Neumann University Presents the Seventh Annual

LEAD Conference

And Poster Symposium

"Leading the Way..."

Presented by the Neumann University Honors Association in Cooperation with the Office of Academic Affairs

April 26, 2018

Order of Events

2:40 PM	Registration (Bachmann 315)
2:50 PM	Welcome and Overview (Bachmann 315)
3:00 PM	Presentation Session (Bachmann 315)
4:30 PM	Poster Symposium (Student Multipurpose Hall, Bruder Life Center)
6:15 PM	Presentation of Certificates and Awards (Student Multipurpose Hall, Bruder Life Center)
6:30 PM	Conclusion

Oral Presentations

3:00 – 4:15 p.m.

Bachmann Main Building Room 315

THEOLOGY

HNR 330 – Honors Theology Seminar: *Laudato Si'*/Care for Creation
Supervising Professor: Dr. John Kruse

Brittany Naimoli
Exploring International Responses to Climate Change in Relation to Pope Francis' Laudato Si'

The purpose of this presentation is to examine three different countries and see how they care for creation compared to Pope Francis' *Laudato Si'*- Haiti, Germany, and the United States. The hypothesis is that each country has a different method when it comes to dealing with issues such as poverty and climate change. A short example would be the difference between the United States and Germany. Germany is considered a leading power in the fight for climate change and uses 27% of its electricity from renewable resources (Kunzig, 2017). On the other hand, President Trump decided to withdraw America from the Paris agreement, causing an uproar from many environmentalists. Caring for creation is a fundamental human duty that has been lost through the years and although countries have different political views, they need to work together to find a solution before a devastating climate phenomenon occurs. This paper will explore how each of the three countries respond to climate change and how they relate to *Laudato Si'*.

HONORS PROGRAM

HNR 320 – Junior University Honors Seminar
Supervising Professor: Dr. Richard Sayers

Dami Omole
Smashing the "Glass Ceiling": Does It Still Exist in the 21st Century?

The term "glass ceiling" is used to refer to an invisible barrier that places limitations on the advancement of women or minorities (racial groups) in workplaces such as corporations and other organizations, and that is not perceived until it is reached. Unfortunately, this explicit practice of inequality and discrimination against women and racial minorities continues into the 21st century as this hard-to-see barrier keeps women/racial minorities away from further opportunities, getting promotions, and pay raises due to intentional or unintentional attitudes, stereotypes, and practices.

The limitations on advancement that women and minorities encounter as a result of the effects of the "glass ceiling" are somewhat similar. The barriers that hinder women and racial groups include prejudice, harassment, presumed incompetence, and resistance to their leadership. Although these two groups are blocked by this same invisible “glass,” they face it in different ways. For instance, men are promoted more quickly than women even with equivalent qualifications due to conservative views or stereotypes, while the “glass ceiling” for racial groups is due to marginalization which excludes them from obtaining more advanced positions. Discussion can shed some light onto this issue and come up with solutions to help to continue to shatter this “glass.”

HNR 220 – Sophomore University Honors Seminar
Supervising Professor: Dr. Richard Sayers

Tanasia Evans
The Cancer of America: The Subtle Tumors of Racism Damaging the American Body

It is a common belief that racism is unquestionably wrong; however, there are still people who take part in racism extensively. In fact, everyone has taken part in racism throughout their lifetimes; it just has not been made obvious yet. Those who have taken part in racism, experienced it, or witnessed it see it as hatred, ignorance, and violence. To others, racism is just a word used when one race wants to be pitied. If racism were looked at for what it really is, then there would be a lot less confusion. Racism is a cancer and though it has infiltrated many bodies, it seems to continue to damage the American body the most.

American is known as the melting pot of the world due to all the different people and cultures that gathered here. America's diverseness is its foundation, along with the hate and violence that built it. That violence and hate toward people was eventually titled racism. Racism is a cancer and should be looked at as such. Racism is a cancer because it infiltrates the body and its ignorance is manifest like bad cells. America has been in a state of remission from the cancer of racism; however, there has been a recurrence of tumors in the American body--through a corrupted justice system, entertainment industry, and society. The way to beat any illness is to accept that there is a problem and acquire the knowledge to get well.

Rachel Wolters
Is Animal-Assisted Therapy Effective?

People are growing accustomed to the utilization of animals in therapy for a wide variety of disabilities and disorders to improve the physical, mental and emotional health of individuals. Commonly, animals have been utilized for those who have hearing or visual impairments. However, animals have also been utilized by individuals for psychological and/or physiological support. Quite often, people misperceive the difference or do not even recognize that a difference exists between service animals and therapy animals. A service animal is any animal that is instructed to complete specific tasks for the well-being of an individual with a disability (Brennan & Nguyen, 2014). A therapy animal, on the other hand, can comfort individuals and help them to a more stable and relaxed state. Therapy animals have been known to help individuals with autism, depression, epilepsy, post-traumatic stress disorders, and with physical and verbal abuse.

Animal-assisted therapy, when appropriate, can be very beneficial towards patients who struggle with a disability or disorder. This presentation will offer information about the potential positive and negative affects animal therapy may have on others.

Poster Symposium

4:30 – 6:30 p.m.

Student Multipurpose Hall, Bruder Life Center

BIOLOGY

BIO 460 - Biology Senior Seminar Capstone
Supervising Professor: Dr. Sandra Weiss

Jenna Campbell
The Bactericidal Properties of Milk on Escherichia coli

The presence of antibiotics in milk products is routinely evaluated for and can also be tested in a laboratory environment when cultured with *Escherichia coli*. The purpose of this experiment is to determine whether there is a significant difference in bactericidal properties between organic, non-organic, raw, and non-dairy milk. *E. coli* was cultured in a 5mL saline normal tube and then 1mL of the inoculated saline was added to each 2mL milk sample. Each milk variable was plated on BBL TSA in three trials. This study investigated the bacterial growth among each milk product inoculated with *E. coli* at one-hour, 24-hour, and 48-hour intervals. The colony counts of each trial were obtained and averaged for the specific time interval. Results were analyzed through ANOVA ($P < 0.05$) in Excel and there was no significant difference between the organic, non-organic, raw, and non-dairy milk ($P = 0.076$). Although antibiotics or bactericidal properties could have been present, the fermentation of lactose would result in the production of acid. This change in pH would ultimately prevent the antibiotics from hindering the bacterial growth. If there were any antibiotic residuals in the milk samples, their nutritive properties may have overwhelmed any potential inhibition. Future implications include culturing milk samples with a different bacteria or an extraction method used to isolate antibiotics from the milk and concentrate it; thus enhancing its biological activity.

Alexandra Casper
Comparing the iChem Velocity with the Manual Hemastix Method to Detect Myoglobin

Myoglobin is a protein found in cardiac and skeletal muscle. If muscle cells are damaged, myoglobin is released into the blood. The kidney removes excess myoglobin from the blood and filters it into the urine. Myoglobin in the urine is known as myoglobinuria also known as rhabdomyolysis. Myoglobinuria can be caused by traumatic crush injuries, muscle trauma, high voltage electric shock, severe burns, and muscle disease. Myoglobinuria gives a positive blood reaction on reagent strips, which is the same reaction as hemoglobinuria. This study compared the automated Iris iChem Velocity with the manual hemastix method to determine if myoglobin was present in the urine. Ten urine samples were tested that had a dark red brown pigmentation. The pH of the urine was adjusted to between 6.5-7.5 and tested by both methods to determine if blood was present. Ammonium sulfate was used to filter out hemoglobin and the specimen was retested

manually and on the iChem Velocity. Both methods confirmed the presence of myoglobin with no differences in the results. It appears that the iChem Velocity will perform equally well as the manual for differentiating myoglobin from hemoglobin. Since a small sample size was used in this study, the recommendation is to repeat this study with a larger sample size.

Vanessa Damiani

Comparison of the Ortho Vision Automated Gel Column Technique with the Manual Tube Technique for ABO/RH and Antibody Screening Testing

ABO/ Rh blood grouping and antibody screening is performed to ensure compatible blood transfusions. The standard conventional tube technique has been known to cause false negative results due to improper technique. However, automated techniques reduce human error and improve ABO/ Rh blood grouping and antibody screening results. The purpose of this comparative study was to evaluate the Ortho Vision automated instrument using gel column agglutination technique with standard manual methods using the conventional tube technique. Thirty specimens were collected. Serum was separated from the red cells. ABO/ Rh blood and antibody screening tests were performed using both methods following the recommended procedures of the American Association of Blood Banks. The results were analyzed using SPSS Statistics 22 software. The non-parametric Wilcoxon signed ranks test determined that the Ortho Vision gel technique and the manual conventional tube technique interpretations were in agreement for forward typing with anti-A, anti-B and the antibody screening tests. However, the results from the anti-D, A and B Cells did show differences between the two methods. The Ortho Vision gel technique produced 4+ grading results for testing anti-D and the reverse grouping of the A and B cells as compared to 1+ or 2+ reaction with the manual technique. The forward grouping and antibody screening results were in concordance, but the anti-D and reverse groupings were statistically significant. Overall, the automated gel technique method produces a more avid antibody response than the manual technique for the anti-D and reverse grouping test, which suggests a more accurate and reliable test results with the automated gel technique. Since this study was limited by its small sample size, further research is needed to determine specificity and sensitivity of the methods.

James Dill

Correlation of Electroencephalography (EEG) Changes with Different Activities

Electroencephalography (EEG) is a tool used to measure the brainwaves of a patient. This procedure is usually done to detect neurological as well as some psychiatric disorders. An EEG detects the electrical activity within the brain and displays it as the 5 brain waves: alpha, beta, gamma, delta and theta. Brain waves can fluctuate due to multiple factors, such as mental state, how one is feeling and what actions one is performing. This study intended to determine how the brainwaves fluctuated in response to performing different activities. Four participants from the Bio 460 Capstone class were recruited for this study. EEGs were recorded while they performed certain actions. The actions performed were thinking, listening to music, meditating and consuming a caffeinated beverage. The amplitudes from the different brainwaves were measured, plotted on graphs, and analyzed for R^2 and r values. Slight correlations were seen with participant 1's alpha, beta and delta waves. Medium strength correlations were seen with all of participant 2's waves, participant 3's delta and theta waves and all of participant 4's waves. Strong correlations were seen with participant 3's alpha and beta waves. However, the manner of correlations (positive or negative) is uncertain. Furthermore, the use of linear features in analyzing the brainwaves, which are described as non-linear, may detract from the accuracy of the results from this study. Despite that, this study is a good starting point for future research that could aim to analyze the EEG amplitude changes using non-linear features and a larger population size.

Danielle Hall

Evaluation of the Automated iSED Analyzer Compared to the Manual Westergren Erythrocyte Sedimentation Rate

Automation is important in the clinical laboratory because of the demand for accurate results in less time. The Erythrocyte sedimentation rate (ESR) is one of the most common nonspecific tests performed in the hematology laboratory that monitors inflammation within the body. The manual ESR measures the distance in mm that an RBC drops in one hour while the automated iSED method measures the aggregation intensity of red blood cells in twenty seconds. In both procedures, the values increase with increased protein or acute phase reactants in the plasma. The purpose of this study was to validate the automated ESR instrument, iSED, to replace the Westergren manual method. Seventy-seven EDTA specimens were collected and ESR results were compared by both methodologies. A precision test was also performed on the iSED. Results were analyzed using Bablok regression analysis. Pearson correlation denoted good correlation between the two methods (r = 0.90). Therefore, the iSED is a comparable replacement method to the manual Westergren method for red cell sedimentation. The iSED has the ability to measure the ESR within 20 seconds, limits the chance of human error, and needs less sample. Future implications would be to determine precisions tests on the manual Westergren and to do a cost comparison between the two methods.

Alyssa Lepore

Analytic Validation of Institution's Reference Intervals Using VerifyNow Platelet Function Assay

Platelet reactivity assays are common hemostasis tests that evaluate patients' abilities to form thrombi in the presence of platelet agonists. The goal of this research was to determine the validity of an institute's reference range for the VerifyNow System PRUTest. A total of twenty normal anticoagulated whole blood specimens and twenty abnormal anticoagulated whole blood specimens were chosen randomly for this validation. All specimens used were demographically relevant to the institute's surrounding population. All abnormal specimens were from patients under some form of clopidogrel therapy. Results were analyzed to obtain mean, standard deviation, and the coefficient of variation to determine validity of the institute's reference range. The significance of PRU scores are used clinically to assess a patient's risk for bleeding or thrombotic events and are paramount for improving patient prognosis.

Alexandria F. Martinez

White Blood Cell Differentials of Pediatric EDTA Specimens Using Manual Microscopy and CellaVision DI-60

White blood cell differentials are a common laboratory test performed daily to aid in the clinical status of a patient. The goal of this research was to determine the overall most effective and accurate method for counting and categorizing white blood cells (WBC) in pediatric ethylenediaminetetraacetic acid (EDTA) blood specimens between the manual microscopic and the CellaVision DI-60 methods. Twenty-five EDTA specimens were randomly chosen from pediatric patients ranging from 3 days to 2 months old. Duplicate 5-part differential testing was performed using the same slide on a CellaVision DI-60 as the manual microscopic 5-part differential. Results were analyzed using paired t tests with SPSS 22 software. Significant differences $P <$ 0.05 between manual and CellaVision Di-60 counts were seen with bands, eosinophils and basophils, but no significant differences were seen with segmented neutrophils, lymphocytes and monocytes. The significance found between the methods in the eosinophils, basophils and bands is likely due to the low numbers of these cells normally found in blood specimens. Since there were no differences in the methods among the segmented neutrophils, lymphocytes and monocytes, which an increase or decrease would suggest clinical significance, this study confirmed that differentials performed by either method would be similar and

reliable. Future implications include comparing cells counts of the manual methods with the CellaVision DI-60 after reclassification of cells by the user, analyzing the clinical significance using reference ranges of each white cell type, and comparing the cost of each method.

Jennifer Ney
Comparative study of Blood Gas Analyzers, Radiometer ABL 90 FLEX and the Radiometer ABL 837 FLEX

Blood Gas testing measures the amount of oxygen and carbon dioxide as well as the acidity of the blood. Blood Gas analysis is important in diagnosing as well as monitoring a patient's condition in acute distress. Although arterial Blood Gas (ABG) analysis is the "Gold Standard," several studies have explored the possibility of using venous samples instead of arterial samples. For blood gas analysis there are point of care (POC) instruments that are used right at the bed side such as the Radiometer ABL 90 FLEX. There are laboratory instruments that are larger and are usually used for blood gas baseline readings. The purpose of this study was to correlate of ABG analyzers, one a point of care instrument (Radiometer ABL 90 FLEX), and the other an in-house laboratory instrument (Radiometer ABL 837 FLEX). Twenty blood samples were collected using dry, electrolyte-balanced heparin as the anticoagulant. Arterial, venous, mixed venous and capillary blood samples were tested on both instruments. For each sample, the pH, partial pressure of oxygen (pO_2; mmHg), partial pressure of carbon dioxide (pCO_2; mmHg), oxygen saturation (sO_2; %), hemoglobin (Hgb; g/dl) and ionized calcium (ICA; mg/dl) were measured. Results were analyzed using SPSS Statistics 22 software. The sO_2, pO_2, pCO_2 pH, and ICA showed positive correlation with a R^2 value of: 0.994, 0.988, 0.996, 0.97 and 0.91, respectively. The only value that showed poor correlation was the hemoglobin with an R^2 value of 0.681. This value indicated poor correlation possibly due to a pre-analytical error such as not mixing the specimen thoroughly before running the sample on each instrument. Over all, each value tested with exception of the hemoglobin is comparable between the instruments. This research suggests that a venous sample may be a safer, easier, and overall more efficient type of sample to use for blood gas analysis than the more difficult, obtained arterial sample. Further research with a larger sample size and controlled sample collection procedures is needed to determine if the results from this study are reproducible.

BIO 460 - Biology Senior Seminar Capstone
Supervising Professor: Dr. Matthew Mastropaolo

Muhammad Amin
Biological Monitoring of Macroinvertebrates

Biological monitoring of macroinvertebrates is a common method used by researchers to determine the water quality. Macroinvertebrates in the aquatic ecosystems are sensitive to various physical, chemical and physicochemical changes in the environment. Aquatic macroinvertebrates respond quickly to perturbation, provoking change in the local community structure and reducing richness to a few tolerant and generalist group. The goal of this research was to determine the water quality of Chester Creek and compare these results to previous results done in the fall and spring of 2017 by other groups. Biological monitoring of macroinvertebrates is the most accurate water quality test because of the sensitivity macroinvertebrates show to various conditions. Sampling of a macroinvertebrates gives a better indication of what happens over a long period of time, unlike sampling the water, which would only give the quality of water for approximately an hour. Due to poor weather conditions this winter and spring, there were a lack of viable samples to make any conclusions about water quality of Chester Creek.

Sarah Murray
Cost Effective Acylation of a Benzene Derivative

The acylation of a benzene derivative is the first step in developing a novel antibiotic. Acylation is the process in which an acyl group is added to a compound and is typically facilitated using a metal catalyst. A typical catalyst used in acylation is silver nitrate; however, this catalyst is expensive, making it not ideal to use for the large-scale production of the benzene derivative. The purpose of this study was to determine if a cheaper catalyst, zinc nitrate, could yield similar results to the reaction where silver nitrate was used as a catalyst. The average percent yields of the silver nitrate and zinc nitrate were 63.31% and 55.96%, respectively. The cost effectiveness of silver nitrate and zinc nitrate were $113.56 and $7.16, respectively. Statistical analysis determined that there is no significant difference between the yields of each catalyst, leading to the conclusion that the more economical catalyst, zinc nitrate, could be substituted in place of the silver nitrate for the production of the benzene derivative.

Adam Robinson
The Effect of Sports Drinks on the Heart

There are many factors that can affect heart rate and blood pressure. The goal of this project was to examine the effects of a commonly consumed sports drink on the heart rate and blood pressure in healthy male individuals. The data was collected through two separate machines, one being a standard, electronic, automatic blood pressure monitor with cuff and the other being a BIOPAC system, over a 15-minute time period. The machines recorded blood pressure, both systolic and diastolic, as well as the heart rate and an electrocardiogram (EKG). The Delta T was measured in both R-R waves and P-R waves from the QRS complex and showed no significant data. The results indicated that there was no statistical significant effect from consumption of the sports drink on the heart rate and blood pressure. Since there was no significant data collected, this study confirmed that sports drinks would not alter the EKG and blood pressure.

LaRita Snypse
Examining Different Variables That Affect Heart Rate

Heart rate (HR) is the number of times someone's heart beats per minute. HR changes in accordance to the body's response to environmental and emotional changes. How will different physiologic conditions affect HR in female students? Seven female college students underwent 6 different psychological conditions: (1) normal vs. (2) impaired breathing, (3) sad vs. (4) happy music, and (5) cold vs .(6) warm water. HR measured with Electrocardiogram (EKG) using a BioPac System. All women experienced a lower HR with the nose clip. A majority of the women experienced a lower HR with the sad song and cold water and increased HR with the happy song and warm water. This study shows that availability to oxygen, emotions and temperature affects HR. The results of this study also demonstrate that different psychological conditions affect the heart rate of each subject differently.

EDUCATION

SPEC 310 – Inclusive Education
Supervising Professor: Dr. Daniel McKee

Aalyssa Moyer
Examining the Effects of Bullying for Students with LD and the Instructional Implications for Teachers

"Peer victimization within schools occurs at a rate of 2.4 instances per hour with a total of 10%-20% of youth being persistently tormented" (Storch and Geffken 2008). Many of these occurrences are with students with learning disabilities. Bullying is a serious and widespread issue that plagues schools across the nation. This is particularly true among children with disabilities who are bullied at statistically higher rates and are at an increased risk of being targeted when compared to their peers without disabilities. This study will specifically examine the impact of bullying on students with disabilities and will offer strategies for dealing with this problem.

Victoria Schneider
Taking Universal Design for Learning from the Classroom to the Playing Field

It is important to stay healthy. However, children living with disabilities get significantly less exercise than that of their typically developing peers. The solution may seem simple, such as having everyone participate in sports; but there is more to it. Children living with LD may experience difficulties with social, physical, and cognitive skills. These detriments affect all areas of life, even athletics. Students can struggle with things like being part of the team, the physical demands of the sport, and following different direction. These struggles lead to a huge gap between them and their non-disabled peers. Combating these inequities can be done by turning to the classroom. Teachers know that because everyone learns differently, and that they must adjust their lessons accordingly. One popular practice is Universal Design for Learning, UDL is a method that provides equal opportunities for all students to learn because teachers create flexible curriculum that meets the needs of every student. UDL can be practiced by using multiple means of representation, multiple means of actions and expression, and multiple means of engagement. Teachers need to present information and ask students to show their understanding in ways that give every student a fair shot at success. UDL has been proven to be extremely successful in the classroom which is why this poster presentation will focus on different ways that UDL can be translated to athletics to give every child the best chance at a healthy life.

Rebecca Woodland
Popular Literature to Inspire Teachers: Examining the Wonder Books

Popular literature can be helpful in guiding educators in their teaching. The Wonder books are examples of popular literature that can inspire and guide teachers in their work with children who have special needs. Teachers will face many challenges, and one in particular pertains to the inclusion of students with special needs in the general education classroom. One problem that can occur in the classroom is bullying. This is an issue that often happens with children who seem "different" than their peers. As teachers, it is our job to ensure that bullying does not occur in our classrooms. No child should be judged by what she or he looks like, but rather, what she or he is capable of doing in the classroom. This series cites some of the challenges children with special needs experience, along with perspectives of other students. An examination of these

experiences and perspectives can provide valuable insights for teachers in effectively creating positive learning environments for all students.

Lauren Vanstone
A Survey of Pertinent Literature to Examine Aspects of Effective Inclusion

The inclusion of students with disabilities can be a complex undertaking with many variables affecting successful outcomes. Three of these variables include the nature of the curriculum, transitioning of students from special education to general education settings, and the dispositions of the students themselves when they are included with their peers. This survey of pertinent literature describes three studies that address these important variables.

HONORS PROGRAM

HNR 320 - Junior University Honors Seminar
Supervising Professor: Dr. Richard Sayers

Victoria Basciano
Birth Behind Bars: The Treatment of Pregnancy in Prison

Have you ever wondered what happens to a woman in prison who is pregnant? Does she earn the right to visit a doctor? Is she respected, or is she mistreated because she has a criminal history? Misconceptions regarding the health care system in prisons abound; many documentaries and TV series take a look into correctional facilities, but they do not always express the level of care inmates receive. This presentation examines how incarcerated mothers and their infants are treated.

The treatment of mothers and infants in the prison system is a controversial issue. The mother's prenatal care is a direct reflection on how the infant will be at birth. Programs are being developed to promote the health and wellbeing of babies and their incarcerated mothers. In a review of prison nurseries, Fritz & Whiteacre (2016) identify three primary benefits of these programs: "(a) possible increased attachment between mother and baby; (b) improved parenting efficacy; and (c) reduced recidivism among mothers." Instead of pointing fingers, it is important to get to the root of the problem by discovering if there is a relationship barrier between babies and mothers who are incarcerated, and if being in prison affects the child at birth.

PSYCHOLOGY

PSYCH 401 Honors Seminar – Critical Thinking in Psychology
Supervising Professor: Dr. Etsuko Hoshino-Browne

Kianna Caiby, Nayeli Garcia, and Kelley Smith
Motivation to Use Social Media and Self-Esteem

Past research on self-esteem indicated that people have a fundamental need to belong to social groups and connect to others (Baumeister & Leary, 1995). Social media is a great tool for people to connect to others. However, social media can influence people's self-esteem (Gonzales & Hancock, 2011; Toma, 2013), perceived social support (Wohn, Carr, & Hayes, 2016), social feedback (Barry, Doucette, Loflin, Rivera-Hudson, & Herrington, 2017), and desirable body image (Bevelander, Anschütz, Creemers, Kleinjan, & Engels, 2013; Strubel, Petrie, & Pookulangara, 2016). These findings seem natural given the fact that people are concerned about how others view them on social media (Metzler & Scheithauer, 2015). Some studies indicated that narcissistic individuals' self-esteem increases and they engage in more self-presentation when they receive more "likes" on their posts (Barry et al., 2017). While past studies clearly demonstrated that social media affects people's self-esteem, it is unclear what motivational factors are related to their use of social media. Therefore, a correlational study has been conducted to examine an association between people's motivation to use social media and their levels of self-esteem. One hundred and two Neumann University students have filled out an online survey. The results of bivariate correlational analysis will be reported. Implications of the findings will be discussed.

Erin Dewson, Kimberly Kasnic, and Sarah McIlhenny
The Relationship between Social Media Usage and Emotional Infidelity

Today, as the popularity of social media such as Facebook or Instagram indicates, social media can certainly help people stay connected with others. However, social media not only has benefits but also drawbacks for human relationships. Past research indicated that Facebook can be intrusive to daily lives, may reduce relationship satisfaction, and increase relationship conflict (Clayton, 2015; Clayton, Nagurney, & Smith, 2013; Elphinston & Noller, 2011). Facebook was also found to prolong the pain of breakups of romantic relationships (Fox & Tokunaga, 2015). Moreover, some studies found that social media may be used for identifying potential sexual partners or for infidelity (Drouin, Miller, & Dibble, 2015). Psychological research on social media has become popular in recent years, but most studies examined older types of social media such as Facebook. Younger generations such as college students tend to use new age social media like Snapchat more than Facebook. Therefore, a quasi-experiment has been conducted to compare similarities and differences between Facebook users and Snapchat users in the degree in which they engage in emotional infidelity. One hundred and two Neumann University students have filled out an online survey. The results of t-tests will be reported. Implications of the findings will be discussed.

Alison Frey, Briana McMahon, and Moriah Rhodes
The Association between Self-Presentation on Social Media and Social Comparison

People have a natural tendency to present themselves in a socially desirable, positive way. Past research indicated that people are most concerned with positive self-presentations when they are dealing with strangers or less familiar individuals than friends and family members (Leary et al., 1994; Tice, Butler, Muraven & Stillwell, 1995). Ubiquitousness of social media today may encourage people even more to engage

in positive self-presentation as one can see in the popularity of selfies. Some studies demonstrated that when college students present themselves in a more positive but also authentic manner on Facebook, they would likely experience higher self-esteem (Park & Lee, 2014; Yang, Holden, & Carter, 2017). However, too much bragging may result in a negative impression. Past studies in impression management indicated that not only bragging but also humblebragging could lead to unfavorable impressions (Sezer, Gino, & Norton, 2018; Scott & Ravenscroft, 2017). How do people engage in self-presentation on social media, and how is it related to their social comparison? This question has been examined in a correlational study. One hundred and two Neumann University students have filled out an online survey. The results of bivariate correlational analysis will be reported. Implications of the findings will be discussed.

PSYCH 460 - Psychology Senior Seminar Capstone
Supervising Professor: Dr. Amanda Breen

Arielle Athanas, Rebekah Lucas, and Shayne Sullivan
Intervention to Increase Physical Activity

The intervention topic we chose was a way to increase physical activity. The goal of this observational study was to increase physical activity by getting students, faculty, and visitors at the Neumann University library and RAB lobby to use the steps instead of the elevator. One sign was created that stated the benefits of physical activity "Stay active, take the stairs!" This sign stated that walking up one story of stairs can burn up to 10 calories. The first week, we did a pre intervention with no poster and watched the amount of people who took the elevator and the amount of people who went straight to taking the stairs. The second week was where we used the poster and counted the amount of people to take the elevator versus the stairs. The third week was our post intervention week, where we didn't use the poster and counted the amount of people to use the elevator versus the stairs. Our findings did confirmed our hypothesis in terms of bringing awareness of the benefits of using the steps for physical activity. Our intervention made more people want to take the steps instead of the elevator.

TaJahna Brayboy, Jasmair Holbrook, and Briana Muhammad
Preventing the Spread of Germs

Past research has shown that by using visual aids and self-efficacy to promote healthy hygiene habits, people are more willing to engage in behaviors that will increase, their likelihood to take precautions in helping to stop the spread of germs. An observational study was conducted to examine the behaviors of college students in the presence of a visual aid that is promoting hygiene and displaying self-efficacy. Neumann University students were observed to see how many students would use the disinfectant wipes provided by the library to wipe down their keyboard and mouse before using them, in the presence of a vibrant colored and decorated posters. We predicted that the highest usage of the disinfectant wipes would be when the posters were present. We also predicted that the usage would be lower before and after the intervention.

Alexis Damask, Maria Perez, and Maya Floyd
Elevator vs. Stairs

The goal of this study was to find out if people's behavioral actions could be positively altered by slogans and pictures. The slogans and pictures contain motivating words and images. This study took place over the course of five weeks. Data was collected at the same time each week based off of Neumann University's course schedule. Collecting data at the same time each week allowed for more accurate results because the same students, staff, and faculty were observed. The objective was to increase the usage of stairs and decrease the usage of the elevator. By taking the stairs, people would enhance their level of fitness. Prior to hanging up slogans and pictures, data was collected to generate a baseline of the amount of people who take the stairs and elevator. During the intervention, data was collected of the number of people who took the stairs and elevator while the slogans and pictures were hung up. Throughout the post-intervention, once again data was collected of the number of people taking the stairs and elevator. Through the purpose of this study, the goal was to change people's behavior from taking the elevator to taking the stairs. By altering people's behavior to taking the stairs, people will see an increase in their level of health.

Elizabeth Dang, Gabrielle Nuscis, and Taylor Solomon
Disinfecting Cafeteria Tables

Past research indicated that through hand washing and personal hygiene germs and bacteria can be eliminated. In this paper, an experimental study is proposed to look at how an informative poster can increase the desire for individuals to wipe down tables. The sample in this study are Neumann University students and staff members. The study is spilt into three interventions. Pre - intervention, intervention, and post - intervention. During the first two weeks of pre-intervention, the number of participants wiping down the tables was low, during the next two weeks, the number of participants who wiped down the table was high due to sanitary wipes being provided and posters with informative information, and during the last two weeks of post - intervention, the number of participants wiping down the tables was lower than the intervention week but higher than the pre-intervention week. Results showed that when an informative poster was up and sanitary wipes were provided, individuals were more likely to wipe down the tables before sitting down to eat. Implications and limitations will be discussed.

Erin Dewson, Kelley Smith, and Nelly Sonpon
Measuring Class Participation: The Use of Technology versus Hand-Writing Notes in Class

Past research shows that laptop use in the classroom has an impact on students' academic performance. In this presentation, a follow-up study will be presented which examined the role that intervention may play in students' use of laptop versus hand-writing notes in class. A sample of Neumann University undergraduate students were exposed to an intervention intended to reduce the use of laptops in the classroom. Three different undergraduate courses were observed, all a different course level. The students in these classes were observed pre-intervention, during intervention, and post-intervention. It was hypothesized that having the negative effects of laptop usage posted around the classroom, students would reduce their laptop use during class time. The results of this study indicate that the intervention had no significant effects on the students. The flaws, limitations, and implications of the study will also be discussed.

Kayla Jackson and Taylor Mastripolito
Increase Recycling at Neumann University

Past research indicated that making it easy for students to recycle will increase the likelihood of them doing it. This study examined if increasing convenience of recycling by placing a recycle bin in the room would increase the likelihood of student recycling. It was predicted that recycling would increase of in classroom bins, whether to use of signs or announcement that recycling bin were able increase participation to throw bottles in the bin and lastly if the recycling behaviors continued without being notifying the participants of bin location. A sample of Neumann students were observed. Implications of predicted results indicated that recycling behaviors increase when announcement are made and signed are used on the bins.

Taylor MacKrell and Justine Gonzalez
Recycling Plastic Is Fantastic

Brianna Marconi, Amanda Gonzalez, and Angellica Porter
Food Waste Reduction

Food service operations contribute massively to food waste management issues. The production of large amounts of edible food waste is a problem towards sustainability. The goal was to reduce food waste in Neumann University's dining facility encouraging a change in behavior using a prompt-type message intervention. This process included visiting the cafeteria every day, going out to the compost bins and measuring the amount of waste every Monday, Tuesday and Thursday of each week. Since we measured each week, during pre-intervention week, which was the first week of measuring and recording our data, there was no sign posted up in the cafeteria to help people acknowledge their waste. Following that, during intervention week, we finally posted a sign in the cafeteria to remind people of their waste, and then in the last week, post intervention week, we recorded our data, we took the sign down and continued to measure the waste to see if the results would change or lessen at all. We found that waste was reduced after we put up the sign to help students be aware of their waste. Before the sign was posted in the cafeteria, there was much more waste (pre intervention), when we put up the sign, it started to lessen (intervention stage), and after we took it back down (post intervention), there was less waste for that specific week.

Briana McMahon & Erin Rostien
Heads Up. Phones Down.

The behavior that we targeted in our intervention was phone usage and texting while walking up and down the stairways. The population of people we observed was Neumann University students. The setting of this intervention took place in the two main stairways located in the Bachmann building at Neumann University. This contained focus area ensured a more accurate collection of data. This research was a naturalist/ observation study. We observed the student's behavior while walking up and down the stairways. We collected data including how frequently students were on their phones and noted if they were texting or not. We then posted four "preventative" posters on each of the doors leading to the stairways. The posters stated *"Heads Up. Phones Down."* We predicted that Neumann students would decrease cell-phone usage while walking up and down the stairs because of the preventative posters. We found that preventative posters did decrease cell phone usage while walking up and down the stairways. One complication we came across with our study is when students hold the door for one another, the likelihood of them seeing the poster decreased and multiple students may walk through and not see it either.

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