Psi Chi and the NDSU Psychology Club presents the

33rd Annual
Red River Psychology Conference

April 12th, 2019

Keynote Speaker
Dr. Kent Kiehl
Professor
University of New Mexico
Conference Schedule

Thursday, April 11, 2019 at Minard Hall Room 230

6:30 - 8:00 pm The Science of Psychopaths by Dr. Kent Kiehl

Friday, April 12, 2019 in NDSU Memorial Union

8:30 - 9:30 am Conference Registration Prairie Rose

9:30 - 11:30 am Morning Poster Session Arikara/Hidatsa

10:30 - 11:45 am Morning Paper Session Mandan

12:00 - 12:30 pm Luncheon (Reservation Required) Prairie Rose

12:30 - 1:30 pm Keynote: Dr. Kent Kiehl Prairie Rose

2:00 - 4:00 pm Afternoon Poster Session Arikara/Hidatsa

2:45 - 4:00 pm Afternoon Paper Session Mandan
Dr. Kent Kiehl
Psychological Sciences
University of New Mexico

Dr. Kiehl’s laboratory has worked diligently along with correctional facilities in New Mexico and beyond to establish the world’s largest database of brain data from incarcerated populations. He utilizes a state of the art mobile scanning unit which can be deployed to remote locations, reaching populations for which functional brain imaging might otherwise be impossible or severely impractical. These resources and relationships have been instrumental in the investigation of mental health issues that are particularly prevalent in those who are incarcerated, including psychopathy, antisocial personality disorder, substance abuse, and externalizing disorders. He maintains several ongoing projects with an overall goal of achieving a better understanding of the interaction between brain function, genetics, and environmental factors ultimately informing improved interventions and prevention strategies and promoting better mental health as a whole.
1. The Impact of Internal Lapses of Attention on Visual Working Memory Binding
Emma Gjesdahl, Jacob Hanson, & Dwight J. Peterson
Concordia College

Visual working memory (VWM) performance is negatively impacted by lapses of attention (Unsworth & Robison, 2016). The current study examined the role of internal lapses of attention for remembering unrelated single objects and object pairs during a VWM change detection task. It was hypothesized that lapses would impact binding performance to a greater extent than performance for single items. Participants were shown three object pairs and, following a brief delay period, were tested using single-item or item-item binding probes. Following some trials, participants were asked, "What were you just thinking about?" to examine the impact of lapses of attention on both item and binding test performance. Results revealed lower levels of performance during "mind-wandering" relative to "on-task" trials. In contrast to our hypothesis, lapses of attention impacted single-item and item-item binding processes to a similar extent, suggesting that internal lapses of attention have a broad detrimental impact on VWM processes.

2. The Role of Perceptual Grouping Cues in Visual Working Memory Binding
Grace Pettit, Miriam Probst, Jacob Hanson & Dwight J. Peterson
Concordia College

Perceptual grouping cues can improve visual working memory (VWM) performance (e.g., similarity: Peterson & Berryhill, 2013; Brady & Tenenbaum, 2013, similarity and connectedness: van Lamsweerde, Beck, & Johnson, 2016; connectedness and proximity: Woodman, Vecera, & Luck, 2003, illusory contours: Allon, Vixman, & Luria, 2018; Gao, Gao, Tang, Shui, & Shen, 2016). The current study examined whether grouping-related benefits extend to VWM binding processes. During a VWM change detection task, participants viewed three color-orientation conjunctions oriented so as to form an illusory object (e.g., Kanizsa triangle) or were randomly oriented, forming no illusory object. Following a brief delay period, a test probe included either an “old” or “new” color, orientation, or color-orientation conjunction. Results revealed no grouping-related benefit for the color test condition, but did reveal significant grouping-related benefits to both the orientation and color-orientation conjunction (i.e., binding) conditions. These findings suggest that task difficulty mediates grouping-related benefits in VWM.

3. Unattended, task-irrelevant object features are stored in working memory in a hidden state
Andersen, J., Andrews, N., Bocincova, A. & Johnson, J.S.
North Dakota State University

Previous studies have shown that only task-relevant object features leave a decodable neural trace while stored in working memory (WM). This has been taken as evidence for a lack of storage of the task-irrelevant features. However, the absence of decodable signals could also mean that task-irrelevant features are stored in WM but are represented in sub-threshold neural activity because they are unattended. Prior evidence suggests that it is possible to “reawaken” a hidden neural trace using a task-irrelevant flash (Wolfe et al., 2017). To test whether task-irrelevant features are stored in WM in a hidden state, we used classifiers trained on EEG data to examine the task-relevant and irrelevant feature representations of a colored, oriented grating over time. An analysis of the signals evoked by the flash stimulus revealed above-chance decoding for both task-relevant and irrelevant orientations, suggesting that task-irrelevant features may be stored in WM in a hidden state.
4. Auditory "capture" of visual motion: Effect of audiovisual stimulus onset asynchrony
Emily Boehm, Ganesh Padmanabhan & Mark McCourt
North Dakota State University
Auditory (A) motion influences the perceived direction of visual (V) motion when moving A and V stimuli are presented at an audiovisual (AV) stimulus onset asynchrony (SOA\textsubscript{AV}) of 0 ms (Mccourt & Leone, 2016). Here we determine the effect of varying SOA\textsubscript{AV}, (0, -50, -100, -150, -200, and -300 ms, where the A stimulus preceded the V stimulus). The visual stimulus was a counterphasing Gabor patch (3° diameter, 375 ms total duration); the Michelson contrast of the leftward and rightward translating grating components was varied from 0 to 1.0. Participants (n=15) indicated on each trial whether the Gabor stimulus appeared to be moving leftward or rightward. Percent rightward motion judgments were plotted against percent rightward grating contrast and the rightward grating contrast yielding 50% rightward motion judgments (the point of subjective equality, or PSE), was computed. Visual stimuli were presented in conjunction with four conditions of Auditory Motion: rightward, leftward, stationary, and none. Results replicated previous findings and showed a significant effect of sound motion condition (p<.001), but no significant effect of SOA\textsubscript{AV} (p=.110), or a significant Auditory Motion x SOA\textsubscript{AV} interaction (p=.091). Future research will extend the range of SOA\textsubscript{AV} to include larger values, and will explore positive values of SOA\textsubscript{AV}.

5. An Examination of Body Image, Eating, and Sexuality Among Female Emerging Adults
Lauren Grant, Emma Johnson, Elizabeth Blodgett Salafia & Kerrie Leonard
North Dakota State University
Body image along with sexuality are important factors during early adulthood. The purpose of this study was to examine the relationships between body dissatisfaction and both sexual activity and sexual satisfaction in female emerging adults. In addition, we examined the relationships between disordered eating patterns and both sexual activity and sexual satisfaction. Participants were 505 female emerging adults with a mean age of 21.59 (SD=3.6). Surveys were used to collect the data. We found that higher levels of body dissatisfaction correlated with higher levels of sexual activity. We also found that higher levels of disordered eating behaviors were correlated with lower levels of sexual satisfaction. Our results indicate that maintaining a positive body image and healthy eating style can impact sexuality for women.

6. Dating Behaviors and Body Image Among Female Adolescents
Victoria Krabbenhoft, Kerrie Leonard, Elizabeth Blodgett Salafia & Emma Johnson
North Dakota State University
Only in recent years have atypical eating attitudes, body dissatisfaction, or the desire for thinness been examined in the context of romantic relationships, and not many direct conclusions have been drawn. In this study, 200 middle school and high school adolescents between the ages of 12 and 18 years old participated in the Eating Attitudes Study (EATS). Participants were given questionnaires to assess their dating behaviors, eating attitudes, body dissatisfaction, and desire for thinness. We then used an independent sample t-test analysis to obtain results. Dating status did not significantly predict any of these outcomes. However, we found a significant relationship between females’ desire to date and atypical eating attitudes, body dissatisfaction, and desire for thinness. These results suggest that the act of dating alone does not contribute to atypical eating attitudes, body dissatisfaction, or the desire for thinness, but the desire to date does.
7. Boredom Proneness, Creativity, and the Tendency to Eat When Bored
Alanna J. Carlson
Minnesota State University Moorhead
The purpose of the study is to explore the impact of the participants’ creative capacity and boredom proneness on their eating out of boredom. The creative capacity and boredom proneness of the participants are the predictor variables, while the amount of food eaten is the criterion variable. Participants are university students from Minnesota State University Moorhead (MSUM) selected on a voluntary basis. Each participant completes a divergent thinking task and boredom proneness scale. The divergent thinking task is used to measure the participants’ creative capacity. Participants are exposed to a boredom condition with popcorn available for consumption. It is expected that participants who score lower on the divergent thinking task will eat a greater amount than those who score highly on the task. Boredom proneness will be taken into account as to how it impacts the eating of each participant in comparison to the divergent thinking task scores.

8. Gender Difference in Implicit and Explicit Anti-fat Attitudes
Megan Blackburn, Emily Blacknik, Kennedy Kidd, Stephanie H. Weigel, Emily M. Carstens Namie & Andre Kehn
University of North Dakota
Anti-fat attitudes refer to negative attitudes toward individuals because they are overweight or obese. While such attitudes appear to be relatively pervasive, research findings support some individuals may be more inclined to express prejudice against the overweight and obese. The present study examined gender differences in explicit and implicit anti-fat attitudes. Undergraduate women (n = 162) and men (n = 44) completed the Anti-Fat Attitudes questionnaire (AFAQ), Beliefs About Obese Persons scale (BAOP), and Weight Implicit Association Test. A series of independent samples t-tests revealed men displayed higher levels of implicit and explicit anti-fat attitudes. Results from this study suggest men and women express anti-fat attitudes differently.

9. The Mediating Effects of Intimacy Between Sibling Body Talk and Body Dissatisfaction in Female Adolescents
Emma Johnson & Elizabeth H. Blodgett Salafia, Ph.D.
North Dakota State University
Close, intimate relationships, where disclosure of information occurs, are vital to positive development during adolescence. Siblings play an important role in providing intimate relationships and have also been found to influence the development of body dissatisfaction. With 134 female adolescent participants, we examined if intimacy mediated the relationship between negative body talk (including appearance-related teasing and pressure to be thin) and body dissatisfaction. Evidence for partial mediation was found for intimacy and the relationship between teasing and body dissatisfaction. In addition, there were both direct and indirect effects when considering the role of intimacy in the relationship between pressure to be thin and body dissatisfaction, but no evidence of mediation. Aspects of the sibling relationship should continue to be studied, in order to more fully understand the development of body dissatisfaction.

10. Abstract Life Domains Seem Better or Worse Depending on Neuroticism Levels
Josie L. Krupich, Robert J. Klein & Michael D. Robinson
Previous research has shown that the personality trait of neuroticism tends to be linked to negative cognitive biases (e.g., recall negativity). The present experiment sought to determine whether such negativity biases vary as a function of how much concrete information the person possesses. In our study, 165 undergraduate participants were asked to rate their satisfaction with 40 life domains, some of which were more concrete (e.g., roommates, family) and some of which were more abstract (e.g., spirituality,
goals). A multi-level modeling (MLM) analysis found evidence for a neuroticism main effect as well as a neuroticism by domain abstractness interaction. Neurotic individuals tended to be less satisfied with their lives, but this was particularly true concerning the more abstract life domains. By contrast, non-neurotic individuals displayed opposite tendencies. These findings suggest that neuroticism can be linked to negativity biases particularly for less tangible life domains.

11. Inductive Reasoning: Relationships between Domain Knowledge, Knowledge Beliefs, and Expertise
Lynn DiLivio
Mayville State University
The research question examined if inductive reasoning ability varies between academic domain (math vs. English students); expertise (undergraduates vs. graduate students); and knowledge beliefs (low vs high). The participants (N = 95) were undergraduate and graduate students in math and English from a large university. Participants completed a new instrument developed for this study to assess inductive reasoning (Cronbach’s alpha = .74), and the Epistemological Beliefs Survey (Kardash & Wood, 2002) to assess knowledge beliefs. Results from the 3-way analysis of covariance (ANCOVA) with age and gender as covariates found only a significant relationship between inductive reasoning and knowledge beliefs. Results are discussed with regard to limitations of instrumentation and factors regarding well-structured and ill-structured domains of knowledge.

12. Pet Owners Associated with Personality Traits
Madison Johnson & Wendy Wilson
Dickinson State University
This study will investigate to find a possible association between pet owner’s personality traits and the types of pets they provide care to. A fast-paced survey will be administered online making it possible to compare the pets owned to the different types of personality traits. The personality traits chosen include: introversion/extraversion, confidence, narcissism, and adventurous levels. Each personality trait will have five questions on the survey that will mark the level of the trait this person most holds. The survey focuses on many of the most common pets. The most common types of pets include: dogs, cats, fish, horses, small mammals, and has a fill in the blank for other possible answers. This information could lead to significant results that may be critical for future animal owners and the kind of animal they may decide to commit themselves to in the future.

13. Evidence-based Sexual Health Education: Meeting the Needs of New American Youth
Jonix Owino, Antonia Curtis, Brandy Randall & Molly Secor-Turner
North Dakota State University
Little is known about the sexual health needs and effective sexual health education among New American (NA) youth in the United States. NA youth may face obstacles to sexual health education including access to health services, limited programming tailored to their needs, discrimination and language barriers. This study describes the impact of an evidence-based sexual health education program on NA youth’s sexual health attitudes, beliefs, intentions and behaviors. Ninety-three NA youth (M =16 years) participated in the program. Participants reported significant increase in awareness of community sexual health resources, beliefs supporting safer sexual behavior (e.g. condom use, abstinence) and self-efficacy to engage in safer sexual behaviors. There were no changes in sexual health attitudes or sexual risk behaviors. Tailoring sexual health education programs to meet the unique needs of NA youth will support them to make healthy decisions.
14. Meaningful Memories: Developing a Scrapbooking Nostalgia Intervention
Allie Geiger, Taylor Nelson & Clay Routledge
North Dakota State University
Past research indicates that nostalgia (a sentimental longing for the past) serves a number of psychological functions. While engaging in nostalgic reflection, people experience increased wellbeing and feelings of social connectedness. The goal of the present study was to begin to develop a nostalgia social intervention in which participants work in groups on creating scrapbooks. Twenty-four female undergraduate students participated in three scrapbooking sessions where they were given the freedom to chose the content of their scrapbooks. Quantitative and qualitative measures were completed prior to Session 1 and after Session 3. Results suggest that the scrapbooking intervention increases nostalgia, reminds participants of meaningful relationships, and may be a good candidate for a nostalgia-based social activity that promotes social connection and stress relief. Additionally, every scrapbook exclusively contained themes that are social in nature (e.g., family, friends).

15. Age Bias in College Students: Perception of Elderly Adults
Anna A. Ellenson
Minnesota State University Moorhead
Previous research has concluded that individuals of all ages have an automatic, implicit preference for younger people (Karpinski & Hilton, 2001). The current study examined this automatic preference in college students and provides a framework for future research on age perceptions regarding the next generation entering the workforce. College students viewed six separate profiles of male and female individuals aged 25, 55, and 85. Participants were then presented with a list of twenty words for each profile, ten “negative” and ten “positive” in random order, and chose a total of five words which they believed to be characteristics of the person in the profile. This experiment was conducted as a 2 (gender of the profile) x 3 (age of the profile) within-subjects design. It was predicted that as the age of the adult in the profile increased, college students would choose more negative descriptors for older targets compared to younger targets, especially for the male targets. There was a significant main effect between ages and no significant main effect between gender.

16. Effects of Social Media on Self-Esteem
Cheyenne Forman Hickel & Wendy L. Wilson
Dickinson State University
The purpose of this experiment is to find out if social media can have a prominent effect on self-esteem. Social media use has been on the rise in our society. This study investigates whether the type of content we allow ourselves to follow online has a direct effect on how we feel about ourselves. A two-part self-esteem survey pre and post slideshow will be implemented. The slideshow consists of a presentation in order to simulate social media use. Group one is presented with a positive images slideshow, whereas the other group is exposed to a fitness model slideshow. Pre and post surveys were measured to investigate the role of different media images on self-esteem.

17. A Lion or a Shoe: 17-month-olds Observe vs. Act in an Object Individuation Task
Savanna E. J. W. Jellison & Rebecca J. Woods
North Dakota State University
Object individuation, the ability to distinguish an object that is currently perceived from one that was previously perceived, is an important cognitive ability used in everyday life. In the current study, we assessed the influence of self-action on infants’ ability to individuate objects. Using a manual search task, we tested eighteen 17- to 18-month-old infants’ ability to individuate objects. Infants either observed as an experimenter hid an object in a covered bucket or they hid the object themselves. The rationale was that if infants perceived the retrieved object as a distinct object from the one hidden, they would continue
Morning Poster Session

searching in the bucket for the yet-to-be-retrieved object. These results indicate that infants successfully individuated only when they were able to hide the object themselves. This outcome provides evidence that, similar to other types of object processing, object individuation is enhanced when infants are given the ability to act on objects.

18. The Impact of Defendant’s Weight on Mock Jurors’ Case Judgments
Mariah Sorby, Emily Eichhorst, Paige Michel, Stephanie H. Weigel, Emily M. Carstens Namie & Andre Kehn
University of North Dakota
The objective of the current study was to examine weight discrimination and extralegal factors in the courtroom. Undergraduate participants (N = 272) were randomly assigned to one of three conditions (overweight, lean, control/no image) and asked to read a hypothetical check fraud case. Following, participants were asked to respond to a series of questions designed to measure courtroom judgments. Two one-way ANOVAs were conducted. The first analysis investigated the impact of defendant’s weight on verdict. Results revealed a non-significant main effect of condition, p = .211. The second analysis investigated the impact of defendant’s weight on sentencing recommendations. Results revealed a significant main effect of condition, p = .031. Planned contrasts revealed higher sentencing recommendations for lean defendants in comparison to the control condition, p = .009; however, there were no significant differences for the obese defendant when compared to the control condition, p = .112.

19. Wealth and Happiness: A Replication Study
Kate Champion, Macy Westerberg, Autumn Koetz, Mona Ibrahim
Concordia College
We will be replicating the study titled Wealth and Happiness Across the World: Material Prosperity Predicts Life Evaluation, Whereas Psychosocial Prosperity Predicts Positive Feelings (Diener et al., 2010). The main focus of this study is to understand if wealthier individuals report overall higher well-being than individuals with lower income, and how this wealth affects the occurrence of positive and negative feelings. It is important for us to replicate this study to obtain data in the midwestern United States to then be able to compare our subjective well-being to other cultures and socioeconomic levels who have also taken this survey. We hypothesis that the results of our replication will show a significant correlation between income and overall well-being; while also presenting a relationship between positive feelings and social psychological rewards, as well as a relationship between negative feelings and the lack of fulfillment of our basic needs.

20. Uh-oh! Reactions to Negative Stimuli Are Faster, Stronger, and More Dynamic
Brody Terry, Robert J. Klein & Michael D. Robinson
North Dakota State University
Davidson (2015) suggested that we know very little about the time course of emotional reactions or of the parameters (e.g., onset, peak) that define it. The present study sought to answer questions of this type within a slide viewing paradigm in which participants were asked to indicate their pleasant or unpleasant feelings across time, using a joystick. We sampled joystick position 10 times a second, which permitted us to examine the time course of both positive and negative emotional reactions. When the pictures displayed unpleasant content (e.g., snakes, mutilated bodies), relative to pleasant content (e.g., babies, sexual activity), reactions were faster, stronger, and the rate of affect change was also more pronounced. Such differences occurred despite the fact that the picture categories were balanced for arousal and extremity. When examined from a dynamic time-course perspective, it appears that negative emotional systems operate more rapidly than positive ones.
21. Factors that Influence the Personal Relationship with God and Centrality of Religion in Minnesota Young Adult Catholics
Jacqueline Day
Concordia College
Young adults are leaving the Catholic Church and this research explores why that might be. When one’s personal relationship with God and centrality of religion are high there is a greater indication that their faith is stronger. Some factors that might influence the strength of those scores is faith depth, religious engagement, and religious emphasis. Participants were from the Crookston diocese in Minnesota, and 313 participants were surveyed. Results found faith depth and religious engagement significant for both personal relationship with God and centrality of religion. Religious emphasis was significant for centrality of religion. Parents do not play an important role in impacting their children’s relationship with God. These factors will help identify areas to improve young adult Catholics religiosity.
Morning Paper Session (Mandan, 10:30-11:45 AM)

1. Potential Clinical Applications of State of Surrender Scale
   Thomas Sease & Suzanne Russ
   Dickinson State University
   This presentation will provide a thorough review of literature and present previous findings to support future research using the newly validated State of Surrender Scale (SOS) as an accurate measurement predicting change following a personal crisis. Specifically, this presentation will focus on individuals whose crisis is related to alcohol addiction. The current literature cites the SoS scale as being related to consciousness (e.g., hypnosis, meditation, and psychedelics) instead of a potential clinical tool. In recent pilot studies, however, the SoS scale has shown its predictive capabilities in areas related to general personal crisis and alcoholism. These small scale results suggest that the SoS scale may be indicative of a psychological state associated with an individual's readiness to change following a crisis related to alcoholism.

2. Going Green to Be Seen: A Replication Study
   Sydney Lundebrek, Stephanie Nelson, Morgan Nordheim & Mona Ibrahim
   Concordia College
   This study replicates an original study called “Going Green to Be Seen” by Griskevicius, Tybur, and Van den Bergh (2010). The study aims to examine how status affects the decision between purchasing green or non-green product. Previous studies found that status is a motivator when purchase green products. We hypothesize a higher hypothetical status will be positively correlated to purchasing green products. Undergraduate students at Concordia College over the age of 18 will participate in a survey. Our sample size is $N=84$ participants. Participants will fill out a questionnaire asking for them to decide between an eco-friendly and a more luxurious non-green product, both of which are the same price. We will analyze the data by running a one-way between-subjects ANOVA. We will run three different Chi Square analyses, and we will compute effect sizes for the Chi Square and ANOVA analyses.

3. Examining the Effects of Pessimism on Historical Nostalgia
   McKena Geiger, Taylor Nelson, & Clay Routledge
   North Dakota State University
   Nostalgia is defined as a sentimental longing for the past, and can be both personal or historical in nature. Previous research has found that personal nostalgia has positive effects on mood and wellbeing and that negative psychological states (e.g., loneliness) increase personal nostalgia. The present study, conducted with 130 participants (92 female; $M_{age} = 19.01, SD_{age} = 1.12$), used an experimental design to determine whether people become more historically nostalgic when they feel pessimistic about the future. Specifically, I predicted that an induced state of pessimism would result in increased historical nostalgia, compared to an induced state of optimism. Participants also responded to several relevant questionnaires. Although the manipulation was effective, endorsement of historical nostalgia did not differ between the pessimism and optimism groups. However, correlations between personal nostalgia, historical nostalgia and other scales supported the assertion that personal and historical nostalgia are distinct concepts.

4. Do feminine and masculine traits influence religious, spiritual, and nontraditional paranormal beliefs?
   Bria Davis
   North Dakota State University
   A growing body of research seeks to examine how different cognitive, social, and motivational variables relate to both traditional religious and non-traditional paranormal beliefs. The current study aimed to
examine if individual differences in masculinity and femininity predict a range of religious, spiritual, and paranormal beliefs while controlling for several other cognitive, social, and motivational predictors. We recruited 125 participants (49 females; $M_{\text{age}} = 33.8$, $SD_{\text{age}} = 9.8$) from Amazon Mechanical Turk (AMT) and administered relevant questionnaires. We observed that higher levels of femininity were uniquely and significantly associated with greater religiosity, spirituality, and nontraditional paranormal beliefs. Differences in masculinity were not significantly associated with any of these beliefs. These findings build upon previous research in the psychology of religion and spirituality by suggesting that psychological characteristics related to gender influence a range of religious, spiritual, and supernatural beliefs.

5. What Women Think Men Think About Women: Attractiveness as a Function of Hair Color and Length
Gracynn R Young, Anna M Semanko & Verlin B Hinsz
North Dakota State University
‘Attractiveness is in the eye of the beholder.’ But do women use their eyes or those of men to judge attractiveness? Female undergraduates judged the attractiveness of women models depicted in photos with three hair colors (blonde, brunette, black) and three lengths (short, medium, long). The women also rated how attractive they thought college-aged men would rate the photographed women. Participants should judge that men rate the photographed women with lighter and longer hair as more attractive, as this is a general trend for men’s judgments. If men’s judgments are the standard for women’s attractiveness, then women will also rate lighter and longer haired women as more attractive. However, if women use themselves as the standard, they will judge the more common medium length and more frequent brunette hair as more attractive. Comparisons of these sets of judgments can investigate if women use themselves or men when evaluating women’s attractiveness.

6. Red, Rank, and Romance: A Replication Study
Madison Asher, Anastasha Bougie, Emily Mastin & Mona Ibrahim
Concordia College
This study is a replication of Red, Rank, and Romance by Elliot et al., (2010). We are interested to find if red can increase perceived attractiveness among other qualities. Multiple studies using similar and different techniques have had success in supporting this hypothesis. The color red has typically been associated with topics of love, romance, danger and failure. Studies find that men who have increased red in the face are rated as more attractive perhaps due to increased fitness. Red is associated with success in the workplace, suggesting the person is stronger and more confident if they are wearing red. Our methods will include using a survey composed of a picture of a man surrounded by a red or gray border and asking female participants personality questions about the man. Statistical Analysis includes an independent $t$ test and our predicted results are expected to be along the original results.
Afternoon Poster Session (Arikara/Hidatsa, 2:00-4:00 PM)

1. (Not a) Fool for Love: Individual Differences in Romantic Competence Predict Relationship Formation, Maintenance, and Satisfaction
Ivy Bergstrom, Elizabeth Lembke, Corynne Krenz, Michelle R. Persich & Michael D. Robinson
North Dakota State University
Individuals differ in their ability to form and maintain satisfying romantic relationships. This may be due, in part, to differing levels of competence in how people respond to situations that arise within their relationships. In one study, we used a scenario-based measure of romantic competence (RC) to examine how RC relates to relationship formation, behaviors enacted within the relationship, and satisfaction in romantic couples ($N = 174$ dyads). The results showed that participants with higher levels of RC were more likely to be with a partner who possessed the qualities that the participant valued, and also more likely to engage in behaviors that strengthened and maintained the relationship. Additionally, both participants and their partners reported more satisfaction with the relationship when the participant had higher RC. This study illustrates the value of an implicit, knowledge-based approach to understanding of how relationships function.

2. Motion parallax - perceiving depth and slant with virtual dihedral angles
Emily Johnson, Jade Berg, Sara Simenson & Mark Delisi
North Dakota State University
To perceive depth from a visual scene, the visual system uses a variety of cues. Here we explore how the visual system uses motion information to recover the slant of a virtual surface (i.e., a dihedral angle). Participants viewed a random-dot stimulus presented on a computer screen and indicated the perceived slant with hand position recorded electronically with a potentiometer. While participants often underestimated the slant, the correction provided by the physical slant experiment suggests that participants were quite accurate in perceiving the depth portrayed by motion in the virtual display. Moreover, when physically impossible stimuli were presented to participants, they accurately interpreted the depth in the only physically possible way.

3. The perception of slant in 3-D printed dihedral objects
Jade Berg, Emily Johnson, Sara Simenson & Mark Delisi
North Dakota State University
When an individual views a complex scene, they have available a number of visual cues to perceive where objects are and their relationship to other objects. Here we are studying how our brain uses motion information to perceive depth. Using 3D-printed dihedral angles, ranging from $15^\circ$ to $75^\circ$, we tested participants ability to mimic the angle orientation with hand position. We compared the indicated and actual angle finding that observers had a very systematic underestimation of slant. For angles facing the subject, the regression slopes vary between 0.388 to 0.6799. For angles facing away from the subject, the regression slopes vary between 0.247 to 0.7242. While the slopes tend to be low, the mean $R^2$ is 0.90, which suggests that individuals have a very orderly, but inaccurate, relationship with perceiving the correct angle slants.
4. Behavioral Sleep Restriction in a Community Sample
Micayla Brown, Samantha Fitzger, Allison Engwall & Leah Irish
North Dakota State University

Many individuals suffer from insufficient sleep. Though some may face insufficient sleep due to sleep disorders, others may choose to restrict their sleep (i.e., behavioral sleep restriction; BSR). We examined the prevalence of and reasons for BSR in 151 adults. Each morning for a week, participants were asked: “Last night, what prevented you from going to bed when you wanted?”, producing 913 intervals of data. Participants reported one reason for BSR on 324 nights (37%). We then coded and collapsed responses into one of three categories: electronics (e.g., TV, Facebook), personal (e.g., children, homework), and social/activities (e.g., parties, sports). Participants reported BSR due to personal reasons most frequently (62% of restricted nights). Electronics-related BSR and social/activity-related BSR were reported on 27% and 11% of nights, respectively. This study indicates that, in adults, BSR is relatively common and may result from various causes. Future work should examine underlying causes of BSR.

5. Undergraduate Perceptions of Typical First Date Activities
Anika L. Mundal, Anna M. Semanko & Verlin B. Hinsz
North Dakota State University

People approach first dates with much apprehension and are generally anxious about the potential outcomes. Nevertheless, there is limited research regarding the psychological features of first dates. Prior research has examined the goals individuals have for their first dates, noting that first dates are likely to reduce uncertainty, be fun, increase intimacy and companionship. We examined responses from 287 undergraduate students regarding self-reports of typical activities for first dates. Based on the first date categories identified in previous literature, we content analyzed the student responses to determine if they were associated with the categories of the prior research. This presentation will describe the different first date-related categories that underlie what students perceived as typical activities for first dates and discuss their relation to the categories from prior research.

6. Maintaining the Status Quo: Ambivalent Sexism and Response to Gender Stigma
Sara Johnson, Sarah Taylor & Darcie Sell
Concordia College

This study investigated the ways in which ambivalent sexism and gender stigma consciousness interact to influence relational quality within heterosexual relationships, specifically the relationship between women’s benevolent sexism and perceived partner support. A previous study discovered that when women’s stigma consciousness is high, women’s benevolent sexism positively predicted women’s perceived partner support (Mattison, 2017). This trend may be explained by ambivalent sexism theory (Glick & Fiske, 1996), which states that benevolent sexism functions to keep women focused on domestic roles and therefore maintains the status quo. We hypothesized that women who score high on benevolent sexism would turn toward their romantic partners for support when they are aware of gender-related stigma. We also expected traditional gender role ideology and avoidance attachment to mediate the relationship between benevolent sexism and relational quality. Heterosexual couples were recruited through psychology courses. Participants independently completed questionnaires; results were analyzed using the actor partner interdependence model (APIM; Kenny, Kashy, & Cook, 2006).

7. Exploring How Judgments of Learning Affect Memory and Retention
Amber Fuller, Allyson Kuznia, Meghan Yerhot & Kathryn Wissman
North Dakota State University

Students are required to remember a plethora of information. Researchers investigating memory and learning techniques strive to find what strategies support long-term retention. Recent research suggests
that making judgments of learning, or predicting the likelihood of remembering information at a later point in time, is more effective than restudying the information. However, one unanswered question is how making judgments of learning compares to engaging in retrieval practice. In this study, 232 participants were assigned to one of three learning techniques: retrieval practice, restudy, or judgments of learning. Participants were asked to study 60 related word pairs (e.g., imagine-dream), which was followed by engaging in the randomly assigned learning technique. Participants then took a final test after either 3 minutes or 2 days. Overall, engaging in retrieval practice versus judgments of learning was more effective for learning and retention, and both techniques were more effective than engaging in restudy.

8. Examination of Desire for Muscle Gain Among Non-Athletic Adolescents and College-Aged Women

Emma Johnson, Elizabeth H. Blodgett Salafia & Kerrie C. Leonard
North Dakota State University

Recently, the thin ideal has been described as including the appearance of fitness or athleticism, and women have shown a preference for this newer, toned, slim figure (George, 2005; Homan et al., 2012; Schaefer et al., 2015). Using focus groups, we examined the desire for muscle gain among 22 non-athlete adolescents and college-aged women. From the qualitative data collected, four themes emerged about the importance of muscularity during adolescence and college. Our findings revealed an agreement among participants that a shift towards the desire for a more toned body occurs after adolescence. In addition, participants’ discussion focused on: less concern of muscle gain among adolescents versus college-aged women, making informed decisions when it comes to nutrition during college, increased use of social media among adolescents, and a desire for a thin body versus a muscular body in adolescence.

9. The Nap Trap: The Relationship Between Daytime Napping and Nocturnal Sleep

Priscilla Xiong, Michael Mead MS & Leah Irish
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While research suggests that napping may be associated with poor sleep, much of this work is methodologically limited and does not allow for the testing of temporal associations. The current study sought to extend the literature by examining the daily, bidirectional relationships between sleep and napping. Participants (N=384) were college students that completed two weeks of a baseline assessment in which their total sleep time (TST) was assessed via actigraphy and napping was self-reported via a bedtime sleep diary. Multilevel modeling was used to test the temporal associations between TST and napping. While there was no fixed effect of TST on napping, a random slopes model showed that this relationship significantly differed between participants. Moreover, greater TST significantly predicted less time spent napping the next day. Results suggest bidirectional relationships between sleep and napping, and offer insight into health promotion and intervention efforts.

10. Behavioral repercussions due to removal of Emx2 gene in primary visual area

Caitlyn Schaffer, Akira Shastri, Devante Delbrune, Carly Hansen, Olatomiwa Ajayi & Adam Stocker
Minnesota State University Moorhead

The neocortex, unique to all of Mammalia, is the largest portion of the brain and houses higher order association areas such as the primary sensory area. This area of the neocortex is responsible for integrating multiple types of sensory information such as taste, olfaction, touch, hearing, and vision. The primary visual area (V1) will be the main focus of this research. Transcription factor Emx2 has been found to play a crucial role in the development of V1, along with other primary areas, and the removal of this gene from the brain has been shown to result in a significant shift of these areas as well as a significant decrease in size of V1 (Hamasaki et al., 2004). To test for a change in visually-mediated behaviors in mice with Emx2 conditional knock out (cKO), the looming
visual stimulus (Yilmaz & Meister, 2013) will be used. This behavioral paradigm has been used by other researchers to initiate a freeze or flight response from mice. Genetic and behavioral techniques will be used to analyze the data collected from this test. The findings of this research will help confirm whether there is a behavioral change associated with an anatomical change in V1.

11. Mandalas and the Centering Effect  
Josiah Olson  
*Minnesota State University Moorhead*  
The purpose of this study will be to test the effectiveness of the centering effect of mandalas, and to isolate it from the structure effect and the distraction effect. Participants will be put into a stressful situation (made to create a speech), and their heart rate will be measured before, during, and after receiving either a mandala coloring treatment or a coloring book page treatment. Afterwards, participants will be given a questionnaire on spirituality (Daily Spiritual Experience Scale) as well as a demographic survey. This mixed design study will be analyzed with a 2X3 ANOVA with the two treatment conditions as the between subject variable, and time as the within subject variable. A secondary hypothesis, based on the original use of mandalas as a *yantra* (a spiritual tool), is that those who score high in spirituality will also experience more calming effect from the mandala treatment condition.

12. The relationship between convergence insufficiency symptoms and stress states during prolonged vigilance performance  
*University of North Dakota*  
Sustained vigilance performance is a crucial component of several occupations (e.g., special forces operators, drone pilots) and relies on oculomotor functioning. The purpose of this study was to examine how symptoms of oculomotor deficits relate to subjective stress states while participants performed a 58-minute vigilance task. Participants (*N* = 15) completed a self-report measure of task induced stress, which measured the constructs of distress, worry, and task engagement, prior to and after completing the vigilance task as well as self-report symptoms of convergence insufficiency (CI). Results indicated symptoms of CI were negatively correlated with task engagement (*r* = -0.56) but were not correlated with distress and worry. These result support the findings of previous literature showing individuals with CI symptoms exhibit inattentive behavioral symptoms. Task engagement plays a vital role in vigilance performance; therefore, future research should continue exploring how the oculomotor system modulates cognitive states.

13. Stressors prime erroneous actions in a go/no go task  
Spenser Kallander, Robert J. Klein & Michael D. Robinson  
*North Dakota State University*  
Stressors are everywhere, so it is important to understand how stressors affect people’s behavior. Stepping in a puddle would be an example of a mild stressor and falling in a lake would be an example of a more severe stressor, and we expected more severe stressors to cause more impulsive behavior. However, this effect should be stronger among impulsive people. To investigate processes of this type, the present research paired a stressful induction of different levels of noise with a subsequent go/no go task. As noise got louder, we showed that people made mistakes and acted more impulsively on the go/no go task. Further analyses, though, revealed that stress increased errors particularly at high levels of trait impulsivity. By contrast, people with low levels of impulsivity were not affected. In total, the results demonstrate that stress can disrupt behavior, resulting in impulsive actions for certain people.
14. Age-related Differences in Multiple Object Tracking
Caroline Zamarron, Bryanna Fuentes, Kylee McLean, Kelsey Laufenberg, Asanath Huether, Linda Langley
North Dakota State University

Multiple object tracking (MOT) requires a viewer to track several target objects as they move among distractors. Young adults can typically track four to five targets simultaneously. Because age is associated with impairments in endogenous selective attention and visuospatial working memory, two key processes in MOT, we examined age differences in MOT and predicted that older adults would be able to track fewer items than young adults. Participants tracked two to five targets moving for ten seconds in a field of twelve identical objects. Age differences in tracking accuracy (with less accurate performance for older adults) increased with the number of targets, and tracking patterns suggested that older adults successfully tracked two items whereas young adults tracked three to four items. These findings suggest that older adults have reduced tracking capacity due to poor maintenance of object files.

15. Addressing the Gap in Adolescent Mental Health: Using Student Wellness Facilitators to Connect Students to Community Systems of Care
Shawn Carlson & Joel Hektner
North Dakota State University

Mental health problems are a major factor in student absenteeism, lack of school engagement, and school dropout. Access to outside mental health services can be difficult, especially in conjunction with school services. The Imagine Thriving Student Wellness Facilitator (SWF) program was implemented to bridge this gap. A SWF assesses referred students’ mental health, and connects them with community mental health care providers. This study assessed the impact the SWF program had on student well-being. Participants were 91 students in grades 6-12 from two schools in the West Fargo School District. 50 students from one school were referred by school personnel and participated in the SWF program, and 41 were recruited from the no-intervention control school. Results from repeated measures ANOVAs showed significant group by time interaction effects, favoring the program, on depression, social stress, self-esteem, and negative affect. No differences were found on anxiety, attitude toward school, and positive affect.

16. Mind Wandering During Easy and Difficult Texts
Claire Clarke, Matthew Kindem & Kaytlynn Ziegler
Concordia College

Mind wandering (MW) is the phenomenon of attentional resources drifting from processing a primary task to a non-primary task. Manipulation of task difficulty has revealed that MW occurs more frequently with easy tasks, but has a greater negative impact on performance with difficult tasks. The purpose of this study is to examine the impact of task difficulty on MW while performing a level cognitive task, specifically, reading comprehension while reading standardized texts. We hypothesized that reading comprehension will yield a different relation between MW and task difficulty than has been previously reported. MW is measured using the probe-caught method used in several previous studies. In line with this hypothesis and in contrast to previous results, MW occurred more often with difficult texts compared to MW during easy texts. However, MW had a greater negative impact on reading comprehension with difficult, rather than easy texts, in line with the previous studies.
17. Masculinity Threat and Affect Towards Gay Men: A Replication
McKenzie Peterson, John Stennes, Kristin Posthumus, Madisen Lundebrek & Heather Terrell
University of North Dakota
This study aims to replicate and reaffirm Peter Glick et al. (2007) in their research finding that when men’s masculinity is threatened, they have an increased negative affect towards gay men; more specifically feminine gay men. After demographics, all participants answered 30 questions of the BEM Sex Role Inventory Test. Participants then received bogus feedback; either a feminine personality, or a masculine personality. Afterwards, they answered 20 questions relating to attitudes of three different descriptions: one masculine gay man (MGM), one effeminate gay man (EGM), and one average heterosexual man (AHM). After analyzing 57 participants’ data using a repeated measures ANOVA with a between-subjects factor, there was no main effect for feedback, and no interaction, but there was a significant main effect for target description. Regardless of masculinity threat, it was found that both gay male descriptions were rated lower in favorability/likeability, with the feminine gay man description rated lowest.

18. Cholinergic Involvement in Spatial Memory Retrieval in the Water Maze
Hailey Glewwe, Christine Buching, & Annika Benson
Concordia College
Alzheimer’s Dementia, a neurodegenerative disease characterized by memory loss, is associated with a loss of cholinergic function in the basal forebrain. Previous research and treatment attempts for Alzheimer’s Dementia have targeted the cholinergic system in the basal forebrain. The present study further investigates the effects of intracerebroventricular administered scopolamine, a cholinergic antagonist, on rat spatial memory retrieval in the Morris water maze. Not only did control and treated rats learn the water maze, but scopolamine significantly inhibited spatial memory retrieval. Further steps of this study analyzed the activity of matrix metalloproteinases -3 and -9 within the hippocampus during spatial memory retrieval and spatial memory retrieval inhibition as instrumented by scopolamine.

19. Experiential Learning Predicts Higher Empathy and Lower Anxiety
Kiara Timmerman & Mona Ibrahim
Concordia College
In our increasingly diverse world, engaging responsibly with others, adopting values that can strengthen community relationships, and helping build a society responsive to multicultural and global concerns are important skills for students to develop. Previous research has pointed to the importance of experiential learning with diverse others in helping students develop these skills. This poster will present quantitative and qualitative data from a study examining the effectiveness of experiential learning at Concordia. Data from a global perspectives course that did not include an experiential component were compared to data from a similar course that included a requirement for students to engage with the F/M community for at least 40 hours throughout the semester. The students in the experiential course interacted with Muslim immigrants/refugees at a local adult education center. Students in both the experiential and non-experiential courses completed pre and post measures of anxiety toward Muslims and of ethnocultural empathy. Scores on these quantitative measures indicated a significant relationship between experiential learning on the one hand and reduced intergroup anxiety and increased ethnocultural empathy on the other hand. In addition, qualitative data from student journals were analyzed in order to gain a deeper understanding of which aspects of experiential learning were most impactful and in which areas students experienced the most gains. The journals were coded and analyzed by two researchers, in order to ensure dependability. This study helps increase understanding of how higher education courses can foster the development of more ethnocultural empathy and less prejudice among college students.
20. Need for Meaning and Goal attainment  
Nathan Kringstad, Taylor Nelson, & Clay Routledge  
North Dakota State University

Previous studies have shown that meaning in life is an essential component in overall well-being. In order to fulfill the need for meaning in life, an individual can work to attain specific life goals. An individual’s relative need for meaning in life and what they choose as their long-term goals can vary. This study aims to connect individual’s need for meaning and their long-term life goals. This study used a student sample ($N = 399$; $248$ females; $M_{age} = 19.03$, $SD_{age} = 2.40$). To test this, we measured the need for meaning and the participants’ specific goals they hope to accomplish over their lifespan and how important those goals are. Overall, the need for meaning was correlated with intrinsic and health goals, but not extrinsic goals. Additionally, we identified gender differences and an interaction. This work has important implications for how individuals find meaning.

21. Perceived Sexual Aggression and Platonic Touch in Men  
S. Alameda, Monica Vega & Sarah Edwards, Ph.D.  
Minnesota State University Moorhead

Cultural expectations and scripts regarding non sexual touching differ for men and women. Men generally have fewer opportunities to give and receive platonic touch in both opposite sex and same sex interactions. This lack of platonic touch has never been studied as a potential variable in expressions of sexual coercion and aggression some men engage in. This pilot study examines men’s perception of availability of non- sexual touch in their lives and how this relates to their acceptance of rape myths and judgments of common scenarios of sexual aggression scenarios. Implications for further research are discussed.
Afternoon Paper Session (Mandan, 2:45-4:00 PM)

1. Bats, Balls, and Substitution Sensitivity: A Replication Study
Jessaline Backer, Emily Moyer & Taylor Courier & Mona Ibrahim
Concordia College
Replication is necessary to confirm the results and the findings of the original study are robust, especially when a study has been cited as frequently as the Bats, Balls, and Substitution Sensitivity study (De Neys, W., Rossi, S., & Houdé, O. (2013). Bats, balls, and substitution sensitivity: Cognitive misers are no happy fools. *Psychonomic Bulletin & Review*, 20(2), 269–273. doi:10.3758/s13423-013-0384-5). This study is analyzing if people detect an error in their answers to the questions that are designed to provoke a wrong answer through substitution. Each participant answered two math questions, a control and a standard question which is designed to encourage substitution. They then rated their confidence level with each answer. We hypothesize that a majority of participants will give the incorrect response on the standard version of our question and that confidence ratings will be lower for that question. This will indicate people can detect errors on a subconscious level.

2. Directed Forgetting in Anxiety
Justin Boe & Jeffrey Johnson
North Dakota State University
Previous research has shown that anxious individuals display an attentional bias toward potentially threatening sources of information in the environment (see review in Cisler & Koster, 2010). Additionally, other work (Stout, Shackman & Larson, 2013; Stout, Shackman, Johnson & Larson, 2015) has suggested that dispositionally anxious individuals may be less efficient than non-anxious individuals at keeping threat-related information out of working memory. However, it remains unclear whether highly anxious individuals have similar difficulties keeping threat-related information out of longer-term forms of memory for episodic information. In the present study, we are using the item-method directed forgetting paradigm (Basden, Basden & Gargano, 1993) to examine the relationship between anxiety and the voluntary suppression of encoding and storage of threat-related information (fearful faces) in long-term memory.

3. How Routines and Intentions Impact Health Behaviors: An Illustration with Factors Predicting Food Safety Behaviors
Matt Laden, Anna M. Semanko & Verlin B. Hinsz
North Dakota State University
An important health behavior is peoples’ safe handling of the food that they consume. Prior research suggests that routines and intentions are key factors in predicting food safety behaviors. However, the facilitators and constraints in the situation may help or hinder how routines and intentions impact these behaviors. These factors, along with cognitive effort, were assessed in an extensive survey completed by a sample of 285 primary food handlers and preparers in the home. We predicted that intentions and routines would directly predict food safety behaviors and that cognitive effort, facilitators, and constrains would have an indirect impact on food safety behaviors. Reliable composite score measures were constructed for each of the variables. The tests of the direct and indirect effects on food safety behaviors will be demonstrated with multiple regression. The results of this study will help us understand how routines and intentions impact an imperative health behavior.
4. Social Context Does not Influence Construction of Novel Faces
Connor O’Fallon, Benjamin Balas & Laura Thomas
North Dakota State University
Social contexts can influence how observers perceive faces. For example, using an established relationship between perceived aggression and facial width-to-height ratio, Balas and Thomas (2015) found that playing a competitive game with a confederate led observers to reconstruct the confederate’s face in a more aggressive configuration. In an extension of this study, we examined whether the effects of social context on face perception generalize to faces outside of the immediate social situation. 126 female undergraduates played a ball toss game competitively, cooperatively, or neutrally with another participant. A facial reconstruction task was then used to investigate face perceptions of a referee confederate and two novel faces. Overall, there was no evidence that social context influenced performance on the reconstruction task for either confederate or novel faces. These findings not only fail to support the possibility of a generalization effect, but also fail to replicate confederate effects from the previous study.

5. Detecting Suicidality and Impulsivity in Unfamiliar Face Images
Hannah Pearson & Benjamin Balas
North Dakota State University
Suicide is a leading cause of death in the United States today. “Detecting Suicidality From Facial Appearance”, found that observers were able to accurately determine whether or not unfamiliar face images depicted individuals who had died by suicide (Kleiman & Rule, 2013). We replicated two of their tasks using their original stimuli. We expected observers would be able to accurately determine whether or not an unfamiliar face image depicted an individual who had died by suicide. Additionally, we included a confidence rating for each trial. We also expected observers would rate unfamiliar face images of individuals who had died by suicide as more impulsive than images of those who had not. We also extended Kleiman & Rule’s study by including a 2AFC task, in which observers chose which of two faces had died by suicide rather than stating “yes” or “no” for individual faces as in the original task.

6. The Impact of ‘Being in a Group’ versus ‘Thinking of Being in a Group’ on Decision Making
Arin Tamimi, Anna M. Semanko & Verlin B. Hinsz
North Dakota State University
Research indicates group decisions differ from individual decisions in pattern and degree. When processing information such as judgmental heuristics, it has been shown that groups tend to exaggerate the response patterns that are prevalent among similarly treated individuals. This presentation examines whether individuals who are asked to imagine being in a group will follow the same response pattern of exaggerating the tendencies of individual information processing. Undergraduate students responded to base rate items that can demonstrate the exaggeration tendency. One condition asked students to imagine being in a group whereas another condition included photos of four other students who were a part of their ‘imaginary’ group. Analyses will demonstrate whether the group exaggeration pattern occurred for the base rate items and whether the ‘imagine being in a group’ conditions produced response patterns similar to group exaggeration. The findings will help us understand the relationship between thinking and being in groups.