Oklahoma Research Day Abstracts

2019 Oklahoma Research Day

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15. Psychology

Southwestern Oklahoma State University

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KelseyGaskins

University of Central Oklahoma

Validation of Pupillometry as an Objective Measurement with the use of Virtual Reality

Pupillometry is the study of the psychophysical state an individual may be in before and after a stimulus has been presented (Laeng, 2012). With the rise in new types of technology, virtual reality is being used to determine whether pupil dilation is an accurate measurement for autonomic activation. This coupled with the determination whether virtual reality plays a part in valence, will further support an existing theory that virtual reality increases the ecological validity in experimental settings. Participants will view multiple 360 – degree videos from multiple levels of intensity and valence in random order while their pupil dilation and constriction are being measured in real time. The researchers hypothesize that the higher the level of subjective intensity and unpleasant valence, the larger the pupil dilation will be. A headset that was created for game development is being used for the interesting software. In doing this, the researcher will be given the unique opportunity to measure pupil dilation while the participant takes part in a semi – realistic setting. This opens up new doors in the area of measurement for the field of Psychology. There is a possibility that a baseline reading can be created using pupillometry. By using the dataset from Gaskins and Rupp: Validation of Pupillometry as an Objective Measurement with the use of Virtual Reality (2018), a generalized baseline reading for autonomic activation may also be created.

SarahMarkland

Oklahoma State University

Honey Bee Shift Work in Comparison to Learning Behavior and Foraging Profiles

Apis mellifera, also known as the European honeybee, sometimes shows a bias toward specific colors of flowers. They can also have preferences for foraging at specific times of the day, i.e. morning or afternoon shifts. The question this research aimed to explore was whether or not a bee who was particular in choosing a shift, was also particular regarding decision making while foraging. Our hypotheses were that shift work would correlate with foraging behavioral patterns and that bees would react to a decrease in flower reward by choosing the more reliable color of flower. We set up two beehives and taught them to visit feeders of sucrose water. The bees were then marked with different colors specific to hive and time of day to observe the shift work behavior. Then, the marked bees were followed in order to observe their decision-making process when the reward of a particular color of flower, that had previously been experienced as consistent, was reduced while the other remained higher. We found that the bees fit into one of four categories of foraging behavior, which did not correlate with their shift work preference. We also noticed that the frequencies of morning bees and afternoon bees were not evenly distributed.

SephraScheuber

University of Central Oklahoma

Physiological and Emotional Reactions to Timbre in Voices and Instruments

Humans detect and react to characteristics of timbre in speech and instrumental sounds, but the relationship between emotions conveyed by non-verbal vocalizations and those conveyed by electric guitar sounds is unknown. It is predicted that listeners will have the same physiological and emotional responses to guitar sounds as they do to corresponding non-linguistic emotional speech sounds. It is also predicted that sounds with more complex timbre will result in higher complexity in EEG signals. These hypotheses will be explored by collection and analysis of EEG data of participants as they listen and respond to guitar and vocal sounds. These sounds will be analyzed and compared on certain characteristics of timbre. EEG data will be smoothed with Empirical Mode Decomposition (EMD) and analyzed for N400 ERPs. Alpha and beta waves will be extracted through a Wavelet Transform (WT), and then a Multifractal Detrended Fluctuation Analysis (MFDFA) will be completed for complexity analysis. An understanding of psychophysiological reactions of listeners between electric guitar sounds with timbral variations and non-verbal affective vocalizations has the potential to inform creative choices in entertainment communities about non-linguistic elements of human communication and has potential applications for health and wellness.

MadisonDay

University of Central Oklahoma

Determination of the Sexual Appeal of Age in Relationship to Dark Triad Personality Traits

The purpose of this study was to determine if a certain age group is seen as more sexually attractive to individuals with Dark Triad personality traits. Previous research has investigated women's attraction to "psychopaths"; however, there is a significant gap in the literature on what someone with the traits of Narcissism, Psychopathy, and Machiavellianism finds attractive. It is hypothesized that individuals with high scores on the Short Dark Triad 3 questionnaire will be more attracted to middle-aged (40-50) individuals. As supported by the Evolutionary Psychology theory of resource recognition and acquisition, middle-aged individuals may seem more appealing to high-scoring Dark Triad individuals as middle-aged individuals would have more resources acquired as well as a possible desire for companionship. This cost-benefit analysis on the part of the Dark Triad individual would make the middle-aged individuals more appealing than younger (20-30) or older (60-70) individuals. Participants will view a series of portrait-style photographs while the EyeTribe, an eye tracking device, measures their pupillary response. As the study is ongoing with very few participants at present, data has not yet been analyzed. Once we establish particular traits of attractiveness that appeal to high Dark Triad personalities, such demographics can be taught to recognize warning signs in a relationship with the potential to be unhealthy.

Mathematics and Science.Psychology.05

ElizabethDwyer

Northwestern State University

How Does Sleep Affect College Students' GPA?

Recent research has shown that the lack of sleep in college students has become a problem. College students have been recognized as one of the top populations that suffer from sleep-related problems (Buboltz, Brown, & Soper, 2001). Because of increasing difficulties with sleep, various areas of college students' lives are affected. In particular, research has shown that academics suffer from an insufficient amount of sleep. However, many college students may not even be aware of the fact that sleep or lack thereof, can affect their performance in the classroom (Gilbert & Weaver, 2010). The purpose of this study is to see the effect of sleep or lack thereof, on college students' grade point averages at a small Midwestern university. Other variables that likely factor into how well a student may sleep include stress at school, at work, student-athlete stressors, and stress in relationships. Other areas that may inhibit students from attaining the level of sleep necessary to succeed in the classroom may be due to, technology and daytime napping.

Mathematics and Science.Psychology.06

BlakeNesmith

University of Central Oklahoma

Can Mock Jurors be Primed Towards Guilt or Innocence by Initial Statements Prior to Evidence Evaluation?

This study will investigate how mock jurors select evidence when given a choice and whether their evaluation of evidence is influenced by an initial narrative. Participants will be randomly assigned to read one of three narratives designed to suggest guilt, innocence, or neutral stance towards a suspect. Participants will choose from six types of evidence (three eyewitnesses, three physical items), beginning with the most important and ending with the least important. Once an item of evidence is selected, participants will have four additional sub-evidence items to review (two suggesting guilt, two suggesting innocence). Participants will select sub-evidence from most to least important and rate each for guilt. Once each sub-evidence is rated, participants will return to the original six items and repeat the process for the remaining evidence until all six have been selected and all sub-evidence have been rated. Participants will make a confidence rating followed by a final guilty/not guilty verdict. It is predicted that participants primed with the guilt narrative will find the suspect guilty more than those primed with the innocent or neutral narrative; participants primed with the innocent narrative will find the suspect innocent more than those primed with the guilt or neutral narrative; and participants primed with the neutral narrative will find the suspect guilty more than those primed with the innocent narrative but less than those primed with the guilt narrative.

Mathematics and Science.Psychology.07

AshtonHood

Other

HuyenTran

University of Central Oklahoma

Assessing the Relationship Between Altruistic Behavior and Stress

Altruism is the motivation to intentionally help others at a cost to one's self. Some studies found a negative correlation between altruistic behavior and the stress response (stress is reduced when an individual performs altruistic acts), while others found out that high levels of stress can actually increase altruistic behavior. The objective of this experiment is to gain a more conclusive understanding of the relationship between altruistic behavior and stress. The hypothesis of the present study is that individuals who display more altruism will have lower cortisol levels than those who display more selfish behavior. I also predict that women will display more acts of altruism than males. Participants are 30 undergraduate students at the University of Central Oklahoma. The participants will provide a saliva sample to establish baseline cortisol levels. They will next play the Dictator game to measure their altruistic behavior. Saliva samples will also be obtained after the game. The saliva samples will be analyzed using an enzyme-linked immunosorbent assay (ELISA) test. Comparisons of the pre- and post-test samples will reveal changes in cortisol levels. Statistical analyses will reveal the relationship between altruistic behavior exhibited during the Dictator game and cortisol levels.

Mathematics and Science.Psychology.09

RuthEgbom

Southwestern Oklahoma State University

Obsessive Compulsive Spartanism (OCS)

Decluttering Marie Kondo-style where "less is more" can be a good thing. But what if it "hijacks" one's decluttering efforts? In her poster presentation, Ruth Egbom from Nigeria, will share her compare-contrast study on how Obsessive Compulsive Spartanism (OCS) can become a problem. In her poster presentation, Ruth hopes to address and raise her audience members' awareness on why some people can't bear the thought of "any stuff hanging around the house," or "decluttering their space", and whether there's any link between hoarding and compulsive discarding. The presenter will also discuss how ERP therapy may be a good choice for treating OCS.

Mathematics and Science.Psychology.10

AmbreChambers

University of Central Oklahoma

Individual Susceptibility to Violent Mob Activity

With the growing instances of civil unrest, it is important to understand what makes one more susceptible to performing violent acts that they would not normally perform. We will identify characteristics that can predict how participants will respond to emotionally-arousing vignettes in different social contexts, and correlate this to data from a self-report scale and the Big Five personality inventory. A biological measure of arousal will be used to assess physiological changes in the individual. The ability to identify the factors that predict a person's involvement in a mob will be useful in diffusing situations before they become violent.

Mathematics and Science.Psychology.11

RhiannonBahnmaier

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Representation and Careers of Women in the Videogame Industry

This essay examines the connections between the representation of women in videogames, and whether this impacts women's view of the videogame industry as a viable career possibility. There is a correlation between improved representation of women in videogames and having women work in the videogame industry, but that does not mean they are being employed in higher positions, such as game developers. Historically, women in the videogame industry only represented 30% of the work force, and only 3% of game developers were female. The research presented uses feminist methodology as a lens, and contains a historical overview of the field, as well as different psychology studies. Female representation and it's relationship between the videogame industry is a new field with little research done. This concept provides insight to a possible untapped market of women in the videogame industry, and has implications for psychology, gender, and the videogame industry itself.

Mathematics and Science.Psychology.12

Ruben RiosRios

University of Central Oklahoma

Effectiveness of Acceptance of Commitment Therapy on the Relationship Quality of Parents of Children with Autism Spectrum Disorder.

Acceptance and Commitment Therapy (ACT) is a popular treatment developed by Steven C. Hayes to help individuals overcome their obsessive and unwanted thoughts by teaching them to be aware of those and to engage in a replacement behavior. The current study looks at the effects of Acceptance and Commitment Therapy on 2 parents of children diagnosed with Autism (ASD). Two pairs of parents were included in this research. The parents received ACT training over the duration of 3 months. All of the parents showed a decrease in their engagement of negative and unwanted thoughts after implementing ACT techniques. Parents 2 and 3 did not engage in thoughts during the last week of treatment. While parents 1 and 4 were able to reduce the frequency of unwanted thoughts by at least 80% when compared to baseline. Acceptance and Commitment Therapy shows be an effective treatment for parents of children on the Autism Spectrum.

TheodoreMofle

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Action-Specific: Individual Perception of Task Difficulty

The action-specific hypothesis is that perception depends on interactions between the perceived features of the environment and the perception of one's abilities (Witt, 2011). For example, carrying a heavy load up steep incline can make a hill seem longer and steeper than if the load is lighter and a ledge looks higher when fear of heights is greater (Proffitt, 2006). Age may influence the perception of one's physical abilities such that being older may mean that loads seem heavier and distances further. Sixty participants helped test the action-specific hypothesis in relation to the perception of length and distance. They performed three action tasks. The first was estimating the distance to a target. Participants provided estimates of the distance from the target by moving laterally the same distance they perceived the cone to be. In the second task, they balanced a wooden dowel rod in the center of their palms. Then they estimated the length of the dowel by holding their hands apart the perceived length. In the third task, they verbally estimated the distance to a tennis ball from a chair where they sat holding a standard grabber-type reaching tool or no tool. Analysis of variance revealed age differences in mean estimated distance in the cone task and length in the dowel task. No age difference was observed in the tennis ball task, although there was a difference between the no tool and the reaching/grabbing tool conditions within the older group.

Mathematics and Science.Psychology.14

AngelaKnight, JefferyLiu

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A Woman's Perspectives on Death Analyzed Through Linguistics

Natural language use reflects an individual's mental state and contains indicators of their emotions. Linguistic analysis allowed us to examine women's language use to gain insight on occasionally subconscious thoughts or feelings regarding death. Death related concerns, for many individuals, are not frequently openly discussed or considered. Language use, when writing about death, reflects individual concerns about death. We performed an exploratory analysis of language usage in women when writing about their thoughts and feelings about death. We analyzed 20 documents written by women in 2019 regarding their thoughts and feelings of death using the Linguistic Inquiry and Word Count. This exploratory analysis allowed us to examine the words women chose to use when writing about death, and gain insight regarding their mental state about death. These findings may be applied to similar future research comparing male and female differences regarding death related concerns.

Mathematics and Science.Psychology.15

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Mathematics and Science.Psychology.15

BreannaWedde, J. AdamRandell

University of Central Oklahoma

Moral Foundations' Influence on Blame Attribution of Male Sexual Assault Victims

Graham and his colleagues (2009) found that conservatives and liberals use different sets of moral foundations when assessing everyday situations. Blame attribution has been linked to participant's beliefs in rape myths which are usually based on stereotypical gender roles, such as a male should be able to fight off an attacker (Davies, Gilston, & Rogers, 2012). Conservatives tend to hold more traditional values; thus, they may be more likely to blame sexual assault victims when the circumstances threaten those traditional gender roles. Participants answered a moral foundations questionnaire, read a vignette of a sexual assault in which the victim was male and varied in victim sexual orientation and perpetrator sex. Participants then answered questions that assessed the amount of blame they attributed to the victim. We found that when participants held high ingroup/loyalty foundations, they attributed more blame when the victim assaulted by a male perpetrator.

Mathematics and Science.Psychology.16

AlexandraCassidy, CaitlinParker, MirandaWoodard, JacksonEngland

Southwestern Oklahoma State University

Video game character selection and modification options

Overall males and females play video games in similar numbers (ESA, 2017). There are differences in the games and genres favored by each however (Yee, 2017a) with females being less likely to prefer shooter and sports games. The features of games that appeal to different gamers are relatively unexplored but Yee (2017b) reported that female gamers rated the availability of a female protagonist as a play option was very important in their game experience. We examined the representation of character selection and modification options in video games. The overall question was: What options are available for players in terms of gender and minority characteristics for players? Overall, character selection was less available in first person shooter games and more common among sports games. However for these games the character selection was mainly choosing from among male characters. Character modification options were more common among RPG and fantasy games.

Mathematics and Science.Psychology.17

AlexandraCassidy, CaitlinParker, JacksonEngland, MirandaWoodard

Southwestern Oklahoma State University

Gender representation on video game covers

Lynch et al (2016) reported that depictions of females in video games had improved over the last 30 years but that some genres such as first person shooter games primarily present portrayals of females as sexualized and secondary. In the present study we attempted a comprehensive content analysis of video games released in the US in 2017. Video game covers were examined as this is typically the first image seen of a game and the primary focal point in a retail setting. Approximately 350 video games were identified. Each cover was coded for the presence and number of characters (human, non-human), gender of each character, and primary or secondary status of the character. Females were present on significantly fewer covers (approximately 30%) compared to about 50% for males. However, males were not more likely to be portrayed as primary characters (30% vs 26%). Females were not more likely to be secondary characters (15% vs 13%).

AlexandraCassidy, JacksonEngland, MirandaWoodard

Southwestern Oklahoma State University

Predicting the creation of video game characters for males and females

Males and females play video games in similar numbers (ESA, 2017). There are differences in the games and genres favored by each however (Yee, 2017a) with females being less likely to prefer shooter and sports games and to prefer fantasy games. The reasons for this disparity are not well understood. One possibility is the greater flexibility in character selection and creation for some genres may be a factor. On average male preferred genres are known for presenting females in a sexualized manner for example (Lynch et al., 2017). We examined the characters female and male players created when given information about the genre of the game they would play (e.g., fantasy, first person shooter) and details about the setting of the game (e.g., winter). Participants used a character creation program that permitted modification of body characteristics, selection and modification of clothing, and selection of accessories (e.g., weapons).

Mathematics and Science.Psychology.19

DaelynBernard, LaylaRich

University of Central Oklahoma

The Effectiveness of Biased Questions on Students' Attitudes Toward the ROTC

In a culture of advertising and persuasion, research into the power of words has become more relevant. Our experiment attempts to establish the extent to which biased questions influence the attitudes of students toward the military and the Reserve Officers' Training Corps (ROTC) in particular. As a second objective, if participants who received the biased questionnaire report a higher opinion of the ROTC, would that attitude be enough to motivate them to action? The aim of this study is to determine if participants presented with a questionnaire that has biased phrasing and word choice will report a more favorable attitude toward the campus Reserve Officers' Training Corps (ROTC) than participants presented with the same questionnaire that has neutral word choice. Participants who begin to leave the laboratory after completing the questionnaire will be presented with a display of ROTC pamphlets. A record will be kept of how many students from each group take a pamphlet. Results are preliminary at this time, but the prediction is that participants in the biased questionnaire group will report a higher opinion of the ROTC than those with the neutral questionnaire. However, the experimental group is not expected to be motivated to take more pamphlets than the control group.

Mathematics and Science.Psychology.20

ZacharyWalling

University of Central Oklahoma

Adverse childhood experience as a predictive factor of atypical sexual behavior.

Mathematics and Science.Psychology.21

AshtonHood, KallieSmith

Other

Behavioral and Cognitive Effects of the College Experience on Students' Wellbeing

Post-secondary students face a unique set of living conditions that can exacerbate stress levels as well as provide the opportunity for social and academic betterment. We conducted a qualitative study to determine what effects higher education have on students, particularly as it pertains to the concept of intimacy vs. isolation. Participants were taken into a private room and interviewed using a qualitative survey and an oral assessment to determine how the role of being a student has impacted their overall health mentally, physically and spiritually and emotionally. Students were questioned specifically about how they felt regarding their college experience thus far and asked to detail the specific positive and negative aspects of college life and any changes that it had caused for them (i.e. weight gain or loss, increased stress, social development, etc.) To ensure validity, researchers kept the data anonymous and individually analyzed all of the data, creating a system of checks and balances. Through thematic analysis, we found that college life can cause an increase of stress and emotional distress if the student lacks a solid support system and has experienced difficulties adjusting. This is vital information for institutions and can be used to improve or create programs dedicated to helping students transition into college.

Mathematics and Science.Psychology.22

MickieVanhoy

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Racial Bias In Police-Civilian Interactions

Examples of police use of force against African-Americans is widely distributed across standard media and media. Attitudes about these interactions are decidedly mixed. The current study was designed to examine the perceptions of the local populace in a response time task. If media reports and scholarly literature are generalize locally, then we may expect that people who are not African-American to be more tolerant of the use of force against African-American, viewing it as more justifiable under the circumstances. We may also expect the opposite result from African-American people who view the same interactions.

A computerized task presented via PsyToolKit will present participants with photographs of police interactions with African-Americans and Caucasians in the same scenarios including ordinary activities like getting out of a car or standing in front of a shop. Participants will also see confrontational interactions like traffic stops, pat-downs, and heated verbal exchanges. Participants will indicate how much of a threat to the officer the civilian seems to be and how likely they are to be armed. The results will be analyzed with an analysis of variance on the choice response times.

Mathematics and Science.Psychology.23

justindurham

University of Central Oklahoma

Replicating Threat-Avoidance Bias Toward Arab/Muslim Targets

Previous research of the shooter bias effect focused on Black versus White male targets, with unarmed Blacks mistakenly shot more often than Whites (Greenwald, Oakes, & Hoffman, 2003; Payne, 2001). Although the shooter bias is considered a robust phenomenon, most of the research has focused exclusively on Black versus White targets. This raises the question of whether this effect can be found using targets of other threat-related groups. If the shooter bias is indeed driven by threat-related schemas, results should find a similar bias when using other ethnic targets and objects. Limited research indicates both Black and other ethnic minorities, such as Arab-Muslim males (Fleming, Bandy, & Kimble, 2010), are stereotypically associated with violence and avoidance more than Whites and Asians (Sadler et al., 2012). Recent research has replicated the original shooter bias effect using Arab-Muslim targets and knives in a European population (Essien et al., 2017). The present research tests whether the shooter bias is generalizable to Arab-Muslim targets, and whether this bias is evident when using knives compared to firearms. It was hypothesized that participants will perform significantly more accurate and commit more errors when primed with Black and Arab/Muslim targets compared to White targets. Data will be analyzed using repeated measures ANOVA and signal detection measures to test shooter and avoidance bias towards Arab/Muslim, Black, and White targets.

Mathematics and Science.Psychology.24

TarynWagner

Randall University

Do We Really Think for Ourselves?: A Naturalistic Research Experiment in Conformity and Heuristic-Based Thinking

This experiment is a variation of Asch's (1970) Line Study. Because human beings are innately social, we have the propensity to alter our way of thinking to match others'. Two alternative theoretical explanations—our tendency to conform in social situations and our brain's tendency to resort to heuristics—may explain this phenomenon. In order to test these theories, I adopted a naturalistic approach. The experimenter posed a simple mathematic equation in multiple naturalistic social settings with a confederate nearby. The experimenter would answer her own question with an incorrect answer, and the confederate would confirm that answer, thereby creating an environment conducive to conformity. If a participant contradicted the experimenter, the experimenter and the confederate would argue in favor of the incorrect answer. The experimenter's hypothesis is as follows: when a participant is provided an incorrect answer to a simple mathematic equation, he or she will accept that answer either due to heuristic-based thinking or because of mankind's tendency to conform in social situations. Participants' responses were categorized as heuristic-based thinking or as conformity largely because of their latency (or lack thereof). While the resulting data indicate that the hypothesis was incorrect for the majority of participants, 36% of participants used heuristics and 43% considered conforming when put under pressure by the confederate and