

## **Psychological Science II**

### **JAAC 5004**

7:00 p.m.-7:15 p.m.

### **The Influence of Acute Exercise on Free Word Recall in College-Aged Students**

Maren Johnson, Christina Sorentino, Anna Margaret McDonnell, Chelsey Deloney, John Longenecker, Benjamin Burdalic  
Faculty Advisor: R. Mansfield, Ph.D.

Many college students bring study materials to the fitness center and review while walking on the treadmill or other pieces of equipment. Recall is defined as the process of retrieving stored information from past events (Fine, 2008). Acute exercise is defined as a single bout of exercise. Recent studies show that an acute exercise session combined with a regular exercise regimen augmented recognition memory. The present study examined the effects of acute exercise on free word recall in undergraduate students (N=25). First, students were asked to memorize and recall 15 words while seated. Then, students were asked to memorize another set of 15 words while walking on a treadmill at 55% of their maximum heart rate and recall the words while seated. We predicted that acute exercise would positively influence the number of words recalled. In conclusion, our findings suggest that acute exercise does have a significant effect on the number of words recalled. However, numerous studies confirm that exercise needs to last for 10-30 minutes to show an increase in cognitive performance. Given that our period of exercise with memorization was 90 seconds, this study should be repeated with longer intervals of exercise to gain a better insight into the effect acute exercise has on word recall.

7:15 p.m.-7:30 p.m.

### **Desired, Perceived and Actual Body Fat Percentage: How it can Affect Meal Choice**

Chelsey Deloney, Karli Kury, and Sidney Johnson  
Faculty Advisor: Linda Jones Ph.D.

Students are often concerned with the way they look, but not necessarily concerned with their actual health. The meal choices they make can not only affect the way they look, but it can also play a major role in their health. Çatikkaş (2011) found that there was a negative correlation between body fat image satisfaction and body fat ratio, and this only happened with women. After noting this association, it is important to know that women are more vulnerable to eating disorders or body image dissatisfaction. Campisi et al. (2015) also found that when individuals demonstrated a discrepancy between perceived and actual weight status, they had higher rates of abnormal weight control behavior and health problems. They also found this to be true between perceived and desired weight status. This study explored how body fat percentage can affect a

college student's meal choices. Participants were asked to state their desired and perceived body fat percentage, researchers then measured their actual body fat percentage, and participants then made meal choices. It was hypothesized that participants would change their meal choices based on if there was a discrepancy between actual body fat percentage and perceived body fat percentage.

7:30 p.m.-7:45 p.m.

### **Social Power and Strength Self-Perception**

Kathryn Graeff, Karli Kury, Alejandra Coto, and Daniel Mata  
Faculty Advisor: Lonnie Yandell, Ph.D.

Research has shown that a personal sense of social power can influence physical self-perceptions, such as perceptions about one's weight (Lee & Schnall, 2014) and height (Duguid & Goncalo, 2012). The present study examines how personal perceptions of social power influence strength self-perception. Participants included fifty-seven (42 women, 15 men) undergraduate Belmont University students who were assigned to either a high social power, low social power, or control condition. In the high social power condition participants responded to a prompt where they placed in the mindset of a manager at a company, and in the low social power condition participants were made to respond to a prompt where they had to put themselves in the place of a low-level employee at a company. Participants in the control condition responded to a neutral prompt about outdoor activity preferences. Participants were then read a fake statistic that presented the average strength for the average individual and rated their perceived self-strength in relation to that average. We expect that participants who feel high in social power will overestimate their perceived self-strength compared to participants who feel low in social power and participants in the control condition. This research can contribute to the literature about how psychological perceptions influence physical perceptions and how it can apply to the actions of those who are in position of leadership and/or power, as well as those who find themselves in situations where they lack social power.

7:45 p.m.-8:00 p.m.

### **Green and the Perception of Conscientiousness**

Kathryn Graeff  
Faculty Advisor: Lonnie Yandell, Ph.D.

Research has shown that colors can carry meanings that have important implications for perception and personality judgments. Green is associated with a high need of achievement (Knapp, 1962) and red is associated with low competence (Maier et al., 2013). Similarly, high conscientiousness is associated with high achievement and low conscientiousness is associated with low achievement (Nofle & Robins, 2007). Thus, the present study investigates how green influences impression formation and the perception of conscientiousness in a success-related context. Participants included sixty (46 women, 14 men) undergraduate Belmont University students who were told that they would be acting as an entrepreneur at a new software company and would be reviewing an applicant for a position at the company. Participants rated the importance of ten characteristics of an ideal job candidate, read a description of the job

candidate, and were shown a picture of the male candidate wearing either a red or green shirt. Participants then rated the candidate's levels of conscientiousness using the Conscientiousness subscale of the Big Five Inventory (John & Srivastava, 1999) and rated the candidate's potential for success. Lastly, participants were screened for red-green colorblindness. It is expected that participants who viewed the job candidate wearing a green shirt will rate him as being more conscientious and successful compared to those who viewed the job candidate wearing a red shirt. The findings of this research will aid in understanding how color influences impression formation and personality judgments, which may have especially important implications in success and achievement contexts.

8:00 p.m.-8:15 p.m.

### **Dyadic Meta-Accuracy and Dyadic Motivational Accuracy in Academic Work Groups**

Reed Priest

Faculty Advisor: Lonnie Yandell, Ph.D.

Eisenkraft, Elfenbein, and Kopelman (2017) found group members showed accurate dyadic-meta accuracy, which is the degree to which one's beliefs of others are correct, for liking, but not for competition with others in a work environment. The present study aimed to replicate this finding in student work groups, with the addition of exploring if students can predict the motivations of other group members, which the researchers termed dyadic motivational accuracy. Research has shown that some students enjoy growing as scholars and enjoy the intrinsic enrichment of acquiring new information, which is a learning-orientation of academic motivation. Other students prefer academic achievement in the form of earning high grades, which is a grade-orientation of academic motivation. These two academic motivations constitute alternative methods for students to engage academic environments. In the present study, dyadic motivational accuracy was examined through the lens of these two academic motivations. Seventy-three students in four upper level psychology labs were examined for dyadic meta-accuracy for liking, competition. They were also examined for dyadic motivational accuracy with learning-oriented and grade-oriented motivations. Results indicated similar results to Eisenkraft et al., (2017) for liking and competition. Researchers also found a nonsignificant correlation between predicted learning-orientation and learning-orientation levels with  $r(71) = .15, p = .20$ . A nonsignificant correlation was similarly found between predicted grade-orientation and actual grade-orientation levels with  $r(71) = -.01, p = .91$ . These results demonstrate that students have poor dyadic meta-accuracy of both academic orientations.

8:15 p.m.-8:30 p.m.

### **Emotion and Working Memory According to Approach-Avoidance Motivation**

Amber Lowe

Faculty Advisor: Lonnie Yandell, Ph.D.

The present study expands the research by Storbeck and Watson (2014), which found that completing a verbal or spatial working memory task induced a mood change within participants (positive or negative, respectively) and a bias for stimuli congruent with their mood. I used an image pair selection task and incorporated measurements of the trait Behavioral Inhibition System/Behavioral Activation System. I hypothesized that participants who performed a verbal working memory task would be more likely than those who performed a spatial working memory task to choose the positive images as going together. Furthermore, measures of trait BIS-BAS sensitivity were recorded for the purpose of exploring the relationship, if any, that exists between BIS-BAS sensitivity, mood induction, and bias for emotional stimuli. It is hypothesized that participants in the spatial task condition and who show high BIS/low BAS scores will report a more negative mood compared to other participants. Approximately 40 participants completed a BIS-BAS sensitivity scale, performed an N-back tasking using letter stimuli (Jaeggi, Studer-Luethi, Buschkuhl, Su, Jonides, and Perrig, 2010) or the Spatial Delayed Response Task (Hershey, Craft, Glauser, and Hale, 1998), completed an online image pair selection task, and completed the Brief Mood Introspection Scale. Results are expected to show a significant difference in image preference and mood between the verbal and spatial groups, with the verbal group preferring positive image pairs and reporting a more positive mood. The results of this study have implications for how we understand the relationship between emotion and working memory processes.

8:30 p.m.-8:45 p.m.

## **Changes in Self-efficacy after Ego Depletion Among Personality Types**

Krista Tice

Faculty Advisor: Lonnie Yandell, Ph.D.

Ego depletion, the idea that self-control relies on a limited supply of mental energy, has been shown to affect certain personalities more so than others (Sato, Donohoe, Weaver, & Hall, 2010). Motivation has seen to be an underlying factor which can boost limited mental resources (Molden et al., 2012; Mauraven & Slessareva, 2003; Chow, Lui, & Haut, 2015). Are self-motivators better at avoiding depletion? What about people who have a high belief in their ability to complete tasks, which is termed self-efficacy? My hypothesis was that self-efficacy would be reduced over repeated depletion tasks and that there would be a smaller difference in self-efficacy over a series of tasks for autonomous personalities who place their self-worth on their accomplishments than for sociotropic personalities who place their identities upon what other's think of their performance. Fifty undergraduate students from introductory courses in psychological science completed a six-minute depletion task followed by the Revised Personal Style Inventory (Robins et al., 1994). They then completed a revised Mathematics Self-Efficacy measure (Chow et al., 2015) and twenty-five two-digit math questions while the final presidential debate of 2017 was playing loudly on a projector in order to demand self-control. The Self-Efficacy scale and two-digit mathematics questions were repeated in order to record changes participants' belief in their abilities, and so that final math performance could be used to further explore whether the students had been depleted and by how much.