

SEVENTH ANNUAL MALONE UNIVERSITY

STUDENT

# RESEARCH SYMPOSIUM

SATURDAY **2015** **APRIL 18**

**12 NOON - 2 P.M.**

**East Campus Multipurpose Room**

*Malone University campus*



**MALONE UNIVERSITY**  
CHRIST'S KINGDOM FIRST

[www.malone.edu/research-symposium](http://www.malone.edu/research-symposium)

## SCHEDULED **PERFORMANCES**

**12:40 p.m.**

**Levi Muriuki**

*Etude in C major, Op. 10, No. 1 and Etude in C minor, Op. 10, No. 2*

Frederick Chopin

**Jenna Beacon**

*Sonata in D Major*

*Allegro Con Brio*

Sergei Prokofiev

**1:20 p.m.**

**Seth Kenyon**

“Dialogue” and “Chiaroscuro”

Seth Kenyon

**Jessica Kapraly**

*Intermezzo in A major, Op. 18, No. 2*

Johannes Brahms

**1:50 p.m.**

**MALONE OPERA THEATRE**

Scenes from *Into the Woods*

# PROJECT **ABSTRACTS**

## **1. Kathryn Olson, Melissa Peck**

**Faculty Mentors: Susan Wechter and Kathleen Flaherty**

*Primary Care Providers' Perceptions of Shared Decision-Making*

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Shared decision-making (SDM) between health care providers and patients is an ideal framework for optimizing health. Utilization of this strategy is limited in the primary care settings for a variety of unknown, undocumented reasons. Some providers continue to treat patients paternalistically, making decisions and coercing patients to comply with medications and treatments prescribed (1). Research shows healthcare providers identify the benefits of SDM, but they fail to incorporate the technique into practice (2). There is little research addressing primary care providers' views regarding the strengths and challenges of SDM. The aim of this research is to explore providers' perceptions regarding shared decision-making related to patient adherence to prescribed medications and treatment plans. The design of this study is a qualitative exploratory design using a grounded theory approach. Semi-structured interviews are used to collect the data. The setting is primary care offices in Northeast Ohio. Primary care providers include physicians, nurse practitioners, and physician's assistants. Planned analysis is a constant comparison method with iterative immersion in transcribed interview data, exploring patterns, commonalities, and diversities. Qualitative software is utilized for identifying specific themes addressing the benefits and challenges perceived regarding SDM.

## **2. Candy Yoder, Christina Cook**

**Faculty Mentor: Stephanie Burgess**

*Do Ohio Nurse Practitioners Have Knowledge of Complementary Therapies for the Treatment of Chronic Pain?*

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As the use of complementary therapies in the treatment of chronic pain increases, it is essential that nurse practitioners have up-to-date information on safety and efficacy of treatments. A strong knowledge base is vital to providing competent care. The purpose of our study is to determine if Ohio nurse practitioners have knowledge in complementary therapies for the treatment of chronic pain and if there is a need for more formal education in this area to better serve patients.

The study uses a cross-sectional, descriptive design. Electronic questionnaires were sent to 3,324 Ohio nurse practitioners, without action or restriction to their license. The questionnaire was reviewed by a panel of CAM experts for ease of understanding, validity, reliability, and accuracy. The Cronbach's alpha is 0.929. Conclusions will be presented upon completion of the study analysis.

### **3. Lindsay Burkey**

**Faculty Mentor: Susan Wechter**

*Elementary Teachers' and School Staffs' Knowledge  
Regarding Food Allergies in Children*

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The rising incidence of food allergies among children has prompted an urgent need for management and education of this potentially life-threatening health ailment. Currently, no nationwide protocols for managing food allergies within schools exist, and the knowledge base of teachers and school staff regarding childhood food allergies has been largely unexplored. This research sought to explore elementary school teachers' and school staffs' knowledge about childhood food allergies. A descriptive study utilizing survey design was used to assess teacher and school staff knowledge about food allergy causes, symptoms, and treatment of food allergic reactions. Nearly 88% of participants correctly identified the 8 most common food allergens, and more than 75% correctly identified anaphylaxis and associated treatment. Knowledge base regarding food allergies of teachers and school staff is limited and inconsistent throughout the U.S. Assessing current understanding of food allergies through research will enhance awareness, knowledge, and education to develop clear action plans that can be implemented in caring for children with food allergies.

### **4. Rachel Kennen**

**Faculty Mentor: Debra Lee**

*Critical Care Provider Perceptions of Mental Illness*

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This research project's aim was to explore the attitudes and perceptions of health care providers towards mental illness within a critical care setting. The concept of this research is in regard to the abstract phenomena of stigma and how it is shaped by a person's attitude towards mental illness. This study measured clinicians' attitudes toward mental illness.

## **5. Melinda Muncy, Rebekah Stutzman**

**Faculty Mentor: Judy Risko**

### *Verbal Abuse against Nurses in the Acute Care Setting*

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The World Health Organization (WHO) indicates that more than half of all workers in the health sector of the workplace have experienced a violent incident at some point. Research shows nurses, in contrast to any other occupational group, are three times more likely to experience violence in their workplace. Workplace violence may be manifested in the form of verbal abuse, humiliation, bullying, and harassment. It may also result in health risks, principally emotional injury, producing feelings of low self-esteem, anger, and diminishing confidence. The purpose of this study was to examine verbal abuse experienced by nurses in the acute care setting to explore 1) if the abuse is more prevalent in the emergency department or critical care areas, and 2) the prevalence of particular reported effects of verbal abuse as perceived by nurses in a northeast Ohio hospital. The nurses of the critical care units, consisting of the coronary care and intensive care units combined, had a slightly higher percentage of experienced verbal abuse, at 96.77%, compared with that of the emergency department with 92.86%. Highest reported emotional effects on nurses are anger, powerlessness, feelings of harassment, and determination to problem-solve. There is room to further expand from this study to help nurses learn ways to cope and handle these abusive situations.

## **6. Jeffery Hershberger, Holly Lewis**

**Faculty Mentor: Beth McVan**

### *Coping Mechanisms of Bereaved Nurses in Response to the Death of a Patient*

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Studies report minimal bereavement support is available to nurses who have been subjected to the ramifications associated with caring for a dying patient. This may be malicious in nature or unintentionally bestowed upon the nurse by the affected family. Early and prompt coping techniques for high risk individuals may minimize adverse outcomes with respect to bereavement. The aim of this study was to explore and evaluate the coping mechanisms of bereaved nurses in response to the death of a patient in the hospital setting. A total of 108 nurses practicing in a Northeast Ohio hospital participated. They were given the Ways of Coping Questionnaire coupled with a demographic survey. The 66-line Likert-style survey produced raw and relative scores, which were used to extrapolate statistical measures of means, frequency distributions, and standard deviations. The resulting data reflected the initial concerns regarding broad-brushed coping mechanisms utilized by nurses in response to the death of a patient. The least utilized method of coping was the Escape/Avoidance technique with a frequency of 518. Conversely, the most heavily adopted approach, documented 747 times, was Seeking Social Support. Reliability was demonstrated by a Cronbach's alpha coefficient in excess of 0.79. The results of our study suggest little variance between coping strategies. This is indicative of a gap between a nurse's need for coping and targeted interventions. Resources utilizing evidence-based coping techniques should be promoted alongside the required unit education and made accessible to all nursing staff.

## **7. Amanda Sanders, Kerri Liggett**

### **Faculty Mentor: Judy Risko**

#### *Attitudes and Perceived Knowledge of Advanced Practice Nurses Regarding Chronic Pain Management*

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Pain is the most common symptom reported to a patient's primary care provider or emergency room physician and the leading cause of disability (Matthias et al., 2010). Chronic pain is a controversial topic of debate within the health care field. This controversy may relate to the attitudes and beliefs providers have towards chronic pain and the management plans. The purpose of this study is to explore Advanced Practice Nurses' past clinical experience, educational background, and perceptions, knowledge, and attitudes about chronic pain management. The sample population for the study included Advanced Practice Nurses who are members of the Ohio Association of Advanced Practice Nurses' Facebook and/or LinkedIn accounts. The participants accessed the survey through a link to SurveyMonkey.com. The survey contained nine demographic questions and thirty-five multiple choice questions. Forty-three respondents engaged in the survey and completed all forty-four questions. The majority (25%) of respondents have been in an advanced practice position for 0-5 years. Of the Advanced Practice Nurses that responded, 82% were certified nurse practitioners.

## **8. Erin O'Connor**

### **Faculty Mentor: Lora Wyss**

#### *The Primary Care Experience for Adults with Developmental Disabilities*

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The researcher attempted to further understanding of the primary care experience for adults with developmental disabilities through the use of a qualitative research design. Using personal interviews as the method, the researcher discussed several topics including independence in healthcare decision making, understanding of health care decisions, and importance of overall health conditions. The interview guide contained both closed and open-ended questions. The convenience sample was obtained through an agency serving adults with developmental disabilities. All participants were greater than 18 years of age and were acting as their own legal guardians. While sample size was limited due to inclusion criteria and willingness to participate, valuable information about this patient population can be taken forward.

## **9. Angela Simmerman, Janet Kubera**

**Faculty Mentor: Beth McVan**

*Childhood Obesity: Parenting Styles and Body Mass Index of School-aged Children in Rural Northeast Ohio*

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Childhood obesity is a growing public health concern worldwide. Obese children have an increased likelihood to be obese as adults leading to otherwise preventable chronic health issues such as insulin resistance and cardiovascular disease. Childhood obesity is often a family matter, and studying how family dynamics and particularly parenting styles may influence a child's weight is the focus of this research. The purpose of this study was to determine if parenting style had any correlation to Kindergarteners' body mass index (BMI) upon entering the elementary school years. This research was conducted by surveying the parents of Kindergartners in two elementary schools in rural Northeast Ohio. The survey instrument used was the Parental Authority Questionnaire-Revised (PAQ-R) that measures parental permissiveness, authoritarianism, and authoritativeness. The results of this research showed Permissive, Authoritative, and Authoritarian parenting styles were not statistically significant as related to child BMI. In addition, other variables were noted as potential influences on a child's BMI, such as the parents' BMI and household economics. The question remains if overall parenting styles have any influence, and further research will need to be conducted not only in parenting styles, but also in the areas of BMI and socioeconomics to enhance the knowledge base and thus add to the prevention of obesity in children.

## **10. Ashley Tengler**

**Faculty Mentor: Lauren Seifert**

*Beginning High School: Student Perceptions of the Transition*

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Moving from middle school to high school can present adjustment challenges for adolescents in the U.S. Previous research indicates a number of areas for concern related to the transition, including peer relationships, interactions with teachers, academic work, time management, and self-regulation. One additional issue for consideration is whether the student moved from private to private, public to private, private to public, or public to public venue. Students' self-reports are one indicator of areas that might need attention. In the current project, ninth-grade students were engaged in structured interviews in order to investigate their perceptions of issues associated with the foregoing categories. Thematic, narrative analysis led to the identification of key topics associated with student perceptions. Among the themes that emerged in the current study were whether the transition environment was supportive (e.g., with respect to peers, older peers, teachers); differing perceptions of the high school schedule compared to the middle school schedule; and the importance of study hall and lunch. Implications for transition programs are discussed.

**11. Robin Eaves, Angela Erb, Tara Hilverding,  
Bri Libertore, Megan Schmid  
Faculty Mentor: Lauren Seifert**

*Excessive Behaviors: Social Effects*

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This study aims to see if excessive behaviors affect a person's relationships. Previous research has shown varied social reactions to people's excessive behaviors. For example, studies about excessive hoarding and internet use indicated that these excessive behaviors led to social isolation. In addition, some excessive behaviors seem to catalyze personality changes and/or mood alterations during and after participation in the excessive behavior. Using population sampling, we surveyed one hundred people concerning the impact of excessive behaviors on their relationships. We will describe correlations between excessive behaviors and social relationships.

**12. Justine Chester, Michele Robinson**

**Faculty Mentor: Lauren Seifert**

*The Effects of Caffeine on Symptoms of ADD/ADHD*

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Our goal was to show the effectiveness in reducing/treating the symptoms of hyperactivity and attentiveness in those suffering from ADD/ADHD. Previous research in this area indicates that caffeine can be effective in treating this disorder. Evidence supports the positive influence of caffeine in children diagnosed with ADD/ADHD but not necessarily caffeine alone. When caffeine is used in conjunction with prescribed medications, there is an improvement in symptoms. Studies showed that when methylphenidate and caffeine were mixed, ADD/ADHD symptoms such as inattentiveness, hyperactivity, impulsivity, aggression, and anxiety were all reduced. It was also found that when caffeine and amphetamine were mixed, hyperactivity was reduced. Also noted was the fact that the tolerance level for caffeine and caffeine-related substances and the effects of such seemed to vary among individuals. To help us reach our conclusions, we conducted a true experiment in order to observe the effects of caffeine on cognitive tasks among college-aged students who were surveyed about their general medical conditions (including ADD/ADHD). We were interested in whether or not our findings would mirror those of previous studies. Our study revealed some interesting data with respect to this question.



### **13. Auriana Danzy Plains, Kaitlyn Shipe**

**Faculty Mentor: Lauren Seifert**

*Prayer Is Action: Two Years of PRAYR Research*

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Beginning in Spring of 2013, the PRAYR Research Group took an action-research orientation to prayer. Our participatory action research (PAR) involves dynamic and expanding cycles of planning, action, and assessment. We held large-group and small-group discussions in the Psychology Department at Malone University. We broadened our inquiry to family and friends. We engaged Malone University in a call for prayer requests and prayer about those requests. In addition, we surveyed “pray-ers” regarding their experiences and perceptions of prayer. In our fifth cycle of research, we engaged Malone University and the larger community of northeastern Ohio in a prayer workshop. Having gathered narrative and numeric information, we now see an emerging image of prayer as bi-directional communication, which can be about any topic and include a variety of emotions. Overall, participants report that prayer is calming, and they describe different perceptions of individual and communal prayer.

### **14. Tess Schmucker**

**Faculty Mentor: Lauren Seifert**

*Religious Upbringing and Beliefs in Emerging Adulthood*

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The goal of this study was to find out if there is a correlation between someone’s religious upbringing and their religious beliefs in emerging adulthood. I surveyed the general public via U.S. Mail in Greater Canton/Massillon, Ohio. Two regions with low (median) per capita income and two regions with high (median) per capita income were used to stratify the sample. Respondents indicated varied levels of current religiousness and of religiousness in childhood. Implications related to geographic region and socio-economic status are discussed.

### **15. Meghan Green, Kenneth J. Dampier, Kalie Stranger**

**Faculty Mentor: Lauren Seifert**

*Art Compared to Waiting as Relaxation after a Test with Unsolvable Problems*

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We were interested in seeing if an art intervention worked better at reducing stress after a general skills test as opposed to a non-intervention. Previous research said that art interventions are an effective method of treatment for stress. Art activities such as poetry, painting, and music can be emotionally and psychologically healing. We conducted a true experiment involving a convenience sample of PSYC121 students who received extra credit for their participation. Two groups took a general skills test, with one group doing an art activity and the other group quietly sitting for ten minutes. Our study revealed interesting data with respect to our initial question. Art has the capacity to heal and to relax. We hope that our study can inform the literature on this topic.

## **16. Bryce Schmidt, Nathan Thomas, Ross Robertson**

**Faculty Mentor: Lauren Seifert**

*Personality and Participation: An Analysis of College Study Groups*

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The goal of our study was to find if students' personalities correlate to their participation in and perception of study groups. Previous research has indicated that students often have positive experiences in study groups. Students gain wider perspectives and better applications of knowledge by participating. Students' personalities affect their perception of specific ways in which study groups benefit them. When collaborating in teams and groups, full awareness of team dynamics, tasks, and expectations will most likely contribute to a productive and beneficial study group experience. We surveyed Malone University students about their past experiences in study groups and assessed their personality traits (while allowing them to retain their anonymity). We analyzed the data using chi-square and drew conclusions based on the results. Our analyses can inform predictions about students' experiences in study groups as a function of their personality traits.

## **17. Bryce Schmidt**

**Faculty Mentor: Randi Pahlau**

*The Dissatisfied Hero: Returning to Adventure*

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The goal of my research was to accredit and analyze a new pattern I saw emerging throughout literature. Previous research has indicated the existence of a monomyth or general structure that nearly all stories abide by. The hero of a story embarked on a journey, endured hardship, completed his task, and if he survived, returned home with a new perspective on life. While I previously subscribed to this theory in literature, I began to notice another stage in the pattern that I had not encountered in any scholarly work, criticism, or analysis. While the hero may return safely home, he becomes dissatisfied with the life he previously lived and wishes to embark on a new journey to gain fulfillment and satisfy his longing for adventure. I studied classic British literature and numerous literary scholars and writers to glean information on the structure of stories and the variety of works of literature that may contain this new stage in the hero's journey. Upon collecting data and completing my research, I proposed a new theory that includes an addendum to what is traditionally recognized as the end stage of the hero's journey in literature.

## **18. Marissa Bennett**

**Faculty Mentor: Randi Pahlau**

*Uncovering the Role of Feminism in the Evolution of the Byronic Heroine*

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Ever since Lord Byron coined the term “Byronic hero,” the type has popped up in literature as the man who is dark, mysterious, and cunning. However, in recent years, there has been an increase in the frequency with which females demonstrate Byronic traits. In my paper, I would like to uncover how feminism has impacted the rise of the “Byronic heroine” in an attempt to understand the role literature has played in the women’s movement for equality.

## **19. Nangamso Mntumni**

**Faculty Mentor: Jacci Stuckey-Welling**

*Immigration*

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Illegal immigration is a hot topic right now in the United States. My hope is that my research will provide the audience with a historical context of the immigration debate, exactly when and why immigration became “illegal,” and a Christian—not a political—response to immigration. Two pastors, both Malone alumni, have helped me with the theological portion of my research.

## **20. Kate Allbritain**

**Faculty Mentor: Jacci Stuckey-Welling**

*More Than a Nerd Sub-Culture: How Anime Culture Has Spread across the Pacific from Japan to the West*

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From Japan to the West, anime has become a way for the modern world to live vicariously through the characters as they face the same social issues that we do, only somehow manage to find an adventurous escape from all the hustle and complexities of modernity. Anime covers such a broad spectrum of relevant topics that there is almost something for everyone out there to be able to relate to, and these endless possibilities have been able to entice millions of people across cultural borders.

## **21. Anthony James Palumbo**

**Faculty Mentor: Jacci Stuckey-Welling**

*The U.S. Prison State: Studies on Its Morality and Effectiveness*

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The research project looks at the rise of the modern prison system, with its myriad of factors that relate to virtually all of social life. Modern prisons have been found to be an increasingly important issue because of their intensified nature through the War on Drugs, overcrowding, and economic concerns. Although prisons have a fundamentally moral component, the modern prison system speaks directly to questions of human dignity and treatment of persons, both under the law and in society. The project touches on modern developments of the prison state, such as solitary confinement and the supposed economic benefits of private prisons. Finally, the project overviews various models and alternatives to the modern prison system, offering a “third way” model that both allows for the incentives that quasi-private prisons afford while protecting the sanctity of persons, through effective public input of these prisons.

## **22. Anthony Palumbo**

**Faculty Mentor: David Beer**

*New Territory: Conflicts of Law and Economics in Charting*

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Charting the course for appropriate public policy dissemination in regards to collective bargaining is fundamentally clouded in debates as to the central role of the federal government in determining labor standards. Necessary in this development is not just economic theories about the manner in which unions recruit, but the ways in which various political interest groups view the ways in which present unions are to operate under consensus-based systems of collective bargaining. This paper seeks to offer a sustained alternative to the present politics of collective bargaining, arguing for a new model that protects the ability of workplace freedom. Unlike present formulations of collective bargaining, this thesis argues that the issue of workplace democracy is essential to the way in which markets are to divide resources, essentially denying the traditional consensus that the two are fundamentally at conflict with one another.

### **23. Austin Fraley**

**Faculty Mentor: David Beer**

*Are Enhanced Interrogation Techniques Legal in the United States?*

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To understand those who read the law means that one will have to learn what they see in a law. There are two common ways to look at laws: the letter of the law and the spirit of the law. In the case of enhanced interrogation techniques, these two ways create opposing viewpoints. If a person is a strict letter of the law follower, they will most likely be against these techniques because of the wording of laws in the United States. If a person is more inclined to agree with the idea or the spirit of the law, they could easily be all right with enhanced interrogation because of the situations this law is applied to. When domestic and international laws, government memos and interviews, Supreme Court cases, and CIA reports are read and examined, there is merit shown to both sides. This is because the laws that are drafted to oversee interrogation are easily malleable and are manipulated. This research highlights that neither viewpoint seems to be easily viewed as more legal than the other.

### **24. Kaitlyn Stump**

**Faculty Mentor: David Beer**

*American Pacifists 1917-1918: How Should Christians  
Respond to the Modern State*

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My project explores the interactions of Christians, specifically pacifist Christians, with the state throughout history. It focuses on a shift in relations during and after the United States' involvement in World War I (1917-1918). I begin with an analysis of historical Christian responses to state involvement, with particular emphasis placed on pacifist theology during the reign of Constantine in Rome and Protestant Reformers such as Erasmus and Menno Simons. In the modern era, I emphasize the push and pull factors of both the church and state in America leading up to and after the declaration of war in April of 1917. Drawing from examples from Christian thought processes in history, I will conclude with a summary of the options Christians have for interaction with the state today and how this should be approached from a pacifist perspective.

### **25. Matthew Akindipe**

**Faculty Mentor: David Beer**

*Levels of Balkanization within the Internet*

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By looking at case studies from various countries and regions throughout the world, I plan to take an in-depth look at how various factors are dividing and separating the Internet. From government censors to religious and ideological differences to language barriers, I would like to provide a more detailed explanation on how each of these variables are changing and the shaping the Internet we have come to know.

## **26. Gabriel Avila**

**Faculty Mentor: David Beer**

### *Trade in the Pacific*

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My research examines the shift in international trade from the Atlantic to the Pacific region. Asian economies, specifically in the East Asian region, have seen economic growth, and one of the major causes has been the increase in trade between North America and the East Asian countries. Trade has increased in the region and has seen states such as China increase exports dramatically. However, there are trade agreements in the works between North American countries and Asian countries, such as the Trans-Pacific Partnership, that exclude China from the negotiations. My project will investigate and theorize what the implications may be for the U.S. and Chinese economies and political situations should future trade agreements exclude China. Since this may be the biggest free trade deal ever, there is much speculation as to whether this may leverage the regional balance of power in favor of U.S. trade and U.S. national interests.

## **27. Caleb Jones**

**Faculty Mentor: David Beer**

### *The Media's Role in Affecting National Political Climate*

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The mass media is tasked with an important role in society: informing the public. Unfortunately, the media takes its platform as the sole provider of information to the public to promote personal, institutional, and political interests of their own, as opposed to neutral reporting of the news. In fact, media outlets even make attempts to “manufacture” news by creating a story that promotes their agenda, despite lacking the actual contents that would comprise such an event. They skew information in order to promote their agenda. By over/undercovering an event and portraying individuals’ opinions as fact, the media is framing information in a way that is persuasive to the viewer, discretely influencing the viewer’s opinion on the topic. The more bias and misinformation that is produced by the media, the more that the public opinion will shift toward an ideological corner of the ring. Through bias and misinformation, individual views become strengthened and intensified, thus creating polarization among the public. These intensified beliefs can result in either motivation to change or disenchantment in the political process. Neither is necessarily good for the country, because neither are prompted from a rational deliberation of fact by human reason. Examples will be given where an individual’s exposure to certain media outlets has resulted in a more drastic level of being misinformed on current events. The effects of media on voter turnout, public opinion polls, and ideological polarization will also be examined.

## **28. Jonathan Homard, Caleb Jones**

**Faculty Mentor: Cindy Ries**

*Criminal Justice System and the  
Impact That African-Americans Have Had from It*

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We are going to conduct research on the criminal justice system and the impact that African-Americans have had from it. The criminal justice system is an essential part of the American government whose purpose is to serve and protect its citizens. The criminal justice system (CRJ) is often described as being disproportionately biased against minority groups. We are interested in the CRJ because we would like to better understand whether it is honestly carrying out its purpose to ensure justice and protect the citizenry. If minorities are being treated differently than the majority, the system is broken at some level and research should be done to investigate where that break down is.

We are asking 1) To what extent does the amount of discretion given to individual officials within the criminal justice system affect racist outcomes? 2) To what extent is the criminal justice system biased against low-level street crime that is primarily affiliated with minorities? 3) To what extent does the judicial system (judge & jury) affect incarceration of African-Americans?

## **29. Casey Norris, Eric Barto, Mattison Rankin, Josiah Smith**

**Faculty Mentor: Cindy Ries**

*The Impact of Gangs on African Americans*

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Our project will focus on the impact of gangs on African Americans. Our group is doing research on how influential African American gangs have been in the experience of African Americans in the United States. We will explore social processes/risk factors that lead to African American youth gang involvement and risk factors that are specific to or most influential in African American communities. We will research the positive attributes offered to African Americans by gang life. We will research the impact of gangs on African American gang members in the increase of delinquency, violence, and overall risk-taking behavior.

## **30. Katrina Burkhardt, Carrie Domer**

**Faculty Mentor: Cindy Ries**

*African American Women in Business*

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The purpose of this project is to explore the history of African American women in the business world from 1900 - Present. Our group is interested in learning about the progression of African American women within the professional realm. African Americans are already a minority, and American women have been fighting for equality with men for decades. This calls into question how African American women (a double minority) have fought for and earned their place in the business world.

### **31. Esperanza Brown**

**Faculty Mentor: Julia Villaseñor**

*Hispanic Immigrants Open, Closing Doors*

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In the United States, we are seeing an increase in the number of churches, both Protestant and Catholic, closing their doors or merging with other congregations due to dwindling membership and attendance. There are, however, churches that are experiencing growth – growth brought by the presence of immigrant populations. What has been the impact of Latin American immigrants on churches in this country? How might that inform us as Christians in regard to current immigration policies and proposals for reform? Through my project, I hope to bring to light the ways that Hispanic immigrants may actually be contributing to the revitalization of our church communities and as a result prompt us to take rethink our perspective on the immigration debate.

### **32. Sarah Meek**

**Faculty Mentor: Julia Villaseñor**

*Making Meaning of the “Other”: How the Media Influences our Perceptions of Hispanics in the U.S.*

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As a student in SPAN 321: Hispanics in the U.S., I have had the opportunity to engage with stories of Hispanics residing in this country. These testimonies have exposed me to the various ways the Hispanic people are perceived by dominant American culture and the challenges they face because of certain perceptions. As a communication arts major, I know that the media plays an influential role in how we communicate and make meaning of the world, contributing to our perception of the “other.” Therefore, the purpose of my study is to analyze how Hispanics are depicted in American popular culture through the media to determine how those images contribute to our perceptions and stereotypes of them. Through this study I hope to gain a better understanding of how popular culture constructs our perceptions of Hispanics in the U.S. as well as increase my ability to better recognize mediated stereotypes. Furthermore, as a future public relations practitioner who desires to work with Hispanic people in the United States, I hope for my findings to be useful in allowing me to better understand and serve my clients.



### **33. Michaela Zanin**

**Faculty Mentor: Julia Villaseñor**

*Health Care for All Americans*

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Historically, many Latin American people living in the United States have been unable to receive necessary health care because of various barriers, such as lack of medical insurance, limited proficiency in English, economic limitations, and immigration status. Current census data shows that Hispanics in the U.S. are more than three times as likely to lack health insurance as non-Hispanic whites, though many were included in the millions of Americans who received insurance as a result of the Affordable Health Care Act. I plan to analyze the factors that are contributing to the ongoing health care inequality among Latino immigrants in the U.S. and the ways the Affordable Health Care Act has impacted the situation. As a future doctor, I hope that by understanding these barriers, I will become better able to build Christ's Kingdom by practicing medicine in ways that counteract these disparities in health care availability.

### **34. Destiny Ross**

**Faculty Mentor: Julia Villaseñor**

*Xoloitzcuintli: A Dog with Little Fur and a Big Name*

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The Xoloitzcuintli (Xolo), also known as the Mexican hairless dog, used to be prized by the Aztecs. They believed that Xolos helped their master's soul through the underworld. According to myth, Xolotl, an Aztec god, made Xolos and gave them to man. If a man guarded the Xolo with his life, it would guide him through the Aztec world of death, Mictlán, toward the evening star, which represents the Aztec's heavens. Though their numbers in Mexico dwindled over the centuries, they have been making a comeback and are gaining in popularity again, not only in Mexico but also in the United States where the breed has recently been accepted into the American Kennel Club. But what do we know about this breed? And what should future owners/breeders and the veterinarians who care for them know about this peculiar breed? The objective of my research project is to learn more about the health issues that affect the Xolo to better inform my future career as a veterinarian.

### **35. Justin Dye**

**Faculty Mentor: Michael Benson**

*History of Music at Malone University*

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This research will examine the history of music at Malone University. From its start as Cleveland Bible College in 1892, founded by Friends couple Walter and Emma Malone, to the present 2015 Malone University, music has been essential to the institution. Information on the music program and the music department's contributions to the Malone community and greater world are not well known. Research will be conducted through archival work and firsthand accounts with current and past faculty to discover programs, degrees, faculty contributions, alumni success, and student achievements. These findings will be made available and can be used for publicity, admissions advertisement, and a greater understanding of the Malone University Music Department.

### **36. Matthew Parsons**

**Faculty Mentor: Jack Ballard**

*Microphones on A Budget*

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This project compares the frequency responses of budget level microphones to a studio high-end microphone. Using frequency analysis and pink noise generators, the microphone frequency spectrum can be determined. When compared to a high-end microphone, budget microphones have a place in all studios.

### **37. Michelle Hollinger**

**Faculty Mentor: Julia Frankland**

*The Fungibility of Sin Taxes: An Economic Analysis of the Effect on Our K-12 Public School System*

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This Honors Thesis project studies the fungibility of sin tax revenues in relation to K-12 public schools. Comparing Ohio and Colorado's revenues from nontraditional approaches (e.g., marijuana, casino, and lottery revenues), I researched the reality and sustainability of these funding sources and the level to which they are receiving promised funds. The project also evaluates if traditional funding reductions have occurred due to the addition of these nontraditional revenue streams.

### **38. Autumn Berry**

#### **Faculty Mentor: Amy Yuncker**

*The Historical Evolution of Malone: A Challenge to Keep Christ First in the Journey from Bible College to Christian Liberal Arts University*

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My project follows Malone University from its founding up through today, specifically focusing on 1966-1971, when a series of changes occurred in Malone's student handbook. These changes revolved around alcohol and tobacco policies and created quite a ruckus in Malone and the surrounding community. My project follows Everett Cattell, the college president at the time, through an exploratory and decision-making process, and it culminates with Malone's moral foundations and the ways the faculty and administration strive to uphold those values.

### **39. Andrew Hill**

#### **Faculty Mentor: Matthew Phelps**

*Hike for Health: The Restorative Nature of Outdoor Exercise*

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This project involves a study of hikers who have taken part in Stark Park's "Hike-A-Hundred" event over the past year. Through the administration of surveys, we coded the responses of 79 participants on the bases of 1) benefits of hiking and 2) focus(es) while hiking, using qualitative analysis.

### **40. Mahogany Oldham**

#### **Faculty Mentor: Lisa Beltz**

*Profound Effects of Green Tea Polyphenols: Providing Anticancerous Properties and the Ideal Application of Spodoptera Frugiperda Pesticide*

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Green tea contains the polyphenol epigallocatechin gallate (EGCG) as 7-13% of its dry weight. Previous research suggests that EGCG has concentration-specific anti-cancerous properties. At high concentrations, it is an oxidizing agent and at lower concentrations, an antioxidant.

We studied effects of EGCG on SF-9 cells, normal insect cells isolated from *Spodoptera frugiperda*, the fall armyworm, a widely diversified pest that migrates throughout the southeastern states. We performed dose response tests with EGCG at 10, 20, 40 and 80  $\mu$ M. EGCG leads to hydrogen peroxide generation, which oxidizes DNA and alters protein structure. At high concentrations, cancer cells became less viable. In these studies, we expect to also find less viable normal cells at higher concentrations of EGCG. We conducted the MTT toxicity test which determines the extent of cell growth and the Trypan Blue Exclusion assay to quantify dead versus live cells. EGCG-induced cell morphological changes were also recorded.

In conclusion, SF-9 are normal cells from an insect crop pest. We will determine how EGCG affects these cells' growth. EGCG is part of one of the worlds' most widely consumed beverages, which could make it an ideal candidate for use as a pesticide because it is natural, nontoxic and inexpensive.

#### **41. Alex Mosteller**

**Faculty Mentor: Kathryn Huisinga**

*Analysis of the Su(var)3-9 I699 Allele in Drosophila melanogaster  
and Its Role in Heterochromatin Formation*

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In our research, we examined the Su(var)3-9 gene of *Drosophila melanogaster*. This gene encodes for the production of a histone methyltransferase enzyme that is essential for proper heterochromatin formation. We compared three fly stocks, each exhibiting a variation of the Su(var)3-9 allele. Su(var)3-9<sup>06</sup> and Su(var)3-9<sup>y<sup>w</sup></sup> were utilized as control groups. Our third stock, being Su(var)3-9<sup>I699</sup>, contained a mutation that disrupts proper heterochromatin formation. To verify presence of this allele in our fly stock, we isolated DNA from each strain. We then subjected our genomic DNA to the polymerase chain reaction (PCR) using primers flanking the region of the gene where the mutation was located. This PCR provided us with a larger quantity of DNA to further analyze the structure of the mutant allele. The PCR product was subjected to a restriction endonuclease analysis using the enzyme, HpyCH4V, which cleaved our DNA into known fragments. Gel electrophoresis of DNA containing the Su(var)3-9<sup>I699</sup> mutant allele yielded a different banding pattern in our control groups, thus confirming that the mutation was present within our I699 fly stock.

#### **42. Jake Belair**

**Faculty Mentor: Karyn Collie**

*Location Preferences in a Captive Galapagos Tortoise*

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In this study, I will be attempting to discover in which area of the exhibit the Galapagos tortoise at the Akron Zoo spends the most time. This is important to know because the zoo can use this to add more enrichment or change the layout of the exhibit to benefit guests and the tortoise more. I will break her exhibit into four quadrants and do scan sampling to observe where she spends her time. Once data is compiled, I will be able to determine which of the four quadrants, if any, seems to be her preference. I predict that she will focus her attention on spending time under the basking spot in the exhibit.

### **43. Rebecca Perruci**

**Faculty Mentor: Karyn Collie**

*Behavioral Study Examining Exhibit Space Usage of  
Burrowing Owls at the Akron Zoo*

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Burrowing owls (*Athene cunicularia*) inhabit the dry, open grasslands, shrub-steppe, and deserts of the western United States, Florida, and Central and South America. Unique among other owl species, Burrowing owls utilize mammalian burrows for nesting and protection. The immediate vicinity surrounding the burrow constitutes the owl's territory and is characterized by low vegetation that provides some cover without obstructing visibility. An understanding of habitat requirements for this species can aid in proper zoo enclosure design. For this study, the exhibit space usage of the Burrowing owls at the Akron Zoo will be observed from 11 o'clock in the morning to 4 o'clock in the afternoon on March 21, 2015. The owls' locations (specified by dividing the exhibit into equal quadrants) will be recorded at 15 second scan intervals. The proportion of time spent by the owls in each quadrant will be calculated at the completion of the observation time. It is hypothesized that the Burrowing owls at the Akron Zoo spend the majority of their time in the quadrants of the exhibit that provide proximity to their burrow.

### **44. Stephanie Eidt**

**Faculty Mentor: Karyn Collie**

*Occupied Octopus*

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The giant Pacific octopus is an intelligent creature, capable of solving a variety of puzzle feeders including opening jars and hamster balls, pulling levers, and rotating compartments. Various studies have demonstrated that octopuses will actively engage with enrichment if given the opportunity. However, upon entering the final life stage of senescence, the activity level of an octopus tends to drop significantly. The female giant Pacific octopus at the Akron Zoo is exhibiting senescence as she broods her infertile eggs. This study will compare her activity budget by ethogram observations, adapted from a similar study on the effects of enrichment on giant Pacific octopuses. I hypothesize that there will be no significant difference in behavior distribution before and after the addition of enrichment because of the dominant effect of senescent brooding behavior. Brooding and/or rest behavior will be the most common category regardless of the outward environment.

#### **45. Krystal Phillips**

**Faculty Mentor: Karyn Collie**

*Elevation Preferences of Captive Himalayan Tahr (*Hemitragus jemlahicus*)*

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Effectively caring for animals in captivity requires knowledge of their natural habitats and interactions to construct environments promoting natural behaviors. This factor is particularly complex when considering mountainous species, which have a natural habitat difficult to replicate in captivity due to fiscal and space constraints. For this study, I examine elevated structure preferences of the Himalayan tahr in captivity, an ungulate species native to southern Asia. This study examines the behavior of captive Himalayan tahr at the Akron Zoo through one minute scan sampling of locations and behaviors of one male and two females. It is my hypothesis that the tahr will spend at least 30% of the time observed on elevated structures, with the male exhibiting more elevated occurrences than the females, reflecting similar preferences to wild populations.

#### **46. Michelle Kozminski**

**Faculty Mentor: Karyn Collie**

*Fear Behavior in the Himalayan Tahr*

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This study will focus on the Himalayan Tahr at the Akron Zoo. Himalayan Tahrs are found in the rocky slopes of Tibet and India and have adapted features that allow for steep climbing and walking when searching for vegetation. One of the main predators of the Tahr includes the snow leopard. In the wild, Tahrs form social groups and will exhibit several warning or fear behaviors to convey when they feel threatened by a predator. During five hours of observation, an ethogram will be completed to represent fear and non-fear behaviors that the Tahrs exhibit. This study will be observing the fear behaviors exhibited during different conditions, such as when the snow leopards in the neighboring exhibit approach the glass separator. I am expecting to see that the ethogram, using all-occurrence sampling, will demonstrate that the Tahr's fear behaviors will occur more frequently when the snow leopards are in close proximity to the glass barrier.

#### **47. Jenny Nelson**

**Faculty Mentor: Karyn Collie**

##### *Microhabitat Usage of Mountain Chicken Frogs*

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The mountain chicken frog (*Leptodactylus fallax*) is a critically endangered species indigenous to the Caribbean Islands, although currently it has been extirpated from all islands except Dominica and Montserrat. The wild population of the mountain chicken has decreased by over 80% in the last ten years, mostly due to the frog's popularity for human consumption, hence the name "chicken." More recently this species has also been particularly affected by amphibian chytridiomycosis, a lethal fungal infection. Published research on this species is sparse and little is known about many of their habits. They are nocturnal, although they have been observed basking during the day; this is most likely to allow for UVB exposure, which is important for healthy bone development in amphibians, and for thermoregulation. Given the extreme decline of the wild population, it is important to garner information that would provide useful insights for conservation and reintroduction efforts to protect this species; to that end, the purpose of this study is to establish the basking habits and microhabitat usage patterns of this species. I will observe the two *L. fallax* individuals at the Akron Zoo and hypothesize that while most of their time will be spent in dark areas of the enclosure or in their burrow, 20-25% of their time will also be spent basking.

#### **48. Shannon Binkley**

**Faculty Mentor: Karyn Collie**

##### *Komodo Dragon Activity Budget*

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The Komodo dragon is one of the largest living lizards on earth, reaching lengths of up to 3 meters. These powerful predators can follow their wounded prey for miles before the prey dies from the deadly saliva of the Komodo dragon (Merchant et al., 2013). It is likely, therefore, that the Komodo dragon spends most of its time being inactive and alert or sleeping in a zoo setting, as the zoo provides the food for the Komodo. This study will involve observing the behavior of Komodo dragons using scan sampling in an ethogram and answering the question of how the two adult Komodo dragons at the Akron Zoo spend their time. During the 5 hours at the Akron Zoo, I will observe and record the Komodo dragons' behaviors every one minute. This information would aid in their care as well as the care of other Komodo dragons in other institutions. Knowing the difference between the Komodo's behavior in captivity and in the wild can help keepers better create a more natural environment for the reptiles as well as illicit more natural behaviors from the dragons during their time in captivity.

#### **49. Danielle Tran**

**Faculty Mentor: Karyn Collie**

##### *Social Interaction in Red Ruffed Lemurs*

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Red ruffed lemurs, *Varencia variegata rubra*, live in deciduous tropical forests on Madagascar. Their main communication is in the form of vocalizations. They also communicate using scent-marking. Red ruffed lemurs live in social groups typically consisting of 2-16 individuals. The females are dominant and typically defend their territories against females from other groups using different antagonistic behaviors. Previous studies of female-female interactions have observed much contest and competition between the females. I will be studying the social interactions of the red ruffed lemurs at the Akron Zoo. To conduct the study, I will be using an ethogram. I will record the behaviors of the lemurs via scan sampling every two minutes. The scan behaviors will be categorized as inactive, social active, and isolated active. I will record all-occurrence behaviors for the social interactions between the individuals, whether they be antagonistic behaviors or non-antagonistic behaviors. This study will assist in the understanding of social interactions in red ruffed lemurs, particularly in females. Since they are all females, I expect to see mostly antagonistic social behaviors displayed between the individuals.

#### **50. Miranda Beran**

**Faculty Mentor: Karyn Collie**

##### *Social Interaction in Lemurs in Mixed Species Exhibit*

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Mixed-species exhibits are being used today in modern zoos to solve multiple management problems. These exhibits allow the inhabitants not only more space, but also a chance for increased behavioral enrichment. These exhibits also assist facilities that may be limited in space and to allow benefit for zoo visitors. This research will focus on finding how different species of Lemur interact with each other along with how conspecifics interact together. The findings are expected to conclude that social interactions occur more between conspecifics and aggressive acts occur between individuals of different species. The subjects of this research are two species of lemurs that are established in an indoor exhibit at the Akron Zoo in Akron, Ohio. The Black and Ruffed Lemur is typically found in small social groups and in monogamous pairs where Ring Tailed Lemur are typically in social groups exceeding twenty individuals. As zoos begin to turn to modern ways of housing captive animals, it is important for us to do continual research on what effect this housing has on animal welfare. Through the information provided we can better understand the social and behavioral benefits and downfalls to housing different species together.



## 51. Hilary Mullane

Faculty Mentor: Karyn Collie

### *Komodo Dragon Space Budget*

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The Komodo dragons at the Akron Zoo have a large exhibit space with many different areas they can utilize. This observational study is being used to determine how the two lizards use their available space. The different areas of the exhibit are classified by their elevation, substrate or material, and whether they are basking, non-shaded, or shaded area. Using scan sampling every one minute to determine the location of the Komodo dragons, comparisons of where they spend their time can be made. Due to the fact that Komodo dragons are fairly large, terrestrial predators, I do not expect them to be in the trees in their exhibit. However, they may be on rocks or logs with a higher elevation level. Since these lizards are also ectotherms, I expect that they will spend a considerable amount of time in basking areas as well.

## 52. Corina Newsome

Faculty Mentor: Karyn Collie

### *Food Quality and Egg Laying Patterns in the Colorado Potato Beetle, *Leptinotarsa decemlineata**

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In Colorado potato beetles, *Leptinotarsa decemlineata*, neonates begin to consume unhatched eggs in as little as one hour after hatching, and cannibals are overall more fit than non-cannibals. I hypothesized that in order to maximize the fitness of the clutch, when subjected to less than ideal nutritional circumstances, females will lay their eggs in such a way that facilitates cannibalism. Cannibalism facilitation was measured by the degree of asynchronous hatching of offspring in the same clutch and increased ratio of sterile eggs to fertile eggs. I subjected females from three different populations (Maine, Ohio, and a laboratory standard population) to three qualities of plant ages: 4 weeks (young; high concentration of plant toxins), 5 weeks (control; optimal quality), and 6 weeks (beginning to senesce). I found that there was a significant effect of plant age on hatching synchrony, but differently than I predicted—clutches hatched more asynchronously as plant age increased, instead of hatching most synchronously on 5 week old plants. There was no effect of plant age on the proportion of sterile eggs. I also observed a significant negative effect of female age on the number of eggs laid in each clutch.

### **53. Corina Newsome**

**Faculty Mentor: Karyn Collie**

*Occurrence of Social and Solitary Play Behaviors in  
Captive Red Wolves (*Canis rufus*)*

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Wolves, being highly social pack dwellers, engage in a variety of play behaviors. Social play occurs more frequently than solitary play, and these behaviors are especially important for juveniles as they establish hierarchies and self and social assessment. However, play behaviors are not isolated in the juvenile stage but remain part of regular behavior into adulthood. I will be conducting an observational behavior study on the play behaviors of two sister Red Wolves, *Canis rufus*, housed together at the Akron Zoo. If the occurrence of solitary play exceeds that of social play, the wolves may be relying on object or solitary play rather than social interaction for mental stimulation, which would inform their keepers' enrichment techniques. However, I hypothesize that, in accordance with the research done on their natural behavioral tendencies, social play will occur significantly more frequently than solitary play.

### **54. Cody Shumaker**

**Faculty Mentor: Karyn Collie**

*A Study on the Occurrence of Investigation Behavior on the  
Coyotes at the Akron Zoo*

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Coyotes are the most widespread and successful canine species across North America. The coyote is able to thrive within a pack and also solitarily outside of a pack. They will hunt small animals independently but when in packs can take down large prey such as deer. Coyotes are categorized as opportunistic scavengers, so as part of their behavior coyotes roam large sections of land within their territory each day in search of carcasses and prey. To actively hunt and scavenge, coyotes must display certain tracking and investigation behaviors. For example, coyotes may travel with their nose pointed to the ground to track the trail of an animal. They also have established territories and will mark their boundaries by scent marking. While traveling their territories, they may come across the scent mark of another coyote and pause to better investigate by actively sniffing the mark. For my study, I will investigate whether the captive coyotes at the Akron Zoo show more investigation-related behaviors than any other kind of behavior. Even though the coyotes are captive, I believe that they will still display the same behaviors of their wild counterparts. I hypothesize that the coyotes at the Akron Zoo will actively move about their enclosure and display more investigation behaviors than any other kinds of behaviors.

## 55. Alec Roshek

**Faculty Mentor: Karyn Collie**

### *Captive Coyote Social Reliance*

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My research will address the issue of social behavior in captive coyotes. I will be studying two elements of the captive coyotes' lives: aggression and reliance. The first, aggression, will be important in determining the capability between possibly non-social animals living with one another. The captive coyotes could have increased aggression towards one another because they, in fact, are solitary animals. The research will determine whether the captive coyotes come from social backgrounds or solitaire backgrounds. The research will also bring attention to any aggressive behavior for the welfare of the individual coyotes. The second, reliance, will also be important in determining if the coyotes enjoy being around one another. Although aggression may be absent, the coyotes could exhibit uncomfortable behaviors with one another, being in constant close proximities. This will also be good for identifying any unwanted stress that the coyotes may be holding. I believe that the coyotes will be in close proximity to each other and show minimal aggression towards one another. I would trust that the zoo would choose compatible coyotes.

## 56. Marionna Cane

**Faculty Mentor: Karyn Collie**

### *Territorial Behavior of Red Wolves*

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Red wolves, *Canis rufus*, are considered critically endangered, according to the IUCN Red List (Kelly, et al. 2008). In 1980, the species was found to be extinct in the wild. Today, the only extant in situ population exists as a reintroduced group in North Carolina (Kelly, et al. 2008). Because of their small population numbers (currently less than 150 individuals), little is known about their habitat and ecology. Of the major threats to the population, hybridization with coyotes poses the greatest threat.

The red wolf pair residing at Akron Zoo is housed next to a group of coyotes so that both species can see, smell, and hear the others. The separation between the two exhibits is a chain link fence. Overlap in wild populations and inadequate territory defense can be attributable factors to the decline in the red wolf population. My experiment is to observe spatial use and behaviors of two captive red wolves. I hypothesize that the red wolves will spend only a limited time securing the perimeters of their territory and will engage in few interactions with the adjacent coyote population, spending the majority of their time in the inner quadrants of their exhibit space.

The methods of this observational experiment will include observing behaviors of the red wolf population at the Akron Zoo. Behaviors will be recorded on an ethogram in scan sampling intervals every 30 seconds for one hour over numerous trials. Interactions between the red wolves and the coyotes will be recorded as all-occurrence behaviors. The data will be collected and analyzed using graphical representations.

## **57. Alexa Taylor**

**Faculty Mentor: Karyn Collie**

*Humboldt Penguin Social Behaviors*

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Penguins are one of the most social types of birds in the wild. They live in large groups, and many species will mate for life. Does this look the same in captivity? To learn how much time a group of Humboldt penguins spend engaging in social behavior, a group of captive Humboldt will be observed over a 4-hour period. An all occurrence sample will be taken of each individual within the group to measure how much time captive Humboldt penguins spend in social or individual activities. Social behaviors will be defined as any behavior directed by one individual to one or more other individuals. In relation, individual behaviors will be recorded as a behavior not directed at any other individual. After observation is done, the amount of social behavior recorded will be calculated as a proportion to the amount of time spent in individual behaviors.

## **58. Heechun Kang**

**Faculty Mentor: Karen Slovak**

*Harbor Light Hospice Bereavement Support Survey*

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A phone survey will be conducted with people in bereavement in the organization named "Harbor Light Hospice." There has been a perceived lack of support within the bereavement system in the organization, and this survey is to help the organization gather information that will address this issue. The information will be obtained from bereavement patients to see how their knowledge and experience from the organization's bereavement program has helped them and what areas of the program need to be strengthened.

## **59. Amanda Brothers**

**Faculty Mentor: Karen Slovak**

*Effectiveness and Importance of Post Adoptive Services*

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Post-adoptive services are gaining much more recognition in recent years and have been shown to be a prominent factor in preserving adoptions. Clients of Pathway Caring for Children who have adopted children will be surveyed on post-adoptive services they have received. This survey is intended to obtain feedback on how beneficial these services are to clients and give them an opportunity to give comments and suggestions. The post-adoptive services being evaluated include respite, support groups, mentoring, mental health services, parallel parenting program, education and trainings, consultation, and family empowerment classes. At the end of the survey there are also questions regarding post-adoptive services in general. This will be a phone survey from the list of clients who have adopted through Pathway in the last year. With the information received from the research, Pathway will have feedback from which to update and improve their post-adoptive services.

## **60. Dan Mangino, Emily Stull, Mariah Husted, Amanda Zima**

**Faculty Mentor: Judy Risko**

### *Relationship between Weight Perception and Body Mass Index In High School Students*

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The purpose of this correlational study was to explore the relationship between reported weight perception and body mass index among adolescents in a Northeast Ohio high school. A descriptive correlational design was conducted using a survey questionnaire adapted from the Youth Risk Behavior Survey that was also approved by the Malone University IRB. The survey was distributed to a convenience sample of students during their lunch periods. The survey was optional and kept anonymous and confidential. A total of 196 surveys were analyzed. Participants were between 13 and 17 years of age. A total of 102 females and 94 males completed the survey. Data showed a positive correlation between weight perception and weight behavior and also between weight perception and body mass index (BMI). Interestingly, data showed that more females perceived themselves as overweight. However, data showed more males were actually overweight than females. These research findings can be applied in nursing to promote healthy living habits as well as weight perception and BMI. Future research areas may include using data from multiple high schools.

## **61. Alyssa Coverdale, Rebecca Ison, Brianna Moody, Amanda May, Steven Niewiedzial**

**Faculty Mentor: Judy Risko**

### *Correlation of Reported Screen Time and Reported BMI in Adolescents*

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The increase in adolescent obesity has sparked an interest in how to identify and prevent contributing negative health behaviors. This study focuses on exploring the relationship between amount of screen time exposure, which includes technology and television use, and body mass index (BMI) in the adolescent population. The research question was "Among the average adolescent population of a northeast Ohio high school, what is the relationship between reported hours of screen time per day and reported BMI?" A descriptive correlational design was used, and data for the study was obtained through a voluntary self-report questionnaire that was distributed to students of a local high school. Of the 240 surveys distributed, 196 contained complete and usable data. The findings showed that there was no statistically significant correlation to an increased amount of screen time and an increased BMI. There were also no patterns in the data relating to age, gender, screen time, and BMI trends. Though these results were somewhat unexpected, they can still be used as a comparison in future studies and perhaps a more focused approach can be taken to determine what kinds of technology specifically can have positive or negative health effects. Future education to other adolescent populations can also be based on the seemingly successful health program that the participating school has utilized.

**62. Gwendolyn Miller, Kayla Akin, Brittany Wadel,  
Anthony Rohr, Catherine Miller**  
**Faculty Mentor: Beth McVan**

*Physical Activity in Adolescents Based on Gender*

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The purpose of this study was to discover more about the physical activity patterns in high school adolescents. The results from the study are compared to statistics from the Centers for Disease Control (CDC). The variables included comparing gender with physical activity, strength training, and participation in sports teams. This study utilized Albert Bandura's Social Cognitive Theory. The research design was a descriptive study. The sample consisted of 196 surveys from one Northeast Ohio high school. The study revealed that 24.5% of the females surveyed participated in at least 60 minutes of physical activity per week, compared to 38.3% of the males. Overall, 64.7% of the female students reported participating in physical activity for at least 60 minutes from one to six days per week compared to 55.3% males. 62.8% of the female students surveyed reported participating in strength training from one to six days per week compared to 57.3% of males. A total of 21.6% of female students reported not participating in any sports teams compared to 24.5% of males. Both male and female students in this study are exceeding the national representative sample according to the CDC. This study gives a better view of adolescent physical activity.

**63. Sarah Fahler, Jaclyn Anderson, Thomas Kublin,  
Annalyn Miller, Abigail Wiggins**  
**Faculty Mentor: Beth McVan**

*Adolescent Sleep Patterns and Relationship to Health*

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This research study looks at the correlation between sleep and body mass index (BMI), and sleep and caffeine intake. Through literature review it has been found that students who sleep a fewer number of hours have a higher BMI and also have a higher caffeine intake than students who sleep the recommended 8.5 to 10.5 hours per night. What is the relationship between the number of hours slept per night and BMI? What is the relationship between the number of caffeinated drinks in a week and the hours slept per night? A survey was given that included 24 health-related questions directed towards adolescents in a Northeastern Ohio suburban high school. Questions were a combination of multiple choice and fill in the blank. 196 surveys were available for analysis. 75% of students were found to have a healthy BMI. There was no statistical significance demonstrating a relationship between sleep and BMI. There was a significant negative relationship between sleep and coffee consumption. Sleep is a health behavior that is needed in adolescence, and there needs to be more research looking at sleep, caffeine use, and BMI. Nurses have a unique position of being able to educate adolescent patients and their families on healthy sleep hygiene and also the influence of caffeine on the growing and developing body.

**64. Jihyun Holderman, Sarah Samblanet, Leigh Ann Sterner,  
Christianna Miller, Jessica Walker  
Faculty Mentor: Natalie Donatelli**

*Eating Habits and BMI of Adolescents*

---

Research suggests that when healthy eating patterns are established in adolescence, they can be carried over into adulthood. Therefore, establishing healthy eating behaviors at a young age reduces the risk of diabetes, cardiovascular complications, and incidences of cancer (Foltz, et al., 2011). The intention of this study was to investigate the descriptive correlation between the specific eating habits of adolescents (including fruit and vegetables) and their body mass index (BMI). The study took place at a local Northeast Ohio high school. An IRB approved, anonymous self-report survey was distributed to students during their lunch period. The survey was adapted from the Youth Risk Behavior Survey (YRBS) and permitted a descriptive correlational research design. Researchers were able to assess for correlations between the intake of fruits and vegetables and the possible impact it may have on the student's BMI. Variables included fruit and vegetable consumption and BMIs. Previous literature suggests a direct correlation exists between the consumption of higher amounts of fruits and vegetables and lower BMIs; however, there was no significant data found in this research project to support the literature. Additionally, this research project found that students in the Northeast Ohio high school consumed more fruits and vegetables than the YRBS state averages. When comparing data between state averages and the Northeast Ohio high school, BMI averages varied by less than 10%. Nursing implications for this research include providing nutrition instruction to students at earlier ages to promote healthy eating patterns, exploring additional social and environmental factors that may impact adolescent health behaviors, encouraging healthy food choices to support a healthy lifestyle, and providing education regarding the importance of maintaining a healthy body mass index (BMI).

**65. Brittany Phelps, Aubrey Neuenschwander, Adam Simmers,  
Caitlin Wells, Ashley Snook**  
**Faculty Mentor: Judy Risko**

*Breakfast Consumption In Adolescents*

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Breakfast consumption has been declining overall over the past 25 years in the United States. Studies have shown that breakfast consumption positively affects memory and attention in adolescents. The purpose of this descriptive study was to determine reported breakfast consumption patterns among students in a Northeast Ohio High School and compare the results to those in Ohio and in the United States. A convenience sample of 196 students was surveyed during their lunch period. A survey adapted from the Youth Risk Behavioral Surveillance System (YRBSS) was given to these students. In the Northeast Ohio High School, Ohio, and nationally, males reported consuming breakfast more than females. No trend was identified in the Northeast Ohio High School students' reported breakfast consumption related to grade level. As grade level increased, the rate of skipping breakfast increased in the state of Ohio and the United States. These results may indicate the further need for research to determine the motivations behind skipping breakfast. Nursing implications could include assessing school breakfast program availability or assessing the ability of the student to pay for breakfast.

**66. Haylee Gee, Gale Muckley, Meredith Pamer,  
Laura Huntington-Borgmann**  
**Faculty Mentor: Natalie Donatelli**

*Adolescent Fast Food Consumption*

---

Fast food consumption is becoming a growing area of concern for adolescents. It can be noted that recurrent consumption of fast food is a large contributing factor to adolescent obesity (Sebastian et al. 2009). The aim of this research study is to determine the correlation between the frequency of fast food consumption and adolescent health behaviors. A health-based questionnaire was administered to northeast Ohio high school students in order to obtain significant data. The focal aspects of this study included the following: body mass index (BMI), gender, amount of fast food consumption over a seven day period, and personal weight perception. With these variables in mind, we hypothesized that fast food consumption would have an impact on BMI, males will have a higher consumption of fast food than females, and weight perception would have an influence on fast food consumption. The only statistically significant finding was related to gender difference in fast food consumption; males consumed more than females. In conclusion, we learned that adolescents struggle with the correlation between unhealthy eating and health associated risks (4). If nutritional information of fast food is available, this could possibly increase the awareness of unhealthy food choices (5). Encouraging nutritional education could have a long lasting positive effect on their future lifestyle choices.



**67. Brandon Petty, Hannah Miller, Naomi Fetzer,  
Ashley Poland, Taylor Slaughterbeck  
Faculty Mentor: Judy Risko**

*Adolescent Caffeine and Fluid Consumption Patterns*

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Studies have shown that caffeinated beverages may have a negative effect on adolescents. The purpose of this research was to describe the reported fluid intake patterns of students in a northeastern Ohio high school, with an emphasis on caffeine beverages. A survey questionnaire containing 23 items was distributed to students on their lunch period at a high school in northeastern Ohio. A total of 240 questionnaires were distributed and 196 were utilized in the final analysis. Verbal assent was obtained from the students (13-19 years of age) for this particular study. IRB approval was also obtained. The Centers for Disease Control database was used to analyze the body mass index (BMI) while the surveys were analyzed using SPSS version 19. Results in this study indicated that there was no correlation between caffeinated beverages and BMI. However, results did show that there was a positive correlation between water intake and BMI. Nurses may use the information from this research in the education of adolescent patients.



**Symposium Planning Committee**

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Karen Slovak

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Provost Donald Tucker

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*In its seventh year as a Malone University event,*

## **Malone University's Student Research Symposium**

showcases student scholarship across schools and departments. Excellent projects from such programs as Zoo & Wildlife Biology, Theology, Nursing, History, Business, Chemistry, Psychology, Spanish, and English are part of this celebration of student achievement. Please, join us in congratulating student participants and their faculty mentors as we come together in community to honor graduate and undergraduate research and creativity.

