critical to promoting healthy child development. Importantly, parenting behaviors may predict infant responses to and recovery from stressful situations. However, few studies examine associations between self-reported parenting behaviors during infancy and infant stress reactivity and recovery. In a longitudinal study, 80 mothers reported on supportive and proactive parenting behaviors 4-8 weeks (T1) and 5-7 months (T2) postpartum. At T2, mother-infant dyads participated in the Still-Face Paradigm (SFP), and infant behaviors were coded for negative engagement. We examine associations between maternal supportive and proactive parenting behaviors at T1 and T2 with infant negative engagement and changes in negative engagement during the SFP. Higher supportive parenting behaviors at T1 were associated with lower infant negative engagement during the play phase of the SFP (r=-0.32, p=.003). Conversely, higher proactive parenting behaviors at T2 were also
associated with lower infant negative engagement during the play phase ($r=-0.25, p=0.021$) and greater increases in negative engagement from play to Still Face ($r=0.25, p=0.025$). Findings provide preliminary evidence that positive parenting behaviors are associated with less infant negative engagement and evidence of distinct effects of supportive and proactive parenting on infant negative engagement as a function of developmental timing.

**The Impact of Familism in Latinx Culture on First-Generation College Students’ Career Locus of Control and Education**

Kylee Lange, Tsega Abraha, Destinea Jefferson Price

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Latinx college students in the United States hold high levels of familism or cultural values of caring for family members’ needs. While previous studies showed familism appears to influence Latinx students’ academic performance positively, those with strong values of familial obligation may need to fulfill more responsibilities for their families and feel greater pressure to respect their family and value traditional cultural practices. This may lead to their strong external, rather than internal, locus of control for their choices of future educational and career opportunities. The mismatch in cultural values between school and home (i.e., independent versus interdependent values) that Latinx students, particularly first-generation (FG) Latinx students in the US may face, bears even more weight on internal locus of control and the value of education. Using data collected from Latinx college students, the present study examined how students’ levels of familism would relate to their internal locus of control and perceptions of the value of education. Multiple regression analysis revealed that while family obligation and internal locus of control predicted the value of education positively amongst all participants, family obligation positively related to the uncertainty of the value of education for first-generation Latinx students only. These findings expand our understanding of the effects of FG Latinx students’ cultural values on their value of education.

**Music Education and Childhood Development: A Baseline Analysis of Brain Morphology**

Past studies have found morphological differences in right superior temporal gyrus (STG), transverse temporal gyrus (TTG), and inferior frontal gyrus (IFG) in musicians when compared to non-musicians. However, many of these studies were cross-sectional in nature and thus cannot conclude if these differences are inherent or acquired. The present study recruited 8-11 year olds (n=44) for an ongoing 5 year longitudinal study investigating the effects of music training on child development.
TI-weighted MR images were obtained from participants, a group of which were about to begin systematic music training through the Youth Orchestra Los Angeles program at Camino Nuevo Charter Academy (Music Group) and a group of which were not engaged in intensive music training (Control Group). Given that decreases in brain morphological measurements (cortical thickness (CT), gray matter volume (GMV), and surface area (SA)) in children correlate with a faster rate of development (Mills et al. 2014), we hypothesized that the right STG, TTG, and IFG will demonstrate decreases in CT, GMV, and SA in the Music group only. One-way analysis of variance revealed a lack of significant differences in morphological measurements between the Music and Control groups at baseline. Thus, if significant differences in CT, GMV, or SA do develop at the end of the study, we can conclude they are due to music training and not inherent group differences.

Subjective Representation in School: Black Youth

It is likely that same-ethnic representation in educational institutions is reciprocal with students’ sense of identity, belonging, and academic success. When students see themselves reflected in the curriculum, textbooks, and teachers, they are more likely to feel valued and included within the school environment. Additionally, when students believe there to be greater amounts of peers that share their same ethnic background in schools it could help to counteract stereotypes and biases that students may encounter in other aspects of their schooling experience. Middle school is an important time when adolescents are further developing their social identities (Gaither et al., 2014). During this time, same-ethnic representation in schools may help create a more inclusive and equitable learning environment that supports the success and mental well-being of all students. However, less is known about the impact that perceived subjective same-ethnic representation may have on mental health outcomes for students, specifically for Black youth. Thus, this research project aims to examine the impact of perceived subjective representation on the mental health of middle school adolescents, specifically reports of depressive symptoms among Black youth. Participants (N = 492; 49% female) are from a large, longitudinal study on adolescent development from 26 ethnically diverse California middle schools. The analytic sample was comprised of youth who self-identified as Black in seventh grade. Students’ subjective perceptions of same-ethnic
peers in seventh grade were measured by one item where students indicated how many students they believed to be in their ethnic group on a 7-point scale ranging from 1 (none or hardly any) to 7 (all or almost all). Reported depressive symptoms in eighth grade were measured using a 7-item scale from the CES-D self-report depression scale (Radloff, 1977) where students indicated the frequency they experienced depressive symptoms during the week ranging from 1 (none of the time) to 4 (almost all of the time). A preliminary simple linear regression analysis revealed that an increase in subjective same-ethnic perception among Black youth in seventh grade was associated with less depressive symptoms reported in eighth grade (b = .09, p < .01). This study sheds light on the Black youth schooling experience and has important implications for understanding how representation, namely perceived subjective representation, may bolster Black youths’ mental health during a pivotal time in their developmental trajectories.

Parenting practices are known to influence children’s understanding of others’ emotions, such as affective reactivity (AR) and affective empathy (AE). However, there is less understanding of whether parenting predicts children’s emotion understanding across transitions to adolescence. The current study examines 2-year longitudinal influences of parenting practices on AR and AE in a sample of preadolescent Latina girls. Forty-seven Latina girls (MAge = 9.92, SD = 1.31) and their parents participated. At Time 1, parents self-reported their parenting practices such as inconsistent discipline, positive parenting, and involvement via the Alabama Parenting Questionnaire. Concurrently and approximately two years later at Time 2, children self-reported their AR and AE via the Affective Reactivity Index and Empathy Questionnaire. Parental involvement (r = .30, p = .039) and positive parenting (r = .30, p = .043) were positively associated with children’s concurrent AE. A marginally significant moderating effect of parental inconsistent discipline on the association between child AR at Time 1 and Time 2 emerged (R2 = .11, p = .058). Parental inconsistent discipline predicted longitudinal increases in child AR at high (b = .86, p = .004), but not mean or low levels, all p’s > .077. Findings elucidate parenting practices that predict distinct affective outcomes in children and
highlight ways in which caregivers can shape their children’s affective functioning during the transition to adolescence.

Augmented reality (AR) technology has become increasingly popular over the years, with many children using this technology from an early age. While virtual reality replaces all visual stimuli creating a completely simulated environment, in this case of AR, the camera’s view displays computer-simulated images on top of real content. In the current study, we explore how children understand AR, particularly whether children can distinguish between real and computer-generated content on-screen and how they learn to do so. In virtual reality, children use tactile perception and verbalization to distinguish real and virtual content by reaching out to touch virtual characters and verbally referencing themselves in the virtual world (Schloss et al., 2021). Given the proximity between virtual reality and AR, children should display similar behaviors. Therefore, this pilot study explored how children ages 3-9 years old verbally reason about AR and what information-seeking behaviors they display, if any. A within-subjects design was used to examine N = 36 children’s (Mage = 74 months) understanding of four filters, including two directly attached to the body (modified hair, butterflies on face), and two detached from the body (balloons, bubbles in the scene). Children were shown each filter and then asked to identify real vs. simulated content and verbally explain how they knew it was real or not. We hypothesized that there would be an effect of age and type of filter on both verbal and non-verbal responses. We found that children are touching their physical body at the location of the filter more when the filter is attached ($F(3, 824) = 24.14, p < 0.001$), which was not explained by age ($F(1,861) = 0.1032, p = 0.7481$). They also touch the location of the attached filter more when asked how they know it is not real ($F(5, 709) = 30.84, p < 0.001$) and provided more perceptual responses (“I can feel it”) by age for how they know something is real ($F(5,851) = 28.66, p =< 0.001$). This suggests that children are using sensory information in making reality judgments and their ability to verbalize this cognitive process increases with age.

Watching television provides knowledge of gender-role stereotypes and gendered behaviors: how boys and girls are expected to look, act, and feel, distinct from biological sex (Aubrey & Harrison, 2004; Common Sense Media, 2017). While characters
who defy gender stereotypes have become more common on US children’s television in recent years (Common Sense Media, 2017), interpreting gender-flexible media messages may be difficult for children at the peak of gender rigidity (5-6 years of age – see Trautner et al., 2005) without assistance from more-knowledgeable social partners (i.e., their parents). In this study, 76 children aged 60-83 months (Mage = 72.41 months, 38 female) and their parents (70 female) watched two clips (in counterbalanced order) from commercially available children’s cartoons, one focusing on a counter-stereotypical male character and one on a counter-stereotypical female character. After watching each clip together, parent-child dyads completed a sorting task with “gendered” toys, deciding which character(s) from the preceding clip would want to play with each toy. Through (ongoing) coding of parent-child talk while completing the study activities, we are probing the links between parents’ and children’s verbal encouragement and discouragement of gender flexibility, and the gender flexibility afforded to each character, indexed by the number of toys in each sorting task given to both characters or just the character of the opposite-than-expected gender.

Research has found that children are able to group objects by similarities to form categories, a process termed generalization. In didactic contexts, greater generalization can be facilitated by spacing learning events out over time. Research suggests that in overheard contexts—contexts in which children listen in on others’ conversation—18-month-old children are able to associate an object with its label. However, children’s ability to generalize in this context has yet to be studied. Our study examines whether two-year-olds generalize information learned from overheard contexts, and how the timing of learning events affects task performance. Participants are recruited from local preschools. During the study, two experimenters sit facing each other and one teaches the other names of novel objects. To create an overheard context, the child sits off to the side of the experimenters’ labeling interaction. Children are assigned to either the massed condition, where objects are presented in immediate succession, or the spaced condition, where 15 second delays occur between object presentations. They are asked in each trial to identify the target novel object that was being taught by the experimenter. Preliminary results (N = 17) find that children
perform at above chance levels, suggesting that they are able to generalize information learned in overheard contexts. An independent t-test will be used to analyze differences in performances between massed and spaced conditions.

Interception can be understood as our ability to perceive and integrate afferent sensory information about the body. Interceptive signaling requires us to use prior experiences when encountering novel stimuli in order to interpret sensory inputs. Differences between predicted and actual experiences are encoded as prediction errors, which are then used to update future predictions and ultimately construct emotional experiences. Prior research suggests that alexithymia - difficulty in assessing the emotions of oneself and others - relates to differences in interceptive awareness. However, it is unclear if such deficits in incorporating prediction errors are apparent in those with alexithymia. This ongoing study recruited (n=70) undergraduates to complete questionnaires regarding emotional self-awareness (including the TAS-20) and view videos while we collect both measures of psychophysiological and self-reported arousal. Participants were asked to rate subjective changes in arousal during different videos, some of which repeat. We hypothesize that participants with greater degrees of alexithymia should have less of a difference in their subjective interpretations of arousal during repetition of visual stimuli if they have diminished interceptive prediction abilities. This work seeks to elucidate the role of prediction error modulation in affective self-awareness and how underlying individual differences in interoception can impact emotional and social processing.
### Poster Presentations: Social

#### Making Women Feel Welcome: Exploring Bias in STEM

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As female undergraduates first enter the academic STEM community, many are met by a hostile environment. This group deals with disproportionately unwelcoming circumstances due to their field of study being a male-dominated space. Previous research suggests that this environment is caused largely by a societal idea that women are not suited to be scientists — gendered media, peer interactions, and underrepresentation in these fields can prevent women from persisting in them (Cheryan et al., 2013). One way of combating this hostile environment is by changing the biases that STEM undergraduates may hold against women in these fields. There is evidence that volunteering causes reflection on one’s beliefs (Tierney et al., 2022), and therefore may encourage a reevaluation of the notion that women are less capable in STEM fields. Volunteer programs where undergraduates work with younger classrooms to foster science interest are hypothesized to impact the volunteer’s biases, as they will be forced to evaluate the validity of their beliefs. Volunteers who signed up for such a program were recruited via email and surveyed regarding their beliefs on the role of gender in STEM before and after volunteering in classrooms. A subset of volunteers also took part in qualitative interviews to further explore experiences with gender bias in STEM. This research has the potential to give insight into how the academic science community can become a more welcoming place for women in STEM.

#### The Effect of Early Childhood Experience on Social-Support-Enhanced Fear Extinction in Adulthood

**Lezhi Deng, Erica Hornstein, Naomi Eisenberger**

This study will examine the effect of the volatility of early childhood family environments on the ability of reminders of social support figures to enhance fear extinction in adulthood. While previous work has demonstrated that the presence of social support figure images enhances fear extinction outcomes, leading to less return of fear immediately after extinction (Hornstein, Fanselow, & Eisenberger, 2016) and over time (Hornstein, Byrne-Haltom, Shirole, & Eisenberger, 2018), this work has been conducted only with healthy participants with no history of mental health disorder and who have reported only a small range of early family history experiences (as assessed by the Risky Families Questionnaire (RFQ): CITE). Thus, in the current work, participants who both have no history of mental health
disorder (healthy group) and those with diagnosed Social Anxiety Disorder (as well as certain allowed co-morbid disorders: SAD group)—who may be more likely to have a diverse range of early family histories—will be recruited through UCLA’s SONA Subject pool and flyers on the UCLA campus. After completing a series of questionnaires, including the RFQ, all participants will then undergo a fear conditioning procedure including fear acquisition, during which they will learn to associate threat of shock with neutral images (CS+s), followed by fear extinction, during which presentation of the CS+s in the absence of shock will either be paired with an image of either a social support figure or matched-stranger. We predict that individuals who have more adverse early childhood experiences, as reported on the RFQ, are less likely to show enhanced fear extinction in the presence of social support images compared to those who have less adverse early childhood experiences.

Culturally Conservative, but Politically Democrats? The Political Psychology of South-Asian American Voting Behavior in the United States

Qasim Farrukh, Efrén O. Pérez

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Pakistani Americans have voted for the Democratic Party in recent elections, yet many of these individuals hail from conservative religious and cultural backgrounds (Ramakrishnan et al., 2017). What explains this seeming paradox in their partisan allegiance? This study seeks to explore this question by theorizing about the political psychology of Pakistani American voters. Drawing on research from social identity theory (SIT) and the system justification theory (SJT), I reason that due to the emphasis placed on the marginalized identity of Pakistani Americans in the context of larger group membership in the U.S., there will be a positive correlation between individuals who identify with conservative cultural and religious values, and individuals who vote for the Democratic Party. Secondly, I predict that religiosity will be positively correlated with notions of conservatism. This study will analyze secondary data from 880 South-Asian American participants from the 2020 Collaborative Multiracial Post-election Survey. Ongoing data analysis using linear regression seeks to assess the impact of liberal-conservative ideology, religion type, and religiosity on the criterion variable of strength of partisanship. By investigating what may propel this disparity in Pakistani American voting behavior, we ultimately hope to find effective solutions to bridge this disparity because system justification can interfere heavily with efforts to promote social justice (Jost & Kay, 2010).
The Role of Social Identity in the Divergence in Anger Towards Blatant Racism

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When witnessing social and moral norm violations like blatant racism, individuals are likely to report anger regardless of social identity. However, the actual experience of anger may diverge for those who share a social identity with the victim vs the perpetrator. Building on Russell’s (2003) distinction between core affect (neurophysiological state of the experience of emotion) and affective quality (evaluations of the emotional experience an emotion should provoke), we argue that high self-reported levels of anger may belie different affective experiences. In Study 1, Latinx and non-Latinx White participants listened to blatantly racist vs equally aggressive, not explicitly racist, clips. We found that both participant groups report high levels of anger in response to blatant racism. However, the subjective experience of anger diverged: Latinx participants’ anger was correlated with strength and determination, suggesting increased resilience. White participants’ anger was related to shame, a withdrawal emotion. Study 2 investigates how group membership influences emotional responses to blatantly racist audio clips, and how these experiences may influence engagement in collective action. We hypothesize that all groups will report anger when witnessing blatant racism perpetrated by a White individual against a Latinx individual. However, we expect that anger will be cognitively based for Asian Americans, mixed with shame for Whites, and trigger approach emotions for Latinx participants.

Measuring Perceived Stigma on Different Mental Health Illnesses Based on Identity Background

Melissa Holland, Rindha Kola, Deauna Foster, Sydney Jackson

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Prior research suggests that people of color coming from collectivist backgrounds may face additional barriers in both acknowledging the importance of mental health and their perception toward mental disorders (Misra et al., 2021, Tieu et al., 2022). In the current study, we examined the impact that one’s identification with individualist or collectivist values has on their perceived stigma toward different mental health disorders. Participants were assigned to one of two conditions where they read a vignette describing an individual exhibiting symptoms of either schizophrenia or depression. Participants then answered a series of questions measuring their attitudes toward the mental illness they had read about. We anticipated that participants identifying as collectivists would hold high levels of stigma toward both mental illnesses. However, for participants who expressed more individualistic traits, we hypothesized that they would express higher levels of stigma only toward schizophrenia and less stigma toward depression.
Memories About Friendship and its Effects on Emotion Regulation

Audrey Lai, Razia Sahi, Elizabeth Gaines, Jennifer Silvers

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Social reappraisal — whereby a friend assists with reinterpreting negative stimuli to decrease its negative emotional impact — produces greater reductions in negative affect compared to reinterpreting stimuli on one's own (Sahi et al., 2021). Since support from a close friend aids emotion regulation, recalling an emotional memory with the friend may increase the salience of their friendship in their mind, and lead to more effective subsequent social reappraisal. This study investigates which components of emotional memories are associated with greater social reappraisal efficacy, and if the friend's perception of the reinterpretations mediates this effect. Friend pairs (N = 60) were assigned to either the helper or the experiencer role. The helpers described a memory they had with their friend and recorded scripted reinterpretations of images. The experiencers completed two computerized tasks where they rated negative and neutral images after passively viewing or reinterpreting the stimuli. In one, they reinterpreted images on their own; in the other, they listened to their friend reinterpreting the images. We hypothesize that themes such as intimacy and shared interests in the helper’s memories will enhance social reappraisal efficacy, and that the experiencer’s perception of how helpful, caring, and believable the reinterpretations are will act as a mediator. The findings will improve our understanding of how emotional memories and emotion regulation are linked.

Characterizing BIPOC Students Responses to a Social Belonging Intervention: Effects on Belonging, Persistence, and Student's Experiences of Transition

Zandile Makatini

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Transitions to universities, specifically predominantly white institutions (PWIs) is a challenging process compounded for students of color. During this adaptation process, BIPOC students at PWIs report feeling isolated and discouraged (Gopalan & Brady, 2019). The main factors shown to increase academic success and retention in BIPOC students are fostering belonging, interpersonal connection, and support (Strayhorn, 2012). The social belonging model normalizes the struggle of transition, and research shows it increases Black students' sense of belonging, and improvement in retention and academic success. In the current study, participants were randomly assigned to be exposed to a belonging intervention—modified to include aspects of critical race theory (CRT)—or a control set of stimuli. Data is being collected on an individual's persistence, effort, resilience, and challenges utilizing PERC—a computer based task analyzing mastery behavior (Porter et al., 2020). Participants were asked to share personal
experiences about their transition to university for qualitative analysis with an emphasis on CRT highlighting the intersection of unique student experiences (Delgado & Stefancic, 2001). Overall, this data can help universities figure out ways to support and highlight shared and individualized experiences for minority students.

Faculty Communication and Students’ STEM Belonging

Chelsea Malicdem
San Diego State University

Students in research labs are developing their educational and career interests. This academic development for students is supported through a mentor-mentee relationship. Faculty research mentors are particularly suited to guide students as they are beginning their scientific journey. This mentor-mentee relationship requires communication between the faculty and the student mentee. Data suggests that faculty use different mechanisms of communication in their research lab (e.g., email, Zoom, Slack/Discord, in-person). Less is known about how the frequency of communication between faculty research mentors and their student mentees influence student experiences and outcomes in science. Given that communication is essential for mentees to feel supported, I investigated whether the frequency of communication between faculty mentors and student mentees in research labs influence the extent to which students feel like they are part of the scientific community. I hypothesize that students who are mentored by faculty that communicate more often are more likely to have a greater sense of being part of the scientific community (measured by student self-reported science identity and belonging uncertainty). To investigate my research question, I examined data from 45 research labs. First, we asked faculty research mentors how often they communicate with their team. We categorized their responses into four categories (monthly, bi-weekly, weekly, daily) which allows us to assess the frequency of communication in the lab. Second, we surveyed student mentees in each of these faculty members’ labs to measure students’ self-reported science identity and belonging uncertainty. To examine whether greater frequency of communication between the faculty mentor and the student mentee was associated with greater science identity and lower belonging uncertainty among students, we regressed students’ science identity and belonging uncertainty (separately) onto the frequency of communication indicated by the faculty. Analyses did not yield a significant association between faculty research
Examining the Role of Leader Gender in Eliciting Support for Gender Equality Efforts

Keira Minamizono-von Imbior, Kunihiro Morimoto, Emily Luong, Evelyn Arrieta, S. Mako Tanaka, Yuen Huo

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Given that men make up a majority of the organizational workforce, it is essential to consider their support for gender equality efforts—particularly when led by a woman versus a man. To examine the effect of a leader’s gender on men’s support of gender equality efforts, we tested two competing hypotheses: a) men leaders may elicit less cooperation from male subordinates because they are perceived as going against their identifying group in favor of women (black sheep hypothesis) and b) men leaders may elicit more cooperation from male subordinates because they are perceived as being altruistic to the “other” group by advocating for women (ally advantage hypothesis). Furthermore, we expanded upon previous research and examined the impact of whether a gender equality effort threatens a group’s values (i.e., symbolic threat) or threatens a group’s power (i.e., realistic threat) (Stephan, Ybarra, & Rios Morrison, 2009). Using a 2 (gender: man or woman) by 2 (threat type: symbolic or realistic) design, we created and distributed “news” articles to male participants and asked them to rate their support of the leader and the gender equality effort outlined in the article. Aligned with the ally advantage hypothesis, we found that men leaders hold an advantage over women leaders in symbolic and realistic threat efforts. These findings expand upon the existing body of knowledge that discuss that men leaders can and should leverage their privilege to advance gender equality agendas.

Investigating Menstrual Attitudes and Knowledge: Menstrual Cup Usage

Alexa Mugol, Sisi Peng, Martie Haselton

Stigma toward menstruation is closely linked to negative attitudes toward sex and bodies, such as self objectification and body shame (Roberts, 2004). The menstrual cup (MC), an alternative menstrual product to pads and tampons, may mitigate these negative perceptions through the high levels of body contact and menstrual and anatomical knowledge required to use it. Hence, the current study examines the relationship between MC usage and attitudes toward sexual and reproductive health. We hypothesize that more frequent MC usage will be associated with 1) greater knowledge about reproductive
The Effects of Empathic Social Bonding on Cross-Partisan Disgust and Dehumanization

Shane Muldowney, Ashley Binnquist, Matthew Lieberman

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anatomy and menstruation, 2) greater personal comfort with sexuality, and 3) lower levels of menstrual stigma. This study utilizes a quantitative survey to understand the attitudes and experiences of menstruators and the menstrual products they use. This study is one of the first to address the MC's association with attitudes toward sexuality and knowledge about menstruation, both of which are central to reproductive health more broadly. Ultimately, this study will contribute to the discussion about menstrual stigma and address how menstrual product usage may change people’s perceptions and conversations surrounding periods.

Disgust is increasingly represented in cross-partisan attitudes in American politics, informing how polarized partisans perceive individuals, policy positions, and leaders across the political divide. Such attitudes facilitate not only social antipathy and political dysfunction, but dehumanization of political outgroups as well. Research suggests that the humanizing effects of empathic social bonding may be uniquely situated to reduce intergroup attitudes of disgust and dehumanization between polarized partisans. To test this, liberal and conservative participants (N=140) were recruited and paired into dyads based on their opposing attitudes toward politically polarizing topics. Prior to engaging in a cross-ideological conversation on a polarizing topic of which they disagreed, participant dyads were randomly assigned to have a politically neutral conversation in either a “deep bonding” or “shallow bonding” condition, in which the depth of interpersonal connection between polarized participants was experimentally manipulated to facilitate greater and lesser levels of empathic social bonding, respectively. Consistent with prior research, I hypothesize that participants who engage in a deep bonding conversation prior to engaging in a polarizing conversation with an ideological outgroup member will exhibit greater reductions in self-reported attitudes of disgust and dehumanization directed toward political outgroups than participants who initially engage in a shallow bonding conversation. Additionally, I hypothesize that individual disgust sensitivity will moderate this effect by predicting greater positive attitudinal shifts for deep bonding participants high in sensitivity to disgust. If validated, the implications of these hypothesized effects may likely suggest a potential avenue for social and political depolarization in the United States.
Exploring the Relationship Between Igbo Language Proficiency and Sense of Belonging to Igbo Culture Among Igbo People Living in North America and Nigeria

Chiagoziem Okonkwo
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Text Presentation and Mood on State Self-Esteem

Kristen Wathen, Alexandra Sorby, Elaina Falconer, Lily DeRouen, Areli Rodriguez, Jewell Dohen, Kristin Kiddoo
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Language is an important aspect of how members in a community cement their bonds with one another, and it is often the foundation of any community. Each member of a community can communicate their identity, cultural history, background, and opinions through the use of language. In Nigeria, there are three major languages and culture groups—Igbo, Hausa and Yoruba. Existing literature highlights that the Igbo language is not yet endangered, but is nearing the line and programs need to be implemented to prevent its endangerment and possible extinction. Using surveys and unstructured interviews, this study will explore the relationship between the level of an Igbo person's proficiency in the Igbo language and their sense of belonging to their culture. The data source for this study will be obtained from 100 students across North American and Nigerian tertiary institutions. Data will also be collected from members of Umu Igbo Unite chapters in various cities across America. This research is imperative because it helps bring light to the effects of being unable to speak one’s native language, and it assesses the need to implement more native language learning programs in all countries Igbo people reside.

Texting has been embraced as a primary method of socializing for young adults. However, two problematic factors of texting include punctuation and emotionally charged words. Past researchers found that variations in punctuation and emotionally charged words have individually influenced state self-esteem (SSE), but limited research has analyzed the variables together. Participants were randomly assigned to one of four conditions where they received text messages with negative or positive emotionally charged words that contained either period marks or no period marks. Then, participants completed the Rosenberg Self-Esteem Scale and State Self-Esteem Scale. Participants who read negative, punctuated messages were expected to have lower state self-esteem than those who read negative, unpunctuated messages, and participants who read positive, unpunctuated messages were expected to have higher state self-esteem than those who read positive, punctuated messages. We predict that emotionally charged words will have a stronger effect on the state self-esteem than the punctuation.

Research has examined the effect of plain language versus technical language in the context of jury instructions, but little is
### Jury Decision Making

Barbara California, Kyle Armstrong, Racist? Officers
When University

When are Police Officers Perceived as Racist?

Cameron Wolfram, Jodi Katti, Alejandra Aviles
Saint Louis University

Police brutality by white police officers has become a flashpoint for bitter disagreement within society. The present studies draw on classic and social cognitive models of attribution to analyze when perceivers attribute aggressive behavior by police officers to racism. The main research questions were: (1) do perceivers generally make dispositional inferences that a white police officer is racist based on aggressive behavior toward a minority civilian?, (2) are perceivers making these inferences automatically? In study 1, participants watched police arrest civilians varying in aggression (High vs. Low) and interaction type (Cross-Race vs. Same-Race). Participants then rated these officers on a variety of dispositions. We found that for both perceived officer aggressiveness and racism, there was a significant interaction between interaction type and aggression: when aggression is Low, officers in the Cross-Race condition were perceived as more aggressive and racist than the Same-Race condition. Meanwhile, when aggression is High, officers in the Cross-Race condition were perceived as less aggressive but more racist than the Same-Race condition. In study 2, we replicated study 1 but added cognitive load. We obtained similar effects for the interaction between interaction type and aggression, though cognitive load was non-significant. Results from the present studies might inform how perceivers make inferences when they witness white police officers arrest minorities.
Testing a Social Media Literacy Intervention Aimed at Reducing Weight Bias Internalization, Appearance Comparison, and Body Dissatisfaction

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Social media usage has been linked to physical appearance comparison, body dissatisfaction, and weight bias internalization (WBI)—the application of negative stereotypes about being a certain weight onto oneself (Pearl & Puhl, 2018). Distinct from traditional media, social media allows for the spread of information, regardless of the veracity behind it. Social media also encourages frequent comparison towards other users, leading to increased body image concerns (Fardouly & Vartanian, 2015). One promising avenue for reducing the harmful effects of social media may be social media literacy. Social media literacy educates individuals on critically consuming social media content and has been shown to decrease body dissatisfaction (Bell, 2022). Given the harms of social media on body image, we tested whether social media literacy would decrease WBI, appearance comparison, and body dissatisfaction using a between-subjects experimental design. In an ongoing study, participants (n = 172) are randomized into a social media literacy intervention or a control condition. Participants complete measures assessing WBI, appearance comparison, and body satisfaction following the intervention. Social media literacy may mitigate the negative effects of social media usage on body image by reducing body comparison deriving from social media. These findings can encourage implementation of social media literacy to mitigate the adverse effects linked to social media usage.

Dynamic Structural Equation Models: Promising Yet Concerning

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Dynamic Structural Equation Model (DSEM) is a powerful statistical modeling approach that has recently gained popularity among researchers studying intensive longitudinal data. Despite its exciting potential, the stability and replicability of DSEM are yet to be closely examined. The purpose of our study was to empirically investigate DSEM using recently published data to explore its strengths and potential limitations. Our results show that while some of its parameter estimates are stable, others are characterized by substantial variation as a function of seemingly innocuous initial model estimation conditions. Indeed, some parameters fluctuate between significance and non-significance for the same model estimated using the same data. The instability of DSEM estimates poses a serious threat to the internal and external validity of conclusions drawn from its analyses, challenging the reproducibility of findings from applied research.
Given the recent focus on the replication crisis in psychology, it is critical to address these issues as the popularity of DSEM in psychological research continues to rise. We investigate several potential solutions to address this problem and offer recommendations of best practice to applied researchers who plan to use DSEM for causal inference in intensive longitudinal data analysis.

### The Impact of Progestin Use on Spatial Strategy and Human Hippocampal Structure

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Shifts in hormone concentrations can bias the use of different spatial navigation strategies. Elevated estradiol has been associated with an increased use of place strategies, while increased progesterone has been associated with a bias for response strategies (Lacasse et al., 2022). In this pilot study, naturally cycling women and women using progestin-based contraceptives (IUD or implant) (n=40, ages 18-40 years) were tested on a navigational strategy task following an MRI scan and endocrine assessment. We hypothesized that participants on progestin would use more response strategies compared to those who are naturally cycling. In preliminary analyses progestin users show a trend of using more place strategies. Future analyses will be conducted on an expanded sample, compare hormone concentrations to behavior, and compare hippocampal volume and strategy use between groups to assess brain-behavior relationships. The purpose of this project is to improve our understanding of the effects of hormonal contraceptives on the human brain and behavior.

### The Impact of IUD Use on Brain Volumes

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<tr>
<td>Ella Carlsson,</td>
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Hormonal contraception (HC), used by 400 million women around the world, alters endogenous sex hormone levels and there is robust evidence that sex hormones influence brain structure and function (Taylor et al., 2021). Neuroimaging research into the impact of HC is nascent, and all studies focus on oral contraception (OC), leaving other types of HC, including IUDs, largely unstudied. This is an oversight, as IUDs are the most common form of HC used by women globally (U.N. DESA, 2019), and population-level studies identified an increased risk of diagnosis of depression across all forms of HC with IUD use conferring the highest risk (Skovlund, 2016). This suggests a neural impact of all forms of HC, not just OC. In this study, we aim to address this gap by investigating the impact of hormonal IUD use on brain structure. Using TI-weighted images from the Ann S. Bowers Women’s Brain Health Initiative, we will compare global
and regional gray matter volumes between current IUD users (n=32, avg age 24) and those who have never used any form of HC (n=32, avg age 23). Additionally, as many IUD users have previously used OC, we will utilize an additional control group of women not currently using HC, but who have used OC in the past (n=31, avg age 24). Findings from this study will help illuminate the impact of IUDs on the brain, and could have wide-reaching implications for public health.

Effects of Repeated Opioid Oral Self-Administration on Cognition/Learning and Behavior in a Rat Model

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University of California, Los Angeles

Chronic opioid use leads to numerous side effects, ranging from drowsiness to dependence. A significant issue is the lack of understanding about the effects opioids have on brain regions that mediate higher cognitive processes, such as the hippocampus. This research focuses on identifying the effects of chronic oral opioid administration on learning, memory and behavior in rats. Before and after oral consumption of oxycodone, four rats will be assessed on two memory tests: object location memory (OLM) and novel object recognition (NOR). Rats will be given the choice to consume oxycodone via the two bottle choice paradigm. One bottle will contain water and the other water with oxycodone (0.1mg/mL). The OLM test will be used to assess the rats’ use of hippocampal-learning strategies. The rats will be required to distinguish between the object that was moved and the object that was not moved. The hippocampus has been shown to be vulnerable to the effects of chronic opioid use, therefore, we expect that oxycodone consumption will negatively affect the rats’ OLM test performance. In the NOR test, the rats will have to discriminate between a familiar and a novel object. The NOR test is not dependent on hippocampal-learning strategy use, so we expect no change in the test performance after drug consumption. Understanding the effects of chronic opioid use on learning and memory in rats has important implications for developing more effective treatments for opioid use disorder.

Incubated Sucrose Craving does not Require mTOR Activity

Christopher J. E. Denning, Fernando J. Cano,

The similar temporal profile of incubated food- vs. drug-seeking posits that these behavioral phenomena may involve common, time-dependent, biochemical adaptations within neural circuits governing motivated behavior. Systemic pretreatment with the FDA-approved mTOR inhibitor Everolimus inhibits incubated cocaine craving in rats. Here, we tested whether Everolimus can similarly block incubated sucrose-seeking. Rats were trained to self-administer sucrose pellets for 6 h sessions for 10 days. 1 or 30
days after the last session, rats were gavage-infused with either vehicle or the maximally effective Everolimus dose from our prior cocaine study (1.0 mg/kg), and then subjected to a 2 h test to measure cue-reinforced responding. Follow-up immunoblot studies examined for Everolimus’ effects on mTOR activation within PFC subregions. Despite lowering phospho-mTOR levels within the infralimbic cortex, 1.0 mg/kg Everolimus did not alter the magnitude of incubated sucrose-seeking exhibited by either male or female rats, relative to vehicle-infused controls. Unlike incubated cocaine-craving, incubated sucrose-craving is not correlated with elevated mTOR activity within prefrontal cortex subregions. These data indicate that the incubation of drug- and sucrose-seeking involve distinct molecular adaptations within the prefrontal cortex.

Breast cancer survivorship in the COVID-19 pandemic: associations between cancer-related post-traumatic growth and pandemic-related adjustment

We surveyed breast cancer survivors, a potentially vulnerable population, regarding their adjustment to the COVID-19 pandemic. We leveraged a previous participant cohort to examine whether perceived post-traumatic growth (PTG) one year after breast cancer diagnosis was associated with psychological adjustment to the COVID-19 pandemic 10 years later. We hypothesized higher PTG would be associated with better adjustment, as higher PTG may buffer against COVID-19-related stressors. Women completed validated measures of PTG, anxiety, and depressive symptoms. Author-constructed items assessed risk perceptions of COVID-19 infection, illness and long-term complications. Counter to hypothesis, PTG one-year post-diagnosis was positively associated with survivors’ perceived risk for COVID-19 infection, sickness, and long-term complications 10 years later. PTG one year after breast cancer diagnosis predicted higher COVID-19 risk perceptions (but not anxiety or depressive symptoms) a decade later. Findings suggest the possibility that perceived cancer-related PTG may offer survivors a sense of “preparedness” for subsequent life stressors, such that survivors may demonstrate heightened attunement to potential health risks, but in a manner that does not threaten psychological adjustment. Future work should examine potential carry-over effects of cancer-related PTG on adjustment to future important life and health-related stressors.
Rats and Reward: An Analysis of the Minimum Reward Detectable by Rats

Jennifer Huynh, Asal Esteghlal, Cristal Cruz, Elena Chen, Parinaz Khosravi, Ryan Grgurich, Shiyun Wang, H. Tad Blair
University of California, Los Angeles

Rats are intrinsically drawn to food, making food rewards common in experiments to keep rats motivated to run behavior tasks. The previous work of Kim et al. (2015) found that differences in reward size influenced rats’ decisions on which reward path to choose in future trials. They used large differences to ensure that the rats could distinguish between the rewards. In the present study, we extend the finding and investigate the minimum difference in reward volumes that can elicit an unbalanced reward preference in rats using sweetened condensed milk. Rats were placed in an automated Tmaze with two liquid reward wells on the left and right arms, respectively. Reward discrimination was tested by holding the reward volume in each session constant in one arm and varying the volume in the other arm across trials. The differences in the reward volumes ranged from 25 to 200 µL. We hypothesize that the ratio of the large over small reward choices will be higher and deviate the most from baseline data when the percent difference in the two reward volumes is larger. The percent difference is measured as the difference between the changed volume and constant volume divided by the constant volume. Following Weber’s Law, we predict that the change in volume that produces a just noticeable difference is proportional to the constant volume. The study’s results can aid future researchers in deciding minimum reward differences that create positive contrast or biased reward preferences.

Classifying Consciousness with Machine Learning Methodologies

Angela Kan
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Despite decades of research on the subject and a host of various theories underlying the elusive phenomenon of consciousness, there remains to be scientific consensus on a singular definition of nor explanation for the neural mechanisms of consciousness. Previous literature outlines nascent success in utilizing more computational methods like machine learning models to approach the issue, using classification models to distinguish between different global states of consciousness represented primarily by neural data in the time domain. In this paper, we employ a recently introduced technique for characterizing the role of broader spatiotemporal organizing principles in overall brain activation with two-dimensional spatiotemporal spectral profiles in conjunction with machine learning classification models to investigate whether a spatiotemporal representation of neural activity better lends itself to a computational discrimination of different global states of consciousness. Using a previously collected resting-state fMRI dataset of healthy human
volunteers undergoing four anesthetically-manipulated, labeled global states of consciousness (i.e., wakefulness, minimal sedation, propofol-induced unconsciousness, and post-unconsciousness recovery) and standard preprocessing methods, we proceed to transform 4D full-volume fMRI data into 2D spatiotemporal spectral profiles. Subsequently, we will train various classification models on these profiles to discriminate between different global states of consciousness and identify broader spatiotemporal organizing principles between these states to inform current theories of consciousness.

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<th>How Racial Identity Moderates the Relationship Between Drug Use and Pre-Exposure Prophylaxis Uptake</th>
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<td>Spencer Liu, Manuel Ramirez, Michelle Tang, Patrick Wilson</td>
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Uptake of Pre-Exposure Prophylaxis (PrEP), a drug that reduces likelihood of HIV infection, remains low despite efforts to make PrEP accessible to high risk communities (Brokus et al., 2021). Compared to White men who have sex with men (MSM), Black MSM have lower rates of PrEP uptake (Remy & Enriquez, 2019). This study investigates whether substance use plays a role in influencing attitudes toward PrEP, and whether race moderates this relationship. We hypothesize that there is a negative relationship between drug use and attitudes towards PrEP, such that greater drug use is related to more negative attitudes toward PrEP. Furthermore, we hypothesize that race will moderate this relationship, such that the relationship will be stronger among Black MSM compared to White MSM. Using a between-subjects design, 323 participants answered questions on attitudes toward PrEP and drug use behaviors. Attitudes towards PrEP were measured using a modified scale used in a previous study (Ayala et al., 2014). Items assess positive and negative perceptions around PrEP. Substance use was measured by asking participants to describe the frequency of their use of different types of drugs over a 3-month period. The study may clarify the role of substance use in influencing attitudes toward PrEP, and provide insight into how race shapes this relationship. Findings can be used to direct efforts aimed at improving PrEP uptake.

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Heavy drinking can induce early-onset dementia and increase the likelihood of the progression and severity of Alzheimer’s Disease and related dementias (ADRD). We showed that alcohol drinking by mature adult C57BL/6J mice induce more signs of cognitive impairment in females vs males without worsening age-related cognitive decline in aged mice. We immunoblotted for glutamate receptors/protein markers within the hippocampus (HPC) and
Strokes and transient ischemic attacks (TIAs) are a leading cause of death in the United States and may trigger the development of posttraumatic stress disorder (PTSD) symptoms. Medication regimens following a stroke/TIA may serve as potential trauma reminders leading to avoidance behaviors characteristic of PTSD, and as such individuals with stroke-induced PTSD may be at risk for medication nonadherence. Research suggests that greater psychophysiological reactivity to recalling the trauma (as indicated by heightened skin conductance [SC] reactivity) predicts PTSD symptom development. However, we do not yet know if heightened SC in the days following a stroke/TIA may also predict medication nonadherence. We hypothesize that stroke patients with greater SC reactivity while recalling the stroke/TIA event will have greater medication nonadherence at a 1-month follow-up assessment and that this association will be explained, in part, by elevated stroke-induced PTSD symptoms. Patients hospitalized for a suspected stroke/TIA (N=98, mean age= 60.4 years, % female= 55.1) completed an in-hospital trauma psychophysiology protocol in which SC was collected during a resting baseline and trauma interview. Participants reported stroke-induced PTSD symptoms and adherence to secondary prevention medication regimens at a 1-month follow-up. All data are collected, and analyses are underway, the findings of which may help to identify at-risk patients after stroke/TIA.
Dim light at night modulates wheel-running in mice

In mice and humans, biological clocks in the brain generate daily (circadian) rhythms in physiology, including sleep/wake, hormones, blood pressure, etc. Much is known about how sunlight synchronizes circadian rhythms with the natural environment. In contrast, less is known about how light from the stars and moon influences circadian systems. Recent studies, however, have shown that dim light throughout the night is capable of facilitating circadian adjustments in mouse experiments, raising the possibility that it could be effective in helping shift workers adjust to their non-traditional schedules. In the current study of nocturnal mice, we investigate how different short dim/dark cycles affect their activity in a running wheel. In one of several experiments, mice (n=16) kept on a day-night schedule experienced repeating cycles of 6 minutes of dim light (equivalent in intensity to dim moonlight) followed by 6 minutes of total darkness. Averaging the 350 cycles collected over 7 nights, the mice showed a dynamic response to dim light. Activity levels were constant over the 6 minutes of darkness. Activity decreased, however, in the first minute after the dim light was turned on. Over the 6 minutes of the dim light, activity progressively increased above levels seen in darkness. Thus, dim light has both inhibitory and excitatory effects on mice activity. Future research will explore how different light cycles contribute to facilitating circadian adjustments.

Lasso and Group Lasso with Categorical Predictors: Impact of Coding Strategy on Variable Selection and Prediction

Least Absolute Shrinkage and Selection Operator (LASSO) regression, as one of the most commonly used supervised machine learning methods, is widely adopted by researchers to perform prediction and variable selection. On the basis of linear regression, LASSO has an additional L1 regularization term that penalizes the function and results in sparse models with few coefficients. Although LASSO regression is closely related to linear regression, we found in this study that using different coding strategies for categorical predictors (e.g., dummy vs. Helmert coding) has no impact on the performance of linear regression, but can affect the performance of LASSO regression in terms of prediction accuracy and variable selection. We fit LASSO regression models that predicted stress with four categorical and seven numerical predictors using a COVID dataset. We then examined coefficients that were dropped and calculated the prediction accuracy for the models. Results show that when using different coding strategies for categorical variables, LASSO
regression produces different variable selections and consequently different prediction accuracy as opposed to linear regression, which does not select variables and produces consistent prediction accuracy. This study shows that the choice of coding strategies for categorical variables in LASSO models can impact model performance and variable selection, and thus should not be made arbitrarily.

The Evolution of Reciprocity Based on Welfare Tradeoff Ratios in Games With Asymmetric Information

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People care about others' welfare to varying degrees, captured by the welfare tradeoff ratio (WTR), or the weight placed on another person's welfare compared to one's own. People can infer another person's WTR toward themselves and reciprocate by adjusting their own WTR toward that person. However, the evolutionary origin of such a capacity is unclear. In games with perfect information, a heuristic strategy with tit-for-tat-like reciprocity is unbeatable, and the additional computation of inferring the opponent's WTR confers no benefit. Here we show that in games with asymmetric information, where the actor has more accurate information about the payoff structure than the observer, the heuristic strategy is prone to errors from misperception, while reciprocity based on the inference of WTRs is robust. These findings suggest that asymmetric information about social decisions, a realistic modification to the game environment, may have contributed to the evolution of people's understanding of others' WTRs.

Substance Use as a Mediating Factor for Incarceration Experiences and Daily Diary Compliance: Implications for Treatment Adherence Among HIV-Infected Young Men

Katie Wong, Christy Wang, Dieguito California, Lindsey Powell

Young men who have sex with men (YMSM) are particularly vulnerable to HIV infection. Technology-enabled prompts in daily diaries are a promising intervention to increase HIV treatment adherence (Cherenack et al., 2016). Incarceration experiences (i.e. undergoing probation, being arrested, going to jail) have been shown to be tied to substance use, which can disrupt treatment adherence (Elkington et al., 2020). However, it is unclear whether incarceration experiences affect daily diary compliance, and whether substance use (SU) mediates this relationship. To examine this question, we hypothesize that incarceration experiences decrease daily diary compliance among HIV-infected YMSM, and that SU mediates this relationship. Specifically, incarceration experiences will be positively associated with SU, and SU will be negatively related to diary adherence. Data was collected as part of a 66-day daily diary study examining SU among HIV-infected YMSM (N=67). Incarceration experiences
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Racial attitudes and disordered eating behaviors among Black men and women

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were assessed in a baseline questionnaire and SU behaviors were assessed in daily diaries. We will use SPSS to conduct a linear regression to examine the association between incarceration experiences and daily diary adherence and a simple mediation analysis to examine the role of SU as a mediator. Results may illuminate how incarceration and SU relate to treatment compliance and help tailor health interventions for improving treatment adherence among HIV-infected YMSM.

Previous studies suggest that Black people are protected from developing eating disorders, due to cultural norms that are more accepting of plus-size body types and do not adhere to a thin body ideal (Poran et al., 2006). However, these findings assume that all Black people internalize Black-centric appearance standards and have positive attitudes toward Blackness (Watson et al., 2019). How varying attitudes toward Blackness may be associated with disordered eating behaviors has not been established. Using cross-sectional data collected via Prolific, we sought to investigate whether internalizing a positive view of Blackness would be associated with an individual's disordered eating behaviors (N = 471). Attitudes toward Blackness were measured using the private regard and centrality subscales of the Multidimensional Model of Black Identity (Sellers, 2013).

Disordered eating was measured using the binge eating, purging, and excessive exercise subscales of the Eating Pathology Symptoms Inventory (Forbush et al., 2013) and the drive for thinness subscale of the Eating Disorder Inventory-3 (Garner, 2003). We hypothesize that higher private regard and centrality will predict reduced disordered eating behaviors. These effects will be moderated by gender, such that the association will be stronger in Black women for all predictors except excessive exercise. This study will further our understanding of unique predictors of disordered eating behaviors within Black communities.