



TCNJ
THE COLLEGE OF
NEW JERSEY

*CLASSES OF
2020 & 2021*

HONORS THESES

**DEPARTMENT OF
PSYCHOLOGY**

Samantha Costigan, *Determining Replication Success: Analyzing Open Science Collaboration Studies With an Empirical Approach to the Small Telescopes Method*

Faculty Sponsor: John Ruscio

Committee Members: Jarret Crawford, Lisa Grimm

Within psychological science there is said to be a replication crisis as many important findings cannot be reproduced. Compounding this issue, there is no single method to determine replication success. The methods currently in use have various limitations and do not adequately assess whether the original study detected a real effect or if the results are simply false positives. The small telescopes method can address these concerns and determine whether the original study could have reasonably detected the effect of interest. However, this method requires an analytic approach which can be impractical or impossible to conduct. To remedy this, one can take an empirical approach to the small telescopes analysis. The present study demonstrates this approach by analyzing the majority of studies replicated as part of the Open Science Collaboration's Reproducibility Project in Psychology. This empirical approach can be used for a variety of study designs and is particularly useful for evaluating replication attempts that do not reach statistical significance. The empirical approach to the small telescopes method is a valuable tool for addressing the replication crisis and can be used to evaluate findings in psychological science and beyond.

Mallery Davis-Swing, *The Effects of Gender and Power Based Personal Violence on Disordered Eating Habits among Undergraduate Students*

Faculty Sponsor: Joanna Herres

Committee Members: Jarrett Crawford, Aimee Stahl

A random selection of 2,000 undergraduate students were recruited from a public liberal arts college in the Northeast to complete an online survey that measured their gender identity, PBPV experience, and disordered eating symptoms. Respondents completed the survey at the start of the fall semester ($N = 273$). Cis-females and those with a history of PBPV reported more disordered eating behaviors compared to cis-males ($M_{\text{difference}} = .67$, $F(1, 269) = 19.79$, $p = .00$) and those without a history of PBPV ($M_{\text{difference}} = 1.01$, $F(1, 269) = 8.81$, $p = .00$), respectively. The interaction between gender and PBPV was not significant. Interventions for survivors of PBPV should incorporate a focus on healthy eating habits and disorder eating prevention.



Gianna Fotinos, *Effectiveness of AIR®s (Attitudes in Reverse) Mental Health Education Program*

Faculty Sponsor: Jean Kirnan

Committee Members: He Len Chung, James Graham

Mental illness and the negative stigmas associated with it have become more prevalent in adolescents. An extensive review of previous literature shows that there have been numerous mental health education programs with the goal of raising awareness of mental health and changing harmful stigmas in students. This paper focuses on one mental health education program, Coming up for AIR, and the effects it has on student knowledge, attitude, and help seeking behavior after the program. Researchers have divided the paper into three studies to focus on analysis of middle school students, teachers, and archived data from previous Coming up for AIR presentations. The program successfully increased both student and teacher knowledge of mental health, showed a positive attitude change, and showed a significant effect in helping seeking behavior for students.

Helen Halpern, *Examining Associations Between Age of Onset of Screen Time, Current Screen Time Use, Facial Emotion Recognition, and Endogenous Variables*

Faculty Sponsor: Jean Kirnan

Committee Members: Margaret (Betsy) Ruddy, Aimee Stahl

This study measured initial and current screen time use, personality measures, and facial emotion recognition. A series of Pearson correlations were conducted to investigate if there was an association between (1) age of onset of screen time use, facial emotion recognition, empathy, and emotional intelligence (EQ) and (2) current screen time use, facial emotion recognition, empathy, and EQ. No statistical significance was identified in support of Hypothesis 1 in accordance with the results of the Pearson correlations. A series of four path analyses were conducted to investigate the relationships of the hypothesis which were established in the Pearson correlations. The results of two of the path analyses were inconsistent with Hypothesis 2, in that current screen time use was independently associated with joy ($p = .029$) and sadness ($p = .002$), but neither current screen time use nor the sub scores of joy and sadness were associated with endogenous variables.

Lauren Hollowniczky, *Neural Correlates of the Relationship Between Fluency and Familiarity*

Faculty Sponsor: P. Andrew Leynes

Committee Members: Margaret (Betsy) Ruddy, John Ruscio

Our study replicated Bruett and Leynes (2015) with word stimuli. Participants completed in-person recognition memory test on pre-experimentally familiar words (drugs) and novel words (fake drugs) encountered in a prior study phase. Stimuli were displayed in either blocked or mixed tests and event related potentials (ERPs) were measured. Our results showed familiar stimuli alone produced the FN400, indicating episodic memory, and novel stimuli alone produced the N400, indicating semantic memory, while mixing both stimuli produced the N400 for both familiar and novel stimuli. These results suggest that participants adjust to the mixing of stimuli by relying on semantic memory, or absolute memory, suggesting there is a degree of flexibility in the recognition processes used that is dependent on the context in which stimuli are presented. In addition, different ERPs were produced from picture stimuli than from word stimuli, suggesting a flexibility dependent on stimulus type.

Elisa Liang, *Negative Emotion and Breakup Anxiety in Romantic Conflict Narratives: Links to Conflict Strategies*

Faculty Sponsor: Candice Feiring

Committee Members: Ashley Borders, Valerie A. Simon (Wayne State University)

We investigated negative emotional responses (angry and sad words, ratings and arousal) and breakup anxiety in emerging adult conflict narratives and associations with conflict strategies in 104 heterosexual couples. Actor effects were found such that a couple members' negative emotional responses and breakup anxiety were associated with their own reports of aggression. Couple members' reports of aggression were also associated with their partner's break-up anxiety in models that included angry words and arousal. Using negative emotion and breakup anxiety to make meaning of romantic conflicts may promote destructive approaches to relationship problems. Interventions to help emerging adult couples solve conflicts more constructively might focus on reducing negative interpretations of conflict events before building skills such as perspective-taking and effective listening.

Kelly Lennon, *The Impacts of Achievement Orientation and the Spacing Effect on Language Acquisition, Retention and Relearning*

Faculty Sponsor: Lisa Grimm

Committee Members: Tamra Bireta, P. Andrew Leynes

The interaction between goal orientation and German language learning with short or long lags was examined to ascertain how German vocabulary was learned, retained, and relearned over a one-week time period. 135 participants completed a language learning task and Immediate, One Day, and Seven Day retention tests. During acquisition, words studied with short lags led to higher accuracy, yet during Immediate retention long lag words led to higher accuracy. Words studied with long lags also led to greater retention accuracy during the One Day and Seven Day retention tests. There were no significant effects of Lag during Relearning. The amount of information relearned increased from the One Day to the Seven Day retention, as more relearning was needed as time passed. Goal orientations did not predict the acquisition of German vocabulary, but preliminary results suggest a stronger performance-approach orientation predicts worse retention accuracy.

Jonathan Oflazian, *Examining Selective Interference of Physical and Semantic Isolation Effects in a Divided Attention Paradigm*

Faculty Sponsor: Tamra Bireta

Committee Members: P. Andrew. Leynes, Margaret (Betsy) Ruddy

An item that differs from its otherwise similar surroundings is more likely to be remembered. This robust finding is known as the isolation effect (von Restorff, 1933). The multiple resource theory (Wickens, 2008) may provide a useful framework for understanding the role of attention in the isolation effect. It is possible that selective interference occurs when a divided attention task uses the same resource pool that is necessary for distinctive processing of a specific type of isolate during encoding. Thus, a divided attention task that is spatial in nature may selectively eliminate a physical isolation effect that was not eliminated when prior research used a verbal divided attention task. To that end, the current study examined recall of semantic and physical isolates under full and divided attention. The results suggest that the physical isolation effect is robust even to dividing attention in a physical manner.



Olivia Orтели, *The Behavioral Economics of Alcohol Demand in Greek-Affiliated College Students*

Faculty Sponsor: Margaret Martinetti

Committee Members: Joanna Herres, Margaret (Betsy) Ruddy

College students affiliated with fraternities/sororities (“Greek” life) represent a known high-risk group for alcohol use. The current study examined the relationship between alcohol price and consumption in Greek-life-affiliated students using the Alcohol Purchase Task (APT) and a variation of the APT that included a fixed-price, nonalcoholic alternative (APT Choice). Alcohol-use measures revealed “hazardous” drinking scores, which were significantly correlated with consumption in both APT conditions; however, higher alcohol prices produced lower reported consumption, particularly when a nonalcoholic beverage was available. These findings suggest that nonalcoholic options may enhance the harm-reduction effects of limiting access to low-cost alcohol among Greek-life students.



Sarah Richter, *The Effects of After School Program Participation on Academic Achievement and Social, Emotional, and Behavioral Health*

Faculty Sponsor: He Len Chung

Committee Members: Jean Kirnan, Michael Lovaglio

This study used a community-based participatory research (CBPR) approach to examine the impacts of after school program participation on academic achievement and social, emotional, and behavioral health. In addition, the study identified reading engagement and efficacy as potential mediators of the proposed relationship, and ACEs and PACEs as potential moderators. The study was conducted in collaboration with a community partner called Urban Promise Trenton (UPT). UPT is an after school program in Trenton, New Jersey that supports students’ academic success and overall well-being. Although this is an ongoing study, preliminary analyses found significant correlations between reading measures, ACEs, PACEs, academic achievement and social, emotional, and behavioral health.



Isabel Rodriguez, *Impact of Race/Ethnicity and Institutional Distrust on Psychological Outcomes of Campus Sexual Assault Victims*

Faculty Sponsor: Joanna Herres

Committee Members: Jessica Barnack-Tavlaris, Ashley Borders

Victims of campus sexual assault (SA) may lose trust in their institutions to support and protect them. Given past and present systems of prejudice and oppression, feelings of distrust may be especially salient among students of color at predominately white institutions. The present study examined whether institutional distrust explains differences in PTSD symptom severity after campus SA and whether students of color experience greater institutional distrust following SA. Students' distrust in their institutions mediated more severe PTSD symptoms among SA victims. Although students of color generally experienced more institutional distrust than white students, a significant interaction between SA victimization and race/ethnicity, revealed that the link between SA and institutional distrust was significant for white victims, but not for students of color. Future research should examine ways colleges can effectively support students of color and victims of SA and minimize incidences of racism and assault.

Devin Ruth, *The Impact of Undergraduate Internships*

Faculty Sponsor: Jason Dahling

Committee Members: Joanna Herres, Jean Kirnan

The purpose of this study was to examine the impact of internships on undergraduate students. This research investigates how job characteristics such as, task significance, task identity, skill variety, feedback and autonomy, impact one's vocational self-concept, confidence in work preparation, and satisfaction with their academic major. Proactive personality was considered as a potential moderator. Participants were screened and selected through Mechanical Turk. They completed a self-report survey that measured the presence of the job characteristics during their internships. This was compared to the outcomes of vocational self-concept, work preparedness, and major satisfaction. Results suggest that the presence of the five job characteristics do have a positive effect on these outcomes, especially for individuals who have a low proactive personality. For individuals with a high proactive personality, there is no significant effect of job characteristics - high proactive personality is compensating for job characteristics. These findings demonstrate the importance of the presence of job characteristics during internships.

Tanushi Upadhyay, *Neural Correlates of the Relationship Between Fluency and Familiarity*

Faculty Sponsor: P. Andrew Leynes

Committee Members: Joanna Herres, Shaun Wiley

Participants encoded fake and real drug names through an incidental encoding task, followed by two blocked recognition tests (one test consisted of only real drug names while the other consisted of only fake drug names) during which participants identified whether the drug name was old or new. Researchers observed that that fluency was supporting recognition judgements as blocking stimulus types elicited a fluency effect during 200-300 ms when stimuli was pre-experimentally unfamiliar. Analyses also revealed ERP old/new differences that are typical indicators of perceptual and semantic fluency (Leynes & Zish, 2012, Lucas & Pallor, 2013). However, researchers also saw old/new differences such that old > new for the fluency component, whereas a reverse polarity (old < new) was observed in Bruett & Leynes (2015), suggesting instead a reliance on semantic fluency (Nessler, Mecklinger, & Penney, 2005). This evidence implies that recognition judgements sourced from different types of stimuli depend on dissociable neural correlates.

