Ninth Annual Psychology Undergraduate Research Conference

April 21, 2011
East Faculty Lounge, Purdue Memorial Union
11 AM to 1 PM
Welcome to the Ninth Annual Psychology Undergraduate Research Conference. This event showcases independent research projects conducted over the last year by our undergraduate majors. The conference originated in concert with the department’s Research-Focused Honors Program in which students spend three semesters learning about all facets of the research process: developing testable hypotheses, reviewing background literature, implementing the project, collecting and analyzing data, presenting their findings at an open forum, and summarizing their work in a form suitable for publication. Participation in this yearly event has since been broadened to include other talented undergraduates who have conducted independent research with the guidance of a faculty mentor.

Congratulations to all of this year’s participants. As you’ll see, their presentations cover a wide variety of topics, reflecting the diverse research interests within psychological sciences. These students have worked long and hard on their projects and on preparing for today’s presentation. They will be delighted to talk with you about their work—please engage them in discussion.

We thank them and their faculty sponsors for their efforts and for giving us the opportunity to showcase the accomplishments of these outstanding students. Thank you for joining us.
Program

Introduction and Opening Remarks
Professor Jeffrey Karpicke .................. 11:00 am

Poster Presentations .......................... 11:10 am

Closing Remarks .............................. 1:00 pm
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Self-regulation (SR) may rely on limited energy stores that are depleted with use. Depletion can impair subsequent SR performance. This study examines the aftereffects of SR depletion occurring in social or non-social situations. Theory and empirical research suggest a link between SR and personality. We expected Agreeableness, a Big Five personality trait, to moderate performance on a subsequent non-social SR task following social frustration.

College students completed personality and verbal measures, then began a cooperative task via computer. An “error” occurred and students were asked to redo the verbal measure and partner task. The error was blamed on either the partner or the computer. Next, students rated their partner’s performance on the task. A random half of the students were encouraged to “be nice” in their evaluations. Afterward, students completed anagrams. Performance on the anagram task served as a measure of depletion. Results are discussed in terms of self-regulation theory.

Devon N. Hopkins
Mentor: James LeBreton, Ph.D

The Transparency of Assessing Aggression Using Conditional Reasoning

The conditional reasoning test of aggression (CRT-A) is an indirect test designed to assess implicit cognitive biases linked to the motive to aggress (e.g., Hostile Attribution Bias). The CRT-A consists of inductive reasoning problems, each containing an inductively valid aggressive answer and an inductively valid non-aggressive answer. The term conditional reasoning is used because the likelihood of endorsing a particular answer is believed to be dependent or conditional on the personality of the reasoner (i.e., high motive to aggress vs. low motive to aggress). The purpose of this study was to examine whether or not respondents could see the through the purpose of assessment. Participants took both the CRT-A and a self-report and were asked what they believed each test assessed.
Presenters

**Amber M. Jarnecke**  
Mentor: Susan South, Ph.D  

**Attachment Orientations as Potential Mediators in the Intergenerational Transmission of Marital Satisfaction**

Previous research suggests that there is an intergenerational transmission of marital satisfaction; however, the mechanisms that explain this phenomenon remain relatively unknown. In the current study, we examined the role of parent-child attachment orientations and romantic relationship attachment orientations as mediators in the intergenerational transmission of marital satisfaction. Participants were newlywed couples currently living together who had been married for 12 months or less. Each member of the couple separately completed several self-report measures via computer administration. Measures assessed participants’ own marital satisfaction, perceptions of their parents’ marital satisfaction, attachment orientations to their romantic partners, and attachment orientations to their rearing parents. Data was analyzed using the actor-partner interdependence model in a structural equation modeling framework to account for the non-independent nature of the data. We hypothesized that parent-child attachment and romantic relationship attachment would mediate the pathway between parents’ marital satisfaction and participants’ marital satisfaction.

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**Caroline Johnson**  
Mentor: Kimberly Kinzig, Ph.D  

**Activity-Based Anorexia in Adolescence and its Effects on Depression in Adulthood**

Historically, research has demonstrated that Anorexia Nervosa (AN) often develops in adolescence, particularly in females. Those individuals diagnosed with AN frequently are also been diagnosed with anxiety disorders, which are often comorbid with other affective disorders, such as depression. It has been previously demonstrated that following activity-based anorexia (ABA), a paradigm in which food intake is drastically reduced and physical activity is increased, adult rats exhibit greater anxiety-like behavior than do control rats. Thus, we chose to examine the effects of ABA as an adolescent stressor on adult depression. Female adolescent rats were subjected to two rounds of ABA in adolescence, and tested for depressive behavior in adulthood via the Porsolt Forced Swim, a procedure in which a rat is placed in a large tank of water. Latency to immobility measured levels of depressive behavior. Following the behavioral test, cFOS activation in the central nucleus of the amygdala, the basolateral amygdala, and the ventral subiculum of the hippocampus was examined. Analysis of the behavioral test in adulthood revealed that rats exposed to ABA in adolescence exhibited increased depressive behavior as compared to control rats.
Assessing Avoidant Personality Disorder Using the Five-Factor Model

New scales were developed to assess avoidant personality disorder (AVD) based on basic personality trait elements from the Five-Factor Model (FFM). The specific FFM traits most critical to the disorder were identified by referring to expert ratings, translations of the DSM-IV diagnostic criteria, and a meta-analytic review. Items were written to assess extreme, maladaptive manifestations of the traits as they relate to AVPD. Participants were 315 undergraduates who completed the NEO PI-R, SCID-11, PDQ-IV, Social Phobia Scale, Social Interaction Anxiety Scale, and the newly developed Elements of Avoidant Personality scale (EAP). Each final EAP scale was examined for internal consistency and unidimensionality. The EAP scales were also compared to the original FFM scales from which they were derived (NEO PI-R) in terms of convergent/divergent correlations and incremental validity in the prediction of existing AVD measures. Our new AVD scale provides an assessment based on elemental personality traits rather than pre-existing scales that blend these elements.

Predictors of Possible Outcomes for Participants within a Court-Mandated IPV Intervention Program

Court-mandated treatments for IPV (intimate partner violence) perpetrators are notoriously poor in preventing reoffending or early program drop-out. The current research examined two possible predictors of treatment failure, readiness to change and outcome expectancies. The study was conducted at the Marion County Department of Corrections. The participants were all arrested for crimes related to domestic violence and all of them were at their initial probation visit. They were assessed for their readiness to change as well as whether they endorse positive or negative outcomes about their behavior. Preliminary data indicates that perpetrators with a lower readiness to change have higher rates of reoffending and program drop-out. Participants with positive outcome expectancies also have higher rates of reoffending and program drop-out.
Marital dysfunction is a complex problem with myriad negative outcomes, so researchers have spent a great deal of time trying to understand risk and protective factors. Both intimacy and conflict have been strongly linked to satisfaction, although they appear to be regulated by two different systems. Researchers have predominantly focused on finding ways to reduce conflict among couples, hoping this will increase intimacy and satisfaction. Few studies have instead focused on whether increasing intimacy, even in the presence of continued conflict, may in fact increase satisfaction. Intimacy is achieved through self-disclosure and responsiveness to one's partner; nonverbal behavior is a more consistent means of self-disclosure than verbal disclosure, in which emotions are filtered through cognitive processes.

In the current study, married couples completed a two-week diary study measuring nonverbal behavior, supportiveness, verbal disclosure, commitment, intimacy, and satisfaction. During week two, participants were divided into two groups in which they either increased nonverbal behavior or behaved normally. It was hypothesized that couples in the nonverbal condition would report more satisfaction at the end of week two because greater self-disclosure would lead to increased intimacy. If this hypothesis is supported, it would suggest that couples should focus on awareness of nonverbal communication and whether or not it is supportive, as it can affect their intimacy level, and in the long run possibly the satisfaction and stability of the marriage.
Presenters

Sean B. Ogden
Mentor: Susan Swithers, Ph.D
Sweet taste pre-exposure influences responding to flavor cues in pre-weanling rats

In adult rats, there is evidence that exposure to non-caloric, high intensity sweeteners such as saccharin can disrupt a normally predictive relationship between sweet tastes and calories. In addition, adult rats exposed to saccharin show enhanced learning about flavor cues that are subsequently paired with a sweet-tasting, caloric diet, suggesting that learning about food cues can be influenced by prior exposure to sweet tastes in adult animals. Animals are exposed to these relationships from an early age, and young animals may be particularly sensitive to manipulations of the relationship between flavors, tastes, and calories. In the current study, pre-weanling rats were first exposed to saccharin, a high-intensity, non-caloric sweetener or glucose, a caloric sweetener, to determine whether the ability of young rats to learn about the relationship between flavors and calories is affected by exposure to sweet tastes that do or do not predict calories.

James D. Parker
Mentor: Robert W. Proctor, Ph.D
Modulation of the Simon Effect by Orienting of Attention

The Simon effect (faster keypress responses to a non-spatial stimulus feature when stimulus and response locations correspond than when they do not) has been used as a tool for evaluating aspects of human cognition. Abrahamse and Van der Lubbe (2008) provided evidence that orienting of visual attention modulates the Simon effect. I conducted a replication of their experiment to evaluate the reliability of their findings. The experiment used a visual cue to orient attention to either a left or right location, at which the target stimulus was likely to occur. The Simon effect tended to smaller when the cue was valid, and attention was directed to the target location, than when the cue was invalid, and attention was directed elsewhere. This pattern, although statistically nonsignificant, is consistent with that of the original study. Possible reasons why my results were not as robust as theirs are considered.
Michelle V. Schwager  
Mentor: Susan South, Ph.D  

The Effect of Perfectionism on Eating Disordered Behavior  

While researchers agree that there is a definite link between perfectionism and eating disorders, there is need for a causal explanation of this link. Our study aimed to look at the interaction between perfectionism and performance evaluation on subsequent food consumption preferences. Subjects were prescreened for high and low scores on the Multidimensional Perfectionism Scale. They subsequently participated in a series of semantic memory tasks and were randomly assigned to either a positive or negative feedback condition. This was followed by a food preference task in which they were asked to rate their liking and desire to eat fifty common food items. We hypothesized that those who prescreened high in perfectionism and who were in the negative feedback condition would have the lowest ratings on desire to eat/liking for the food items. If this pattern of results holds, it would suggest that when someone with perfectionist tendencies believes they perform poorly on an evaluative task relative to others, they may tend to exhibit symptoms of eating disordered behavior including a lowered interest in eating and liking of food in general.

Tyler R. Shiflett  
Mentor: Kipling Williams, Ph.D  

Ostracized Individuals are Less Persuaded: Distracted or Straddling the Fence?  

Ostracism—being ignored and excluded—negatively affects individuals' emotions, cognitions, and behaviors. As yet, no research has examined its impact on persuasion. Fifty-five participants were randomly assigned to be included or ostracized using Cyberball, a virtual ball-toss game. They then read a persuasive message comprised of either strong or weak arguments that advocated comprehensive examinations. Included participants agreed with the message if it contained strong arguments and disagreed with it if it contained weak arguments. Ostracized participants, however, were unaffected by the strength of the arguments and reported neutral responses. I discuss whether ostracism is a distractor or if it motivates people to seek the safe haven of neutrality.
The Hadley Award

Dr. John Millard Hadley was a Professor in the department from 1946 until 1970. Professor Hadley was the first Director of Clinical Training at Purdue and later served as the second Head of the Psychology Department. It was under his leadership that the Purdue program in clinical psychology was to reach national prominence in research, clinical training, and service. The award that bears his name is given each year to a senior Psychology major at Purdue who has demonstrated excellence in research activities. Since 2003, the award is given to the senior presenting the best research at the Undergraduate Research Conference. Winners are recognized by having their names inscribed on a plaque that hangs in the department, a letter of recognition, and a cash award of $300.

Past Hadley Award Recipients:

2003  Alma Haas
2004  Ashleigh Maxcey
2005  Emily Gurry
2006  Amanda Kilavos
2007  Bethany Edwards
2008  Nicole Weatherman
2009  Megan Smith
2010  Judith Asem

Special Thanks To:

- Professors Jeffrey Karpicke, Ximena Arriaga, Kipling Williams, Howard Weiss for conducting the Honors seminars.
- Peter Urciuoli for his service as Undergraduate Director.
- The faculty mentors for their support of undergraduate research.
- Christopher Agnew, Head of Department, for the financial support of undergraduate research and this yearly event.