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## **Abstracts from the 2013 Oklahoma Research Day**

**Held at the University of Central Oklahoma**

### **05. Mathematics and Science**

#### **17. Psychology**

##### **05.17.01 Heterosexism: Can It Predict Homosexual Discrimination in Adoption?**

**Evelyn Stratmoen, Thomas Hancock,**

*University of Central Oklahoma*

According to the U.S. Census Bureau, 24% of homes are a traditional family, and 165,000 children are waiting to be adopted. Adoption agencies report that 25% of rejections are due to the sexual orientation of the couple. Previous research has indicated that a child is not harmed when raised by same-sex parents. Perhaps the persistence of these rejections is due to heterosexism. A significant aspect of heterosexism is in the compliance of strict gender roles, the enforcement of traditional family structures, and granting special privileges and rights to heterosexuals over lesbians and gay men. Hence, it might be the heterosexist beliefs of adoption professionals that are a hindrance to same-sex couples in the adoption process. It is our hypothesis that the level of heterosexism would affect the number of rejections to a same-sex couple, regardless of the household income. Four different adoption scenarios were developed for the study. The scenarios differed only by income and gender of the couples. Participants were asked whether they would accept or reject the adoption, confidence level in the decision, and to provide explanation. They took the Attitudes Towards Lesbians and Gays (ATLG; Herek, 1988), a 20-item scale that is designed to measure the level of heterosexism. The results showed that 92% of the participants accepted the adoption. Analyses on individual groups as well as content analyses on the themes of the explanations will be displayed, as well as reference

## **05.17.02 The Relationship Between Digit Ratio and Interhemispheric Transfer Time**

**Wilmon Brown III, Rachel Messer, Shelia Kennison,**

*Oklahoma State University*

The research investigated whether prenatal exposure to androgens (as assessed by digit ratio, McIntyre, 2006) would be related to how quickly information is transferred between the hemispheres of the brain. In the present study, we assessed prenatal exposure to androgens using measurements of digit ratio (Manning et al, 1998) and assessed interhemispheric transfer time using Savage and Thomas' (1993) interhemispheric transfer manual reaction time task. The participants in the study were 31 students enrolled in courses at Oklahoma State University. Participants completed the IHTT task (Savage & Thomas, 1993). Later, the lengths of their fingers on each hand were measured using a digital caliper. According to the data that was collected, the IHTT is related to digit ratio on the right hand for both men and women, but in opposite directions. For women, smaller digit ratio on the right hand is related to longer IHTT ( $r=-.496$ ,  $p=.05$ ). For men, smaller digit ratio on the right hand is related to shorter IHTT ( $r=+.659$ ,  $p=.03$ ). The results supported the hypothesis that digit ratio would be related to IHTT. They further indicated that the relationship differed for men and women. Prenatal exposure to androgen appears to slow IHTT for women but facilitate it for men. The relationship between digit ratio and IHTT has future implications that digit ratio may be an external physiological indicator of other cognitive processes, such as learning.

## **05.17.03 Correlating Effects of Conformity: Egoism and Prosocial Behaviors**

**Amber McCoy,**

*University of Central Oklahoma*

Conformity is the actions in which individuals behave or interact within a group (Baron, 1973). This set of experiments is a modification of Asch's conformity studies (Jacobson, 2011). This study involved examining the interaction between genders to see the effect on individual conformity. The experiment identified key attributes that an individual conforms to and identified what causes individuals to adapt to gender in their discourse community. This experiment exposed how gender plays a prime role in conformity. The study examined the role of gender in conformity, showing that participants conformed to males regardless of ethnicity ( $p < .05$ ). Additionally, it is demonstrated that, regardless of the participant's gender, individuals conformed to the males ( $p < .05$ ). This study is important because it identified what individuals will more likely conform to. The results of this study relate to egoism and prosocial behaviors by how individuals conform. Keywords: gender roles, conformity, egoism, altruism, ethnicity

#### **05.17.04 Self, Give Me Strength: The Rise of Self-Esteem Following Child Mortality Salience**

**Jenel Cavazos, Christopher Ditzfeld,**

*Cameron University*

Proponents of Terror Management Theory (TMT) posit that one of the basic functions of self-esteem is to provide a coping mechanism whereby individuals exaggerate their positive self-views in order to manage the threat of death. The current study examines whether this adaptive function will extend to gene-perseverance as well. We predicted that self-esteem would be symmetrically heightened in parents who imagined the death of their child and those who imagined their own death. One-hundred ten parents with at least one biological child completed measures including a traditional self or adapted child mortality salience manipulation (or control), a self-esteem scale, and a number of other questionnaire measures. A Target (child, self) x Manipulation (MS, control) ANOVA showed that self-esteem was higher after mortality salience than after dental pain across both child and self conditions. Additionally, self-esteem was significantly higher after imagining the death of a child than after imagining the child experiencing dental pain. These data demonstrate that the bolstering of self-esteem to protect the self from the threat of one's own morality extends to the threat of losing one's offspring. When nature reminds us that life can be unjust (e.g., a parent should not outlive a child), people may react by increasing their reliance on self, to which they may feel the power to control. As such, the self can persevere even under the most psychologically painful of circumsta

#### **05.17.05 Oxytocin as a Mitigator of Aggression**

**Stephanie Menotti, Amelia Brewer, Lindsey Osterman,**

*University of Central Oklahoma*

This study explored the effects of oxytocin on aggression and examined whether increased oxytocin levels lowered aggression. The hypothesis for the current study is that participants who receive an oxytocin stimulus will show less aggression in scores on a partner rating task than the participants who did not receive the oxytocin stimulus. Furthermore, it is hypothesized that the participants in the oxytocin groups will have a lower ratio on a word completion task which measures the cognitive accessibility of aggressive concepts. Participants completed a task that induced frustration and then completed a word completion task that showed cognitive preparedness for aggression and a partner rating task which measured aggression. Each participant viewed a video prior to or following the aggression task. The video either raised oxytocin or was neutral, depending on the condition the participant was in. Results for the study showed a trend for the word completion task in predicting a lower cognitive assessment of aggressive concepts. Due to this trend, the hypothesis that oxytocin will lower aggression is partly supported.

## **05.17.06 Sibling Attachment, Parental Attachment, and Perceived Differential Treatment**

**Tiffany Russell, Alicia Limke,**

*University of Central Oklahoma*

Sibling relationships may be one of the longest lasting in peoples' lives; yet, there is little research applying attachment theory to adult siblings. This correlational study investigated the relationship between sibling attachment and parental attachment, in addition to considering the effect of perceived parental differential treatment (PDT) on adult siblings' attachment to each other. It was predicted that attachment would predict current sibling relationships and perceived PDT, such that participants reporting high levels of perceived PDT will report insecure attachments as well as low-quality sibling relationships. Participants completed four forced-choice questionnaires online, which measured their attachment security and perceived PDT. Attachment avoidance and attachment anxiety towards siblings predicted perceived differential maternal and paternal affection, such that as attachment avoidance and anxiety towards siblings increased, participants felt less favored by their parents. Attachment anxiety (but not avoidance) predicted perceived differential maternal discipline, such that as attachment anxiety towards siblings increased, participants felt less overly-disciplined by their mothers. Additionally, attachment avoidance (but not anxiety) predicted perceived differential paternal discipline, such that as attachment avoidance towards siblings increased, participants felt less overly-disciplined by their fathers.

## **05.17.07 Personality Correlates of False Confessions**

**Kathryn Schrantz,**

*University of Central Oklahoma*

The goal of the current study was to examine the association between self-esteem, dissociative experiences, need to belong, self-monitoring, social desirability, and the probability of false confessions. In the current study, 40 undergraduate students completed personality measures and Kassin and Kiechel's (1996) computer crash paradigm. Researchers coded both whether or not a confession was offered following the crash (false confession) as well as whether participants explained their fault to a confederate following the study (internalization). It was predicted that low self-esteem, unstable self-esteem, high dissociative experiences, and high need to belong would predict providing a false confession and subsequent internalization of that confession. Furthermore, it was predicted that high self-monitoring and high social desirability would predict providing a false confession but not internalization of that confession. These hypotheses were only partially supported. Need to belong was a significant predictor of false confessions. No other significant predictors were found.

## **05.17.08 Demographic Differences in Employee Perceptions of Performance Based Evaluations: A Qualitative Analysis**

**Brandon Pickens, Robert Mather,**

*University of Central Oklahoma*

The research project seeks to discover if the gender, race, and age of a supervisor/manager has an impact or influence on the perceived value of a performance evaluation/appraisal. Data for this project will be collected through a confidential qualitative questionnaire on faculty and staff at the University of Central Oklahoma. It is expected that age and race will have the most impact on the judgments the individuals give in response to the questions asked. Age and race are the most controversial when it comes to demographics, but attention will be given to other demographics as well. This study is important because it has the ability to provide insight into an individual's perception regarding how to deal with people as it relates to work performance in a world where dealing with different ages, races and genders are a norm.

## **05.17.09 The Role of Extracurricular Activities on Sexual Behavior**

**Beau Leaf,**

*University of Central Oklahoma*

I have proposed that individuals who have participated in or are currently participating in an athletic extracurricular activity any time during their lives may experience a higher prevalence of sexual contact and/or engage in risky sexual activity versus those who are or have participated in a non-athletic extracurricular activity. An Extracurricular activity is defined as an educational activity not falling within the scope of the regular curriculum, i.e. music lessons, any sport, art, acting, academic organizations. Past research shows that among sexually active college students, males reported a higher prevalence of unprotected sex and multiple sex partners than females and both males and females report elevated sexual risk taking. Research in male athletes has shown that there is an increase in testosterone levels while participating in the sport, watching the sport, or by being in an athletic environment, i.e. gym, locker room. Sexual behavior research began in the 1930's by Dr. Alfred Kinsey. From his extensive research, there were two profound publishings: *Sexual Behavior in the Human Male* and *Sexual Behavior in the Human Female*. After publication of these books, both venereal disease reduction and an elevated level of sexual satisfaction among married people occurred. The study of sexual behavior in human beings is imperative in that with what is discovered and understood can be published and used to educate the public. This education could assist in th

## **05.17.10 Using Linguistic Analysis to Understand Transition to College Experiences**

**Mary Dzindolet, Jeff Seger, Lana Lucas,**

*Cameron University*

Understanding students' transition to college may be useful in increasing retention and graduation rates. The usefulness of linguistic analysis (specifically, the Linguistic Inquiry and Word Count, LIWC) in identifying students who feel high school prepared them for college and those who wish to continue on to graduate school was examined. About 50 Cameron University students enrolled in General Psychology completed a survey and a face-to-face interview concerning their transition to college and their career goals. The transcripts from the interview were submitted to the LIWC. Students who reported that their high school prepared them well for college used more personal pronouns (e.g., I, you, he, she, we, they) than those who reported their high school did not prepare them for college,  $M$ -prepared = 12.90,  $M$ -not prepared = 11.89. In addition, the older the student, the more words,  $r(47) = .33$ ,  $p < .03$ , and articles,  $r(47) = .30$ ,  $p < .04$ , the student used. Older students were more likely to report that their high school did not prepare them for college,  $M$ -prepared = 21.78 years,  $M$ -not prepared = 27.20 years. Implications for retention are discussed.

## **05.17.11 Pre-Recorded Power Statement Usage on Collegiate Male Hockey Athletes**

**Beau Leaf,**

*University of Central Oklahoma*

Athletes during sport performance encounter stress levels which affect performance outcome. Pre-performance rituals and/or practices vary amongst individual athletes and assist the athlete with their ability to focus during performance. The athletes involved in the current study were members of a team which is a competitive performance club league in the American Collegiate Hockey Association (ACHA). A recording consisting of 40 hockey specific power statements was randomly assigned to 10 members of the team by an independent source and the other 10 members received a recording asking the athlete to continue on their normal pre-practice routine. The athletes were advised to listen to the recording directly before the practice and then were observed. Data was collected on the pass completion/incompletion and goal completion/incompletion pre-treatment on a separate occasion and data collection was repeated after treatment was applied. It was predicted that the completion of goals and passes would increase in those athletes receiving treatment and the results in the athletes not treated would remain the same as in the pre-treated results. Results of the data collected show a significant relationship to the intended result in passing completion and a positive trend in goal completion in the athletes who received the treatment. Results of the athletes not receiving treatment were the same as the intended result, an acute deviation from pre-treatment statistics.

## **05.17.12 The Relationship between the Big 5 Personality Factors, Locus of Control, and Political Ideology**

**Antonio Laverghetta, John Geiger,**

*Cameron University*

This study investigated the relationship between personality traits (using the Big Five Inventory), locus of control (using the Rotter scale), and measures of political ideology (using the Social Attitudes Statements scale, SAS-2). Research has shown that the personality trait of openness to experience was negatively correlated with political conservatism using the right wing authoritarianism (RWA) scale as the conservative measure (Peterson et al., 1997). However, there is ongoing debate regarding the nature of political conservatism. Authoritarianism might not be synonymous with conservative beliefs (Crowson, Thoma, & Hestevold, 2005). This calls into question research studies that make the theoretical assumption that political conservatism has components of fascism and/or authoritarianism (e.g. Altemeyer, 1998). We hypothesized that conservative political ideology would be associated with an internal locus of control, while liberal political ideology would be associated an external locus of control. We administered a questionnaire including a brief demographics survey, SAS-2, the BFI, and the Rotter's Locus of Control scale to a sample of college students attending Cameron University. Results found a positive correlation between political liberalism and external locus of control. We also found that openness to experience was unrelated to conservatism, while agreeableness was correlated with conservatism.

## **05.17.13 On the Structure of Measurement Noise in Eye-Tracking with Ambiguous Figures**

**Trey Ridlen, Mickie Vanhoy, Yaser Dorri,**

*University of Central Oklahoma*

Recent and past research has discovered fractal structures within human eye movements (Aks & Sprott, 2003; Aks, Zelinsky, & Sprott, 2002; Stephen & Mirman, 2010; Stephen, Mirman, Magnuson, & Dixon, 2009). However, until recently no research has investigated how the eye-tracking instrument might affect the accuracy of the measurement of eye-tracking variability (Coey, Wallot, Richardson, & Orden, 2012). The results of the study revealed that the structure variability from a fake eye to a real human, displaying that real human eyes have self-similar properties (multifractal structures), whereas fake eyes have random variability (monofractal structures). Fractal patterns are shown in the strong relationship between power ( $P$ ) and frequency ( $f$ ) of observed variation in a time-series of measurements. The pattern of variability in the behavior is self-similar and scale-invariant; displaying that large-scale changes occur in relative frequency to small-scale changes. The degree which a dataset approximates the ideal relationship between power and frequency is summarized in the scaling exponent,  $\alpha$ . Random fluctuations (i.e. white noise) those associated with the measurement of fake eyes, produce a flat line on the spectral plot. The study proposed is an extension of Coey, et al., 2012 and will show how measurement can affect the measuring of variability of within eye movements, when those measurements are applied with the same data averaging to ambiguous figures.



## **05.17.14 The Role of Working Memory in Situation Model Construction**

**John Geiger, Sarah Dailey,**

*Cameron University*

During reading people form a situation model of the events and layout described in the text, which contains both textual information and inferences made by the reader. The style of the text they read often affects how these models are formed (Perrig & Kintsch, 1985; Taylor & Tversky, 1992). These situation models are formed in working memory, so the present study investigated how tying up either Verbal WM or Visuospatial WM affected the model. 141 participants read a route or survey version of a text describing a small town. During reading participants performed either a verbal or spatial secondary task. After reading participants answered 24 true/false questions about the text and drew a map of the town from memory. A 2(Story) x 2(Task) x 2(Question type) x 2(Question version) ANOVA with repeated measures on the last two factors found that locative questions were answered more accurately than inference ones. A Question type x Question version x Story interaction found that when participants read the route version of the text, locative-route questions were answered more accurately than inference-route questions, but there was no difference between locative-survey and inference-survey questions. The opposite was true when participants read a survey text. This finding supported previous findings (Geiger & Millis, 2004) that elaboration and effort during reading leads to increased memory. A 2 (Story) x 2 (Task) ANOVA for the map drawing data was not significant.

## **05.17.15 Genocide Decoded: A History Lesson to Raise Awareness**

**Carrie Sanchez,**

*Northeastern State University*

Throughout the ages mass pillaging, rape, and murder has plagued the world. A recent study (CLG, 2013), examines the approaches of studying genocide. Another researcher (Gale, 2005) raises challenges in understanding genocide, and the implications in the dangers of coining acts of violence as genocide. Based on these findings, "Genocide Decoded: A History Lesson to Raise Awareness," will take an in-depth look into the momentum of genocide and the incitement in international law. This poster will discuss the stages of genocide, historical timelines and comparisons of genocide, and recommended actions individuals can take to help end genocide worldwide.

## **05.17.16 Participation in Extracurricular Activities and Alcohol Use Throughout the Lifespan**

**Hunter Holder,**

*University of Central Oklahoma*

The study will investigate how alcohol use patterns in adulthood vary among people that participated in various types of extra-curricular activities (i.e., academics, athletics, and fine arts) during high school. This study will use data from Add Health, a 14 year-long longitudinal study using a nationally representative sample of over 16000 adolescents focusing on their physical and psychological health. Previous research has shown that both participation in extra-curricular activities and peer-influence can affect alcohol use and abuse during adolescence (Borden, Donnermeyer, & Scheer, 2001). Research has also shown that age of onset of alcohol use affects life-long alcohol abuse and dependence (Grant & Dawson, 1997). This study is an attempt to build upon these known relationships by determining if these differences in high school persist into adulthood by looking at alcohol use in the fourth wave of Add Health during which participants were in their early 30's. This information will help school districts, community organizations, and their administrators develop and implement more focused primary prevention programs aimed at reducing risky alcohol use among adolescents. These types of programs are important because they can prevent long-term alcohol abuse or dependence problems that stem from adolescent alcohol use, and instill safe and responsible alcohol use habits that could persist into adulthood.

## **05.17.17 Self-control, displaced aggression and power: Impacts for workplace performance?**

**Shari Beecher,**

*University of Central Oklahoma*

Recent research has looked at the relationship between self-control and direct aggression involving strangers and intimate partners (DeWall, Finkel & Denson, 2011). Findings show that depletion of self-control should not directly increase aggressive behaviors, but this depletion limits an individual's ability to override the aggressive urge. The 'fight' or 'flight' responses of the sympathetic nervous system are engaged during an aggressive threat and research suggests that those high in displaced aggression have an activated 'flight' system (Denson, Petersen & Miller, 2006). If those with high-displaced aggression are likely to engage in 'flight' they may be likely to run or feel a lack of power to control the situation. Power has been shown in a performance setting, to eliminate the depletion of self-control effect and task performance was unaffected (DeWall, Baumeister, Mead & Vohs, 2011). With sufficient motivation, individuals can perform well even if they are depleted of self-control (Muraven & Slessareva, 2003) and power may be a source of this motivation. It is also predicted that those primed with power will write more words as compared to those not primed with power. Those with the perception of more power do not show a lack in performance and performance of the evaluation task may likely have more words as power is suggested to stimulate generalized executive functioning (DeWall, Baumeister, Mead & Vohs,

## **05.17.18 Characteristics of Successful Grant Proposals: Findings and Recommendations**

**Kathryn Schoonover, Arizona Chin,**

*Northeastern State University*

Objective: The objective of this research was to determine attributes of grant proposals and principal investigators that contribute to success in acquiring extramural funding. Methods: We examined archival data in the form of grant proposals that had been successfully awarded and those that were not funded. After examination, we compiled a list of characteristics that distinguished effective proposal development. Results and Conclusion: Findings indicated that successful grant proposals are well organized, carefully constructed with adherence to funder guidelines, and clearly compliant with institutional policy. Proposals that were not funded showed evidence of disorganization and disregard for timely preparation and submission for institutional review. Realistic expectations, understanding of fundability of projects, and experience or training in proposal development appeared lacking among principal investigators-writers of these proposals. One of the implications of these findings is need for emphasis on principal investigator professionalism. We propose training for principal investigators to encourage demonstration of excellent skill in organization, familiarity with their project or program, understanding of the funding source, knowledge of institutional assistance, and compliance with guidelines.

## **05.17.19 Rebound Effect for Stereotypes Involving Formerly-Convicted Criminals**

**Sean McMillan,**

*University of Central Oklahoma*

This study is a replication of Macrae et al. (1994). They found a rebound effect, which is when a suppressed thought becomes more frequent than it was before suppression. They found this effect by priming the concept of a skinhead. The purpose of this study is to determine if there will be a rebound effect after priming a violent convict concept. Additionally, if there is a rebound effect, does the picture's ethnicity (Black or White) influence it? It is hypothesized that there will be a rebound effect, and that the effect will be stronger when the photo's ethnicity is Black. Participants will view a picture of someone they are told is a formerly convicted criminal. They will then write a day in the life of the convict. Participants will be told that they will interact with the convict from the picture. They will then be led to a room that has one row of seven chairs. The middle chair will have a jacket on it, and participants will be told that it belongs to the former convict. They will be asked to choose a seat and wait for the person to return. The excuse given for the person's absence will be that he must have gone to the bathroom. The experiment will end once they have chosen their seat, as this will give a measure of social distance from the former convict (a rebound effect). This project is currently awaiting IRB approval, and data collection will begin as soon as approval is received.

## **05.17.20 Affective Neuroscience: A Perspective on Psychopathology**

**Heather Coleman,**

*Northeastern State University*

The interdisciplinary field of Affective neuroscience investigates the neural mechanisms of emotion. The integration of the psychological and biological perspective has provided a greater understanding of psychological processes; in particular mental illness. This poster will provide an overview of this emerging field including theoretical approaches, meta-analysis conducted to date, and current methodology of investigation. Also, the contribution of Affective neuroscience research in understanding psychopathology and implications for future study will be discussed. The role of emotion regulation within a psychopathology framework will be emphasized.

## **05.17.21 Facial Perception and the Human Neural System**

**Alyssa Hendrex,**

*Northeastern State University*

The face takes a fundamental role in the human social interaction. It provides clues about a person's characteristics such as age, race, emotion and gender. Investigators utilize a variety of methods to examine how humans perceive faces, from behavioral measures to neuroimage techniques. Empirical studies suggest that faces are processed differently than non-face objects. In addition, recent studies suggest that faces are processed in the brain differently based on the observers age, mental health, gender and familiarity of the faces presented. The proposed poster will present popular methods utilized in face research and discuss findings of recent and past studies. Emphasis will be placed on neural processes involved in facial perception, including social aspects of face processing.