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Abstracts from the 2008 Mary Lou Fulton Mentored Research Conference

The Annual Mary Lou Fulton Mentored Research Conference is a full day event designed to showcase mentored student learning. It is an opportunity for students to present and explain their research to the public and their peers. The fourth annual conference took place on April 3, 2008, and students from all departments in the College of Family, Home, and Social Sciences were invited to participate. Abstracts of the presenting undergraduate psychology students are featured here in Intuition.

Affective Functioning in Pre- and Post-Surgical Patients With Medial Temporal Lobe Epilepsy and Good Seizure Outcome

J. Roper, H. B. Cleavinger, B. C. McDonald, J. D. Goldstein, B. C. Jobst, V. M. Thadani, P. D. Williamson, D. W. Roberts, and A. J. Saykin

Mentor: Howard Cleavinger

Abstract: This study examined affective functioning in patients who received surgery for intractable medial temporal lobe epilepsy. We hypothesized that patients who received surgery with decreased post-surgical seizure frequency would show affective improvement. The study showed a clinically significant improvement in affective functioning for patients with a good surgical outcome.

Pediatric Traumatic Brain Injury: The Entorhinal Cortex and Cognitive Outcomes

John A. K. Coburn and Howard B. Cleavinger:
Brigham Young University
Erin D. Bigler, Elisabeth A. Wilde, Jill V. Hunter,
Xiaoqi Li, and Harvey, S. Levin: Baylor College of
Medicine

Mentor: Howard Cleavinger

Abstract: Research has consistently demonstrated

volume loss in temporal lobe structures, including the hippocampus, following moderate-to-severe traumatic brain injury (TBI). However, the relationship between the entorhinal cortex (EC), a structure with direct hippocampal input, and volume changes following TBI has not been specifically examined in children. This study was conducted to investigate the role of EC volume loss as it relates to cognitive outcomes in children who have suffered TBI. Quantitative magnetic resonance image analysis was used to measure EC volumes in 16 children with TBI and 16 demographically matched controls. Other temporal lobe structures were also measured to examine volumetric relationships. Cognitive outcomes were also analyzed. EC volume was significantly reduced in children with TBI in relation to the control group, and strongly correlated with hippocampal volume. Children with TBI also showed a significant relationship between aspects of cognitive functioning and EC volume. As hypothesized, EC volume loss occurred following moderate-to-severe TBI. This was correlated with other temporal lobe structures and cognitive functioning.

Authoritative Influences on Self-Report Self-Esteem

Timothy Holt, Elizabeth Eagar, Tabitha Harper,
and Ashleigh Johnson

Mentor: Claudia Clayton

Abstract: We examined the influence of authoritative messages on self-reported self-esteem. A 30-item questionnaire measure of self-esteem was administered to three groups of subjects, consisting of college students from either the older or younger half of their family. One group received a questionnaire with a message stating that older siblings are more intelligent than younger siblings. Another group re-

ceived a message stating that younger siblings are more intelligent than older siblings. The last group received no message. Self-esteem scores were higher among subjects in the younger half of their families than subjects who were in the older half of their families. It is suggested that younger children generally have higher levels of self-esteem than older children.

The Effects of Informational Conformity on Long-Term Memory

Josh Cazier, Chelsey Campbell, Brian Blewitt, and Billy Chaplin

Mentor: Claudia Clayton

Abstract: Past research has stressed the need for accurate memory recollection of important information, such as eyewitness testimonies (Paterson & Kemp, 2006; Wright, et al., 2000). Our experiment tested the influence of informational conformity on long-term memory. We hypothesized that subjects who were exposed to informational conformity would be more likely to have an actual change in their long-term memory than subjects who were not exposed to informational conformity. Subjects viewed a picture for sixty seconds and then completed a quiz regarding the picture. Experimental subjects received a fabricated set of results while control subjects did not. Subjects completed the same quiz a week later. However, due to confounding variables, the results did not support our hypothesis.

Substance Dependence and Psychiatric Disorders Do Not Influence ICU Outcomes

Callie J. Beck, Ramona O. Hopkins, PhD, Colin W. Key, MS, Mary R. Suchyta, DO, and Al Jephson, BS

Mentor: Ramona O. Hopkins, PhD

Abstract: Alcohol use and dependence disorders are associated with chronic health problems and cost more than \$184 billion United States dollars per year. The contribution of drug dependence, alcohol dependence, and psychiatric disorders on patient recovery and morbidity following critical illness is unknown. We compared mor-

tality and discharge disposition in patients with and without substance dependence and in patients with and without psychiatric disorders. We reviewed medical records of all patients admitted to the LDS Hospital Shock Trauma and Respiratory intensive care unit (STRICU) between July 1, 2003 and June 30, 2004. A preexisting diagnosis of alcohol dependence, drug dependence or psychiatric disorder was confirmed if: 1) the pre-existing disorder was reported on the admitting history and physical note; 2) the disorder was reported in a previous record; 3) or the pre-existing disorder was reported in a psychiatric or social worker note. Preexisting substance dependence occurred in 137 (19%) patients. Of the 137 patients, detectable ethanol levels were found in 40 patients with a mean ethanol level of 82.4 ± 113 mg/dL. The overall prevalence of psychiatric disorders in our ICU population was 19% (137 patients), including 14% with depression, 4% anxiety, 2% bipolar disorder, and <1% of patients with schizophrenia or post-traumatic stress disorder. Patients with substance dependence were younger, more likely to be male, have an admission diagnosis of trauma or drug overdose, a shorter hospital length of stay, and lower incidence of ARDS and comorbid illnesses. Patients with psychiatric disorders were more likely to be female and have comorbid illnesses and drug overdose as an admission diagnosis. We found no difference in mortality or discharge disposition for patients with or without substance dependence or with or without psychiatric disorders, except for patients with psychiatric disorders being discharged to psychiatric units.

Reducing Error: Averaging Data to Determine Factor Structure of the QMPR

Shea Gibbons, Robert Bubb, BS, and Bruce Brown, PhD

Mentor: Bruce Brown

Abstract: Human subject data in psychological research often contain a high level of unexplained error. Factor analytic data are no exception. Factor loading instability is common in single administration factor analytic research with high levels of error. Such instability accounts for little variance in the data and results in poor interpretation of the factor pattern. However, Monte Carlo simu-

lations have shown that averaging data across multiple administrations reduces unexplained error, resulting in increased explained variance and stable factor patterns. In the present study, the Questionnaire for the Measurement of Psychological Reactance (QMPR) was administered to participants multiple times over a three-week period. The data were then averaged and analyzed using principle-components factor analysis with varimax rotation. Factor stability was measured using the Tucker, Koopman, and Linn (1969) coefficient of congruence. The results of the study demonstrated a notable increase in explained variance and factor-pattern stability and support previous Monte Carlo simulation findings. Averaging data from multiple administrations is advocated to reduce unexplained error in human subject data.

Narcissism and Aggression in Sports

Adam Anderson, Anne Ricks, Rob Lowry, and Zaida Requelme

Mentor: Dr. Patrick Steffen

Abstract: Researchers have high linked levels of narcissism with high levels of aggression, derived from narcissistic traits producing a need to aggress in order to prevent ego depletion. Competitive sports have proven to be highly correlated with aggression and violence in media has shown to have a positive correlation with feelings of aggression in viewers. We investigated whether watching aggressive sports media had an effect on feelings of aggression in correlation with levels of narcissism. We hypothesized that participants with narcissistic traits would produce higher levels of aggressive feelings than participants with minimal or entirely without narcissistic traits. We investigated 90 university-aged Brigham Young University students, equally distributed in gender. Subjects were divided into three groups and were exposed to varying levels of aggression in rugby sports media. The primary measures were scores on the Narcissistic Personality Inventory-16 and the Aggression Questionnaire in response to the sports media viewed. Although combined levels of narcissism and aggression were slightly higher in participants viewing more aggressive media, there was no significant difference between scores of participants viewing media of differing levels of aggression. Possible explanations of this lack

of correlation in our study are the quality and duration of aggression instigated, and/or a disconnection between the media presented and the methods of measurement.

Social Support in Failing Therapy Outcomes

Aaron Allred, Matthew Kahler, Seth Robinson, Michelle Souder and Russell Bailey

Mentor: Michael J. Lambert

Abstract: This exploratory study examined the influence of social support on the outcome of 95 failing clients in a college counseling center. Clients were identified for participation in the study based on scores on the Outcome Questionnaire (OQ-45), an assessment of overall client functioning. After signaling as a failing client, each participant was given the Assessment for Signal Clients (ASC) at each subsequent therapy session. Four variables were measured for each client across the course of their treatment (alliance, social support, motivation, and perfectionism). The ten most improved participants were identified and then compared to the top ten least improved. Results showed that when considered alongside other therapy factors, social support tended to decrease faster in participants that deteriorated over the course of therapy.

Social Comparison Theory and Body Image: A Depression Evaluation

Crystal Davis, Shannon Crabb, Kim Curtis, Mike Eveton, and Rebecca Sayers

Mentor: Patrick Steffen

Abstract: This study compared the effect of social comparison of body image on depression by measuring depression using the CES-D after participants viewed a slideshow featuring pictures of their peers. While past experiments have induced social comparison through mass media images, this experiment focuses on the effects of social comparison to immediate peers. We hypothesized that when participants in an experimental group were exposed to a slideshow featuring images and statistics of healthy and attractive people, this would cause them to

make upward social comparisons and lower their mood state when compared to a control group exposed to a random sampling of BYU students and socially neutral facts. No significant results were found; however, males scored in the opposite direction than hypothesized. The manipulation check results provide interesting questions for future research.

Ego Depletion, Incentive, and its Effect on Self-Control

Brittany States, Andrea Friddle, Hazel Rodriguez, Whitney Stiggins, Joe Galloway and Ryan Wallace.

Mentor: Patrick Steffen

Abstract: Research suggests that active self control depends on a limited resource. When this resource is depleted, an incentive can give the necessary motivation to draw from reserves of energy to complete the required task. This study tests whether or not an incentive will motivate participants, allowing them to perform better on a measured math test. Participants in both groups are ego depleted by difficult word and logic problems. Then the experimental group is offered a gift certificate for the top performer while the control group is offered nothing. The experimental group on average answered 1.8 questions more than the control group, thus suggesting that incentives really do play a part in overcoming ego-depletion.

A Comparison of Time Management Practices of BYU Students: Time Logs

Dr. Bruce L. Brown, Dr. Steve Turley, Dr. Steven A. Wygant, Jessica Scott, Ryan Johnson, Megan Linn, Michele Myer, Andrew Proctor, David Richardson, Nancy Stoltenberg, and Joshua Dawson

Mentor: Bruce L. Brown

Abstract: As part of ongoing research into the affects of time management on academic success, a pilot study was conducted Winter 2008 semester using a new approach; time logs. Data gathered from a convenience sample of 13 Brigham Young University students (11 control and 2 academic support) over a seven day period was analyzed

with respect to evaluations of time. Descriptive statistics of activities and productivity ratings were evaluated. Also, comparisons were made between average ratings of various activities. It was found that the control group studied more than those in the academic support group. The academic support group had approximately three times as much visiting and about twice as much recreation as did the control group, and rated sleep as more interesting. Differences were also noted in the productivity ratings of various activities between the two groups. This information is being used to conduct a similar, larger, study during the Fall 2009 semester in hopes of more reliable and valid data.

The Halo Effect of Returned Missionary Status on Long-term Dating Attraction

Garret Roundy and Carol Vermillion

Mentor: Claudia Clayton

Abstract: In the context of mate selection, this experimental study suggests a halo effect among Latter-Day Saint (LDS) women attending Brigham Young University (BYU) when rating their attraction to a returned missionary (RM). Fifty-six male and female undergraduate BYU students, ages 18-30, were presented with 1 of 3 biographical descriptions of a fictitious person whose characteristics were identical except for returned missionary (RM) status and gender. Subjects rated their attraction using a questionnaire based on criteria for mate selection. A two-way ANOVA with RM status and gender of subject showed significant gender differences and an interaction effect between gender and RM status at $p=0.001$. Possible theoretical frameworks are used to explain findings and understand errors of impression formation.