



PennState
Mont Alto

CELEBRATING THE SCHOLARLY RESEARCH AND
ACHIEVEMENTS OF PENN STATE MONT ALTO STUDENTS

PENN STATE MONT ALTO
**ACADEMIC
FESTIVAL**



FRIDAY, APRIL 19, 2024



PennState
Mont Alto

SCHEDULE OF EVENTS

Opening Remarks

12:10 p.m.

Multi-Purpose Activities Center, Gym

Posters and Exhibits

12:20 – 3 p.m.

Multi-Purpose Activities Center, Gym

Oral Presentations & Performances

12:30 – 2:50 p.m.

Multi-Purpose Activities Center, Room 122

Awards Presentation

3:30 p.m.

General Studies Building, Auditorium

Student names are listed with each project.

Faculty advisers for each project are included in parentheses.

Cover artwork by Max Membreno

2024 Academic Festival Judges

Somjit Barat, David Beecher, Brandi Biesecker, Renee Borromeo, Liz Denlea, Vahid Ghomi, Kira Hamman, Olivia Hammond, Hanafiah Harvey, Anne Hill, Ed Hipkiss, Nikolette Lipsey, Greg Mahlon, Alicia Miller, Jacob Moore, Tom Reinsfelder, Donna Rhodes, Kristi Addleman Ritter, Charlene Saeman, Denise Salters, David Seitz, Nancy Skacel, Dana Tyree, Lisa Ward, Deborah Wilson, Linghao Zhong, and the Penn State Mont Alto Sustainability Committee

The Academic Festival Committee

Kim Herrmann, Anne Hill, Brad Kendall, Nikolette Lipsey, Tom Reinsfelder, Kristi Addleman Ritter, Denise Salters, Nancy Skacel, Stephanie Unger and Robin Yaure

RESEARCH POSTERS

#1 Marijuana Use During Pregnancy and Its Effect on the Infant– Cannabis use is on the rise around the world due to increased legalization of recreational use. The objective of this study was to determine how marijuana use during pregnancy affects the infant. PubMed was used to gather systematic reviews, cohort, experimental, mixed-methods, and descriptive studies completed no later than 2014. The studies concluded that marijuana use in pregnancy causes low birth weight, small gestational age, increased rate of preterm birth, increased NICU admission, small head circumference, and a 5-minute Apgar score less than seven. Further research is needed to determine effects related to the level of use. **Ryleigh Timmons, Riham Sghir, Karmyle Gunder (Stephanie Unger)**

#2 Postpartum Depression– In the postpartum period, how can mothers differentiate between postpartum depression and expected hormonal changes? Specifically, mothers in postpartum period suffer from depression and do not receive the support to overcome the mental disorder. This intervention is used to recognize the symptoms via screening tools at home and postpartum doctor appointments. **Sara Washabaugh, Emma Myers, Izabella Gordon (Stephanie Unger)**

#3 Infant Nutrition Related to Immunity– Infancy is a crucial part of early development. One of the major body systems infants develop is their immune system, which protects them from viruses and illnesses. The purpose of this study is to compare breastfeeding to formula feeding and effects on the infant's immune development. Overall, the results exhibit that breastfeeding provides greater immune system development than formula feeding; infants fed breast milk will have more resistance to pathogens than infants fed formula. It is recommended that healthcare workers use this information to aid their patients on the options they have for nutrition. **Hannah Boppe, Nicole Fabian, Isabella Dymond (Stephanie Unger)**

#4 Effects of Chemotherapy on Pediatric Patient's Development– This EBP study was conducted to find the effects of chemotherapy on pediatric patients' growth and development. This research was found to be necessary due to the lack of research on long-term effects of chemotherapy in the pediatric patient. The outcome of this project focused on development, so various systems of the body were included. The main areas found to be affected include the neurological, cardiovascular, skeletal, and reproductive system. The PICO question is supported. **Dara McBeth, Haylee Morter, Aurora Danal (Stephanie Unger)**

#5 Obesity in Adolescents: Prevention of Diabetes Mellitus– This research study examines the relationship between obesity and diabetes mellitus among adolescents ages 13 to 18 years old to see if healthy lifestyle programs are more effective in reducing body mass index (BMI) and the risk of developing diabetes mellitus compared to traditional methods. The research was compiled from ten scholarly articles, which had different settings, such as schools, pediatric units, and hospitals across the United States. Results show that healthy lifestyle programs are effective in reducing BMI, therefore decreasing the risk of developing diabetes mellitus and improving these adolescents' physical and mental health. Based on these findings, a conclusion can be drawn that healthy lifestyle programs are successful in reducing BMI and the risk of developing diabetes mellitus in adolescents who are categorized as obese. The PICO question was supported. **Maggie Faust, Leslie Huckle, Maurice Huggins (Stephanie Unger)**

#6 Pediatric Oncology Nurses' Mental Health– Mental health is an under researched and overlooked issue in the nursing profession. This issue keeps increasing as there are less resources available, a higher demand for nurses, and a decreased well-being of self. Through this research, we answered the PICO question, “In pediatric oncology nurses, how does mental health with coping mechanisms affect nurses leaving the specialty?” We conducted this research through statistical analyses of meta-analyses, randomized studies, correlational studies, and literature reviews. Overall, coping mechanisms decreased the susceptibility of nurses leaving the specialty due to mental health issues. **Alden Roberts, Katie Sinks, Alexis Reber (Stephanie Unger)**

#7 Preventing HAIs: The Importance of Hand Hygiene– This research study focused on preventing healthcare associated infections (HAIs) by reinforcing hand hygiene. The intent was to discover whether hand hygiene reinforcement was an accurate way to decrease HAIs in intensive care units. This led to the PICO question, "Does reinforcing proper hand hygiene reduce hospital acquired infections in intensive care units in the United States?". The studies from various scholarly resources were reviewed and analyzed. A variety of levels and quality of studies was used for this research. The PICO question was supported. **Melisa Orellana, Faith Beall (Stephanie Unger)**

#8 Substance Abuse Among Nurses– This study explored substance abuse in the nursing profession. Nurses have a unique vulnerability to developing substance abuse disorders due to increased levels of work-related stress and frequent access to narcotics. The question that guided this study was: what are alternate options to immediate termination that will facilitate rehabilitation for nurses experiencing substance abuse disorders in the United States? The expected outcome examined in this study was that alternative-to-discipline programs encourage disclosure, rehabilitation, and re-entry into the workforce for registered nurses with substance abuse disorders. **Autumn Fischer, Megan Billings, Chelsey Barrick (Stephanie Unger)**

#9 Myocardial Infarctions In African American Males– In adult African American males, can encouraging early screening, compared to using traditional practice, reduce the risk of experiencing aa MI (myocardial infarction) in the United States? African American Male adults being at a higher risk for MI has become an important topic because US health care workers need to strive for health equity. We found it essential to consider the socioeconomic factors and the individual to determine the best interventions to reduce the risk of MIs. Throughout our research, it became prevalent that our PICO question was supported. Education on preventative measures is crucial in reducing the risk. **Ava Lohr, Kayla Curry, Eellyah Barrolle, Connor Falvey, Mackenzie Sampere (Stephanie Unger)**

#10 The Hispanic American Experience with Health Care–“Hispanic Americans are less likely than any other race to have health insurance and receive preventative medical care” (KFF, 2023). This study combines internet research and interviews with subjects in the Hispanic American community to explore the unknown health disparities of Hispanic Americans. Research questions included the language and cultural barriers, higher levels of poverty, and lack of job opportunities with benefits that resulted in lack of access to preventative medicine. The goal of this research is to enlighten health care students about health disparities and how to advocate for Hispanic communities. Areas of discussion include the health care accessibility in Hispanic communities, difficulties in acquiring health insurance, and reasons why we should give them resources on preventative medical care. **Alyssa Olvera (Deborah Wilson)**

#11 Improving Geriatric Mental Healthcare– Mental health has become a hot topic in today's society. There are many resources for young children and adults regarding mental health; however, older adults are often overlooked and underprioritized in that category. This study was created to find ways to improve geriatric mental health care, both at home and in facilities, by increasing mental health screening efficiency and minimizing misdiagnoses in this field. Through this study, individualized elderly institutions will bring awareness, become further accessible, and be more efficient for the health and well-being of the geriatric community. **Madalyn Burton, Autumn Shatzer, Sara Witter (Stephanie Unger)**

#12 Pottery: Does It Help Mentally?– We designed a survey for our class to see how pottery has helped people mentally. We also looked at research/studies about making and painting pottery. **Elizabeth Sulek, Sareana Framilla, Jenna Bowers (Barrett Scroggs)**

#13 Pottery and the Creative Process: Exploring the Imagination with Clay– In terms of pottery and the creative process, the goal was to further explore the impact that the engagement of pottery has on the creative process, mood, and social connection. This was done through evaluation of past research on the subject and conducting an experiment which consisted of engaging in a pottery class bi-weekly and evaluating mood changes prior to and after creating a pottery piece. **Gabrielle Mooney, Autumn Reed (Barrett Scroggs)**

#14 Confidence Levels and Painting– We know from prior research that art helps to achieve higher confidence and self-esteem (IneseStudio, 2013). This study helps us to understand how to gain more confidence through doing art and taking painting classes. The participants in this study include us, two college students at Penn State Mont Alto, who are both 19 years old. We write how confident we felt before and after each painting class in a journal, and we analyzed how much our confidence changed by the end of this project. We anticipated these findings to indicate that painting will increase confidence. **Tesla LaRosa, Sicile Heun (Barrett Scroggs)**

#15 Emotional People Paint... What Happens Next?– This ideal study is to help see if painting can improve an individual's mental health, and their overall day, and to measure how imaginative they have felt before and after painting. **Karrington Brown, Maddie Wagner, Breezi Anglin (Barrett Scroggs)**

#16 The Emotional Impact of Single-Player Narratives– Video games with in-game storytelling, or narratives, can enhance affective theory of mind (Borraman et al., 2015). Some games also challenge the morals of players with various dilemmas and ways to control character actions (Anderson, 2022). Through this, players may be left with emotional impacts or life takeaways after playing narrative based games. We used a Google Forms survey to collect the data for our research from college age students (n=50, mean of age = 19.6). We found that around 56% of our participants had an emotional impact when it came to the games that we had listed, and around 52% of participants had taken away some sort of idea or lesson from the games that they had played. Out of the 50 participants, about 44% of participants had played a game that was not on our list, but they still had an emotional impact, and around 32% were tied between entertainment and interest on their reasoning for playing the games. **Cristina Bond, Hayden Condo, Taylor Butcher-Benjamin, Connor Allgood (Robin Yaure, Nikolette Lipsey)**

#17 How Pre-Test Expectations Affect Post-Test Outlook– This study investigates the impact of pre-test expectations on post-test outlooks, exploring how student beliefs before taking a test influence their perceptions afterward. Through a survey conducted with students at Penn State Mont Alto (n=50), it was examined how a positive versus negative expectation prior to and during a test can affect feelings of confidence after the test, score satisfaction levels after results are released, and the short-term and long-term effects of each mindset. The objective is to determine how students, across various demographics, can adjust their perceptions prior to taking a test to potentially yield higher score satisfaction. **Yara Amleh (Robin Yaure)**

#18 Testing Water Quality and Safety in Local Springs– This project aims to assess the water quality of local springs originating from South Mountain, determining if the water is safe to drink or contaminated with coliform bacteria over the course of a year. The study involves collecting water samples from two sites near the campus: Tomstown Pump and Traveler's Spring. In this analysis, water from both springs was tested for the presence of *Escherichia coli*, and evaluated to see if enough bacteria was present to deem the water unsafe for drinking. The study concluded that, at certain time points, coliforms were present at both sources but did not correlate to rainfall or temperature. **Yara Amleh, Natalie Hill, Faith Simpson (Ed Hipkiss, Linghao Zhong)**

#19 The Effects of Nature Sounds on Studying– This is a hypothetical study on the effect of the sounds of nature and wildlife on students' attentiveness and productivity. 30 college students would be observed and tested while different nature sounds played at different levels or no sound at all in the background. This would test if nature sounds and the volume at which they are played has an impact on students and their performance. **Thomas Lane (Robin Yaure)**

#20 Feelings Under the Influence– According to previous studies, it is already known that music increases blood flow to regions of the brain that influence emotions. This study is to test if the researchers can trigger the response. In order to trigger these responses, the researchers made playlists designed to display certain emotions. The participants completed the survey and then randomly choose a playlist by picking a number. After listening to the playlist, participants filled out another copy of the same survey. Based on data collected, researchers determined music does influence the mood of the participants. **Kassidy Stumbaugh, Hannah Wetzel, Baille Jones (Barrett Scroggs)**

#21 Art of Thrifting– Thrifting often involves discovering unique and unexpected items. This sense of novelty and discovery can trigger the brain's reward system leading to the release of dopamine and serotonin. Since it is budget friendly, saving money and finding great deals can reduce financial stress and contribute to a sense of accomplishment and satisfaction. It engages in environmentally conscious behaviors that can lead to a sense of purpose and satisfaction. Thrifting requires a certain level of mindfulness and attention to detail;. Practicing mindfulness has been shown to reduce stress and anxiety while prompting feelings of calm and contentment. **Brooklynn Merryman, Shanez Morales (Barrett Scroggs)**

#22 Do Visual Albums Convey a Deeper Meaning of Music?– Visual albums are albums that are accompanied with music videos/film that relate to the songs. Some example artists who use visual albums are Tyler the Creator, Beyonce, Michael Jackson, Kanye West, and Frank Ocean. These are thought to convey a deeper meaning in music and reinforce the themes in music. **Dalton Blubaugh (Barrett Scroggs)**

#23 Tell Us About Your Tattoos– Many people of various ages and backgrounds with tattoos of various styles have different outlooks on their tattoos and how to express their creativity. Our survey was designed to explore tattoo themes or outlooks from numerous individuals. This study also looks at why there is agreement and disagreement among people of similar and dissimilar ages and backgrounds. **McKenna Sas, Paige Loudenslager, Amelia Fouch (Barrett Scroggs)**

#24 Voice Recognition Systems: Unveiling Complexity, Mitigating Spoofing Risks, and Enhancing Security– This project delves into the realm of voice recognition systems, leveraging peer-reviewed articles and scholarly journals to explore their mechanisms, spoofing techniques, and security considerations when integrated with Artificial Intelligence (AI). By synthesizing historical insights from expert-reviewed literature, the study aims to identify security weaknesses inherent in voice recognition systems and propose advancements in anti-spoofing technologies. Furthermore, the research explores authentication methods to mitigate risks posed by AI-driven voice impersonations, ultimately aiming to contribute to the development of robust safeguards against unlawful exploitation in voice recognition systems. **Jon Paolo Dimaculangan (Liz Denlea)**

#25 Strength of Mechanically Stabilized Earth– Mechanically stabilized earth (MSE) is soil that is artificially reinforced to increase its shearing strength. Materials being layered within the earth can cause greater horizontal forces between the soil. These materials can result in different effects of the shearing strength of the soil, depending on the type of material and how it is used to reinforce the earth. For this project, the effects of using different kinds of techniques for reinforcing soil are examined in a controlled experiment. **Joseph Tassin (Jacob Moore)**

#26 Photoelectric Effect in Solar Panels: Harnessing Light Energy for Sustainable Power– Exploring the principle of quantum mechanics and optics behind the photoelectric effect using solar panels helps to deepen our understanding of this phenomenon and practical methods of using it to turn light into electricity. In this study, Pasco Capstone was adopted to measure current and voltage from different wavelengths of light to demonstrate the relationship of light wavelength and the photoelectric effect. This research provides an experimental and analytical study of the photoelectric effect and its relation to AOSHIKE Solar Panels. Solar panel design improvement and efficiency enhancement in light-to-electrical energy conversion are gained from the study that helps in the field. **Syed Kazim Hasan (Kim Herrmann)**

#27 The Use of Narrative to Shift Criminal Justice Attitudes– Research shows when victim impact statements are used in criminal cases, they influence the judicial process towards a retributive sentencing practice by providing “emotional transportation” for the listener, increasing empathy. This study exposed participants to a video of a restorative narrative of a justice-impacted individual and asked them to complete a survey which evaluates participants attitudes toward criminal sentencing policy. Three groups participated in the study and the findings indicate how effective the use of prose narrative is in comparison to poetic narrative. **Michael Vander Horst (Robln Yaure)**

#28 The Paradoxical Influence of Social Media Use on Disordered Eating Behaviors and Recovery– Social media, an integral part of daily functioning in modern society, has increased exposure to both potentially harmful and beneficial content. The aim of this project was to understand the paradoxical relationship social media use has with disordered eating behaviors and recovery. It considered whether exposure to appearance-ideal content (Pro-Ana, fitspiration, etc.) or body acceptance content (#EDRecovery, body positivity, etc.) impacts body image and thought patterns regarding oneself. Analyses of surveys and self-reports were examined to understand how social media influences opposite ends of the disordered eating spectrum. **Kimmlie Kinjerski (Robin Yaure)**

#29 The Effect Smoking Has on Adolescents– This project explores the effects of adult smoking on adolescents, especially physical and mental problems that result from exposing children to smoking. The main goal, however, is to see if exposure to smoking leads to adolescents picking up the habit later in life. **Diarra Jones (Robin Yaure)**

#30 The Impact of Video Games on Adolescents' Emotions and Sociability– We explore the impact of video gaming habits on adolescents' emotions and sociability. With the increasing popularity of video games, especially among children and teenagers, it is crucial to understand how these games affect their social-emotional development. Adolescents are the future of our world, and as video games have become a common hobby among them, it is important to monitor the impact on their social and emotional well-being. Our goal is to identify the positive, negative, and neutral effects that video games have on adolescents' social and emotional development. **Rylle Baker, Diarra Jones (Nikolette Lipsey, Robin Yaure)**

#31 Effects of Video Gaming on Child Psychological Development– The effect of video gaming on children and adolescent development is seen as a hot topic of debate for several decades. A rift has been created between both sides of the argument due to many lacking the proper information to form their own opinion and end up relying on what those around them think. The factor many debate on is how violent video gaming affects their child's psychosocial and overall psychological development. The study we research delves into how video games affect psychological development of children and the correlations of possible influences. **Connor Gels, Blaine Wilson, Kyle Neuendorf (Nikolette Lipsey, Robin Yaure)**

#32 Gender Inequalities in the Gaming World– This project explores how gender inequalities lead to cyberbullying in the gaming world. Unfortunately, because of stereotyping, online harassment, gatekeeping, and toxic cultures, the gaming environment around the world has become more hostile for women. By recognizing the impact of these inequalities on the widespread presence of cyberbullying, my goal is to find a solution to these issues and to create a more positive experience for everyone regardless of gender. **Delaney Bard (Robin Yaure, Nikolette Lipsey)**

#33 Video Games Inspire Creativity– Prior research has shown that video games can be effective in emphasizing creativity and that “digital games can dynamically adapt the environment to the player’s abilities, optimizing creativity” (Ganter-Argast et al., 2024). Participants in our study were undergraduate male and female Penn State students between the ages of 18-23. We are testing our hypothesis by giving a survey and then calculating our responses. We anticipate our findings to show that no matter the game or genre, all video games can increase productivity. **Ryleigh Nelson, Paris Lwin, Call Conway, Joel Henry (Barrett Scroggs)**

#34 Beyond the Screen: Investigating the Impact of Video Games on Cognitive Function, Social Coping, and Mental Health– In today's world, youth and young adults find themselves playing video games more often to pass the time. Some players use video games to escape reality when they find themselves overwhelmed with stress and struggle to find other ways to cope. This review aims to find the relationship between video games and cognitive function, social coping skills, and overall mental well-being. **Logan Marsik, Rebecca Brown (Robin Yaure)**

#35 Psychological Safety and a Sense of Belonging: How they Correlate with Longer Employee Retention In Relation to Pay– Factors that contribute to retaining employees include psychological safety, a sense of belonging, developmental opportunities, a supportive work environment, and salary. This study looks at psychological safety and a sense of belonging and the interaction they have with salary to predict employee retention. In this planned study, 200 randomly selected employees will be given a survey asking questions relating to these factors. The expected responses will show psychological safety and a sense of belonging have a more significant impact on determining how long someone will stay at their job than salary. **Rebecca Brown (Robin Yaure)**

#36 Relationship Between Autism Spectrum Disorder, Personality, and Other Factors– Autism is a neurodevelopmental disorder. It is also a spectrum, so many autistic people have varying experiences. Through secondary data analysis, we examined relationships between personality, masking, alexithymia, mental health, and other variables within autistic populations to better understand their experiences. We found that many variables do correlate, especially to personality. **Kyla Hoffner (Nikolette Lipsey)**

#37 The Impact of Art on Mental Health– College students represent a significant portion of the population of individuals who struggle with mental health issues. They often struggle to balance their personal, work, and school commitments and frequently report symptoms of anxiety, depression, and stress. Fortunately, creativity in the form of artistic expression can help individuals manage mental health issues (Magsamen and Ross, 2023). **Grace Steineman, Alek Smith, Ansleigh Darhower, Kendall Burleson (Barrett Scroggs)**

#38 The Domino Affect of Creativity– Research suggests engaging in some type of creative activity is effective for sparking inspiration. (An & Youn, 2018). This study was conducted to help determine whether participation in a collegiate choir is effective for inspiring creativity in other media. The participant completed a journal entry every day, addressing specific criteria to see if there was a pattern and correlation between choir participation, inspiration, and engagement in creative activities. The journal entries showed increased inspiration and creative behavior as the study progressed. **Joey Booze (Barrett Scroggs)**

#39 Peaceful Projects– Prior research has shown that participating in creative activities improves mental health and actively being creative is an effective health-improvement strategy. For the first data collection, there were 6 female participants ranging in ages thirty to sixty. The following data collections will be groups of about 20 participants from East Juniata High School aged fourteen to eighteen. To test the hypothesis, participants will complete a survey after finishing a creativity session regarding their mental state in comparison to before they engaged in creativity. These surveys will indicate if participants' mental health improved, stayed the same, or declined. **Cora Musser, Frances Fitzgerald (Barrett Scroggs)**

#40 Doodling for Days– Prior research states that those who take part in art activities more than once a week have higher life fulfillment than those who do not. The participant, an 18-year-old college student attending Penn State Mont Alto, is journaling their experience of drawing from a random line daily to track if there is a changing theme throughout their responses. **Lindsey Wang (Barrett Scroggs)**

#41 The Beauty of Emotions Through Art– Abstract art can boost someone's mood if they are stressed, but you need to experiment with different styles to see what works for you (Team, 2023). Additionally, art specifically in a museum can affect someone's mood and self-worth (Mastandrea, 2019). All four participants in this study are undergraduate female students with an average age of 19. We looked at five exhibits of art at Susquehanna Art Museum and answered questions about each piece. **Kristen Priest, Jaedyn Powell, Ashlyn Vandebree, Izzy Zentz (Barrett Scroggs)**

#42 Anxious Artistry: The Impact of Art on Mental Health– Research constantly indicates that art reduces stress and anxiety, as engaging with any form of art can induce rewarding and enjoyable experiences. Looking at objects that one believes to be “art” can lead to higher liking, pleasure, and positive experiences, which can elicit greater activation of reward-related brain areas. The end result may be improved wellbeing or mood benefits, especially for people who struggle with time management like students. This study will provide a better understanding of the benefit of art engagement on the mental health of college students. **Sanny Zheng (Barrett Scroggs)**

#43 Does Scrapbooking Effect Morale?– Research suggests that scrapbooking may be a creative outlet that can be beneficial to some, especially those grieving (Karns, 2002; Kohut, 2011; Williams & Lent, 2008). It is important to understand if this art form may have an effect on one's outlook on life. If this shows to be the case, the information can be used to help people improve their morale. This study explored an individual's experience with weekly scrapbooking and journaling both before and after each session. The participant also took a life orientation test (LOT-R) before the first session and after each subsequent session to check for differences. I anticipated my findings to show that scrapbooking does improve life outlook and morale at the finale of this project. **Jocelyn Shields (Barrett Scroggs)**

#44 The Effect of Music Genres on Artistic Tendencies– Research shows that music can change a person's perception, mood, and meaning within art. “The music genre you listen to while painting will affect your subconscious mind and swing your mood” (Higgins, 2020). When we are sad/feeling depressed, we all listen to “sad” music, so we chose to research if “sad” music can create a depressing vibe visible within art. In our study, five Penn State Mont Alto students aged 18-20 first drew to different genres of music, then guessed the genre for each drawing. We predicted that changing the music we listen to will change how we feel and our outlook on the day/future. **Nathanial Smith, Garrett Rosenberry, Caleb Cawthern, Alex Knerr (Barrett Scroggs)**

#45 The Art of Psychology in Museums– Our goal was to understand the social impact and mental health that museums have on individuals. Museums can decompose feelings that may be hard to release somewhere else. We each recorded how we felt before and after attending a museum, shared our feelings as a group, then took a survey or did a brief group interview. We anticipated that going to a museum will periodically decrease social isolation and better help students' mental health. **Arlanna Schmidt, Alexis Mariano, Edna Pokuaa (Barrett Scroggs)**

#46 How Live Music Influences Mood– Prior research has shown that music is an important means of stress relief in young people (Cheng et al., 2023). Attending local live music can improve our mental health and bring us closer to the community. Participants are 5 college students between the ages of 18-19 at Penn State Mont Alto. We completed journal entries after each attendance to a live music event analyzing how it impacts emotions and connection to community and comparing journal entries made at the beginning and the end. We anticipate that our findings will indicate the impact on the community the music has along with how it brings everyone together, and how the music makes us feel emotionally in the moment. **Philomena LaFata, Kiera Mull, Garrett Haskell, Trysta Bricker, Ashley DeKalb (Barrett Scroggs)**

#47 Learning to Like/Understand Rap Music– The participants, with previous knowledge of different rap artists and rap songs, had classmates, friends, and family recommend rap songs and artists from the 1970s, 1980s, 1990s, 2000s, and 2010s. Each week the participants listened to at least 4 rap songs from different eras, journaled about the music, and rated each song out of 5 stars. We compared the resulting means to see which age of rap music we appreciate the most. Not pushing away or dismissing rap music and listening to it helps to appreciate or understand the genre. **Ryan Small, Joseph Zabrocky (Barrett Scroggs)**

#48 Effect of Music Therapy during Low-Impact Kinesthetic-Based Activity Relating to Mental Wellness and Mood– Certain types of music may affect the body's limbic system and dopamine production (Fink), which is also increased by exercise. The combination of performing low-intensity, kinesthetic activities such as yoga while listening to music has been shown to enhance those effects on the body and yield an increase in overall mood and mental wellness. By participating in multiple group yoga sessions throughout the semester with and without music, our group concluded that our yoga practice in combination with music therapy was more effective in enjoyment and overall performance than without music therapy. **Rachel Hula, Allison Dunlap, Kyla Stine (Barrett Scroggs)**

#49 Monitoring Moods Through Gospel– Recent studies have shown that gospel music has several benefits on mental health: it can lower stress levels and improve overall mood (Dingle et al., 2013; Lee & Cohen, 2015). In our study, six Penn State Mont Alto basketball players, ages 18-23, completed a wellness survey every day of the week, but they only listened to gospel music on Monday, Wednesday, and Friday. We anticipated finding that gospel music does affect people's stress and mood. **Jonathan Pang, Vincent Frene, Joseph Brooks (Barrett Scroggs)**

#50 Game Changers: Examining the Social Bonds and Mental Health Among High School and College Student Athletes– In high school and college, many student-athletes befriend their teammates and find better social skills, find a new stress reliever, and help with depression and anxiety. **Joseph Brooks (Robin Yaure)**

#51 Do People Believe Change Is Achievable?– The purpose of this research project stemmed from curiosity of what made people change. I created a survey through google forms which received 53 responses, varying in age groups. This academic project will touch on common trends amongst one another and sharing the popular responses. **Anna Mowrer (Robin Yaure)**

#52 “Don't Stop” ...My Motivation– Listening to music has been proven to impact mood and motivation (Fonseca). This study examines if listening to "Don't Stop Me Now" by Queen first thing in the morning will boost motivation for the day. Two Penn State Mont Alto students 19 years of age completed a survey at the beginning of the day right after listening to the song and later in the day to analyze the impacts on motivation during the day. **Klaya Mouer, Kelsey Sanders (Barrett Scroggs)**

INFORMATIONAL EXHIBITS

#53 Aggressive Tendencies as a Result of Violent Video Games– The debate about violent video games increasing the likelihood of violent or aggressive tendencies is becoming a very hot topic. The participants in this study completed a survey which indicates that violent video games do not play a role in how they react to outside stimuli. Following the results of the survey, other articles were reviewed that further support our findings. **Samantha Reichel, Maclovia Estrada (Robin Yaure, Nikolette Lipsey)**

#54 What is Memory?– Memory is very complex to the human brain. Understanding how memories are created within the brain or how we can create false memories that we believe are true can be very complicated and studies still trying to determine the depths of memories. Five stages of memory can help us understand how experiences become memories. **Kayla Kish-Soda (Robin Yaure)**

#55 What Motivates Us? – Everything we do in life requires motivation. It may be the simple task of getting up in the morning or something more complex such as finishing a college degree. So, what exactly is it that drives us to complete such tasks? Are we all motivated by the same factors, or does it differ depending on the individual? The answers to these questions are not easily answered by a yes or no, but instead require diving deeper within the mind. In my exhibit, I take a look at not only the genetics but also the environments of one another that come into play when answering questions revolving around the psychology of motivation. **Natalie Hill (Robin Yaure)**

#56 “Level 1” is Admitting You Have a Problem– Over the decades since gaming began, researchers have noticed a developing addiction in gaming. It is important to examine how an individual develops it and how serious it can become. We will focus on gaming addiction and the specific genres of gaming addiction. Then we will discuss how to stop or prevent gaming addiction. **Karrington Brown, Maddie Wagner, Kinsie Ruckle (Robin Yaure, Nikolette Lipsey)**

#57 AI Mimicry: Does AI Copy Us?– The popularity of AI use has skyrocketed in the past four years, including entertainment. People enjoy being able to speak to AI as though it is a person; after all, it can respond and talk like a human when prompted to do so. That begs the question of whether AI copies us, or is AI capable of sentience or morality? Meta-analysis of related research as well as an experiment I ran myself will be used to answer this question. **Faith Simpson (Robin Yaure)**

#58 Web Support for Academic Conference: Devil2024– My mentor and I were invited to join the organizing committee for an academic conference on the devil to be held at the University of King's College in Halifax, Nova Scotia, in May 2024. I received undergraduate research support to create and maintain the conference website, the delegate submission form, and the payment portal for the conference which will comprise 97 papers including delegates from fourteen countries. **Johnathan Wright (Peter Dendle)**

#59 Hydroelectric Turbine Model– The Hydroelectric Turbine project aimed to design and test a hydroelectric turbine system capable of efficiently generating electricity from moving water. The project involved the design and creation of a CAD model of a waterwheel, followed by the fabrication of a physical model using a 3D printer. Research was conducted to select materials that would be strong, lightweight, and durable, capable of withstanding the physical elements encountered in a hydroelectric environment. The waterwheel components, including a DC generator, were assembled, and tested to ensure efficient generation of electricity power. The project also involved the monitoring and testing of the conversion of moving water to electricity. **Joseph Tassin, Syed Kazim Hasan (Kim Herrmann)**

#60 Rebuilding the Waterwheel– The main purpose of the waterwheel project was to investigate the reason why the historic Penn State Mont Alto waterwheel was not working correctly. Through a process of careful assessment, our goal was to produce a course of action that would address the damage that had affected the waterwheel. With special attention being paid to the rotational joint, we executed our plan to bring back the waterwheel's functionality. **Katlin Provard, Ariana Sookoo, Anika Mendiola, Syed Kazim Hasan, Jack Zeis, Ryan Butts, Andrew Neisser, Chris Pellicano, Joseph Tassin (Jacob Moore)**

#61 The Drone Project– The Engineering Club is engaged in a comprehensive drone project that includes design, assembly, and programming aspects to develop a functional unmanned aerial vehicle (UAV) system. This project entails designing the drone frame using SolidWorks, selecting components from commercial markets, and assembling them into a fully operational drone. Additionally, we aim to program the drone to interface with controllers for precise and responsive flight maneuvers. **Katlin Provard, Ariana Sookoo, Anika Mendiola, Syed Kazim Hasan, Jack Zeis, Ryan Butts, Andrew Neisser, Chris Pellicano, Joseph Tassin, Shakur Hamza, Jacob Hartness, Frank Intini, Liam Stevens (Jacob Moore)**

#62 Time Dilation: Real life vs Media– As Einstein discovered in his Theory of Relativity the faster an object moves, the slower it experiences time compared to an object at rest. The amount of time that passed for the object moving fast vs. the object at rest can be accounted for using *time dilation*. This phenomenon is easily represented using the Twin Paradox. Although time travel, a very popular concept among the Sci-fi genre, is most likely not possible, time dilation is the next best thing. While studying famous T.V shows and movies such as *Interstellar* and *Star Wars*, I was able to see the difference between good vs. bad representations of time dilation in media. **Rhannon Ambrosio (Kim Herrmann)**

#63 AI-Powered Resume Matching Application: Simplifying the Job Search Process– This capstone project presents an innovative application that leverages artificial intelligence to streamline the job search process. Using machine learning with Azure Document Studio, I created a model that identifies a user's areas of interest (education) and experience. This information is then used to search for relevant job opportunities within a specified location on Indeed. Artificial Intelligence (AI) then analyzes these opportunities, provides a rough percentage score on the match, and returns them to the user. This project aims to simplify the job search process and ensure that it remains tailored and valuable, so users are matched with opportunities aligned with their skills and interests. This demonstrates the potential of AI to simplify and revolutionize traditional processes. **Johnathan Wright (Liz Denlea)**

#64 Professor Deri: A Calculus-based GPT– Professor Deri specializes in teaching derivatives through interactive and accessible methods. She begins by offering a choice of topics, including basic concepts and various rules, and then provides customized practice problems and feedback. The approach emphasizes practice, understanding, and self-directed learning, with explanations available upon request. Conversations and problems build on previous discussions to enhance learning. Responses are concise and math-focused, with a casual tone, and each is accompanied by an illustrative image from Wolfram Alpha or Wolfram Language to ensure visual engagement. **Elnor Borrell, Ariana Sookoo (Kira Hamman)** <https://chat.openai.com/g/g-tDYDBixqB-professor-deri>

#65 AI-Powered Sentiment Analysis for Financial Forecasting through Tweets–This Capstone Project presents an approach to financial forecasting by leveraging sentiment analysis on social media content. Utilizing AI models from Hugging Face, I examined and analyzed the sentiments of over 10,000 statements extracted from X (formerly Twitter), uncovering correlations of market trends and collective sentiment. These findings suggest that sentiment analysis, powered by AI, can provide very valuable insight into public sentiment and the fluctuations of the financial market. The project not only proves useful in this case, but also demonstrates the practical application of AI in extracting meaningful patterns from vast, unstructured datasets. **Heston Harvey (Liz Denlea)**

#66 What's for Dinner?– This website is an opportunity for anyone who wants to broaden their horizons through recipes that you have most likely never heard of before. This website, with 400+ ingredients and 200+ possible matching recipes, provides a search bar to allow users to enter the ingredients they plan to use. Clicking on the match button will activate the process of reading your ingredients, and then searching a list to find the perfect match for a recipe. Immediately, there will be a downloaded text file showing several listings of recipes and directions. In addition, the text file will include the recipe ingredients, the ingredients you typed, and how many recipes were matched. **Noah Mulka (Liz Denlea)**

#67 Grief and the Link between Our Mind and Body– Grief is a unique emotion everyone must experience at one point or another. It is deeply personal and there is no set way to experience it, varying from person to person on every level possible. It can be so intense that it even affects you physically, whether more immediate or long-lasting. This is what I explore in my poster; how grief manifests both physically and mentally, the factors that contribute to it, and how interconnected we are between mind and body. **Lael Mazzone (Robin Yaure)**

#68 Mont Alto's Views on Ethics In Psychology– The APA has rules and regulations on what can and cannot be done in psychological experiments. In this small experiment, a survey containing ten questions was sent out via the Internet. A sample size of 42 was collected and most people who took the survey fell in line with what was considered ethical by the APA. **Joseph Quesada (Robin Yaure)**

#69 Mapping the Trail Systems of the Meeting of the Pines Natural Area– To gather data, a handheld GPS was used to plot 1,500+ waypoints while hiking the distinct and indistinct trails of the Meeting of the Pines Natural Area and adjacent portions of the Michaux State Forest. This data was overlaid onto an existing base map and further manipulated using ArcGIS Pro software. This map was then simplified to create a brochure detailing the history, flora and fauna, and trails found in this area. **Abigail Ide, Maria Fitzpatrick (Kimberly Bohn)**

ORAL PRESENTATIONS & PERFORMANCES

12:30 p.m. #70 A Functional Movement Systems Approach from a Screening Perspective– Our group wanted to investigate the management of a client from the perspective of health and wellness compared to the traditional medical system approach based on illness. Our objective was to utilize the Functional Movement Systems (FMS) screen as a feedback tool while increasing our familiarity with FMS generated correctives in a case-based situation. We challenged our existing therapeutic exercise biases and experimented with a treatment-based course of action to address identified deficits. In general, we found the FMS screen to be a useful, cost-effective tool to assist in client management within all phases of the health-care continuum. **Hannah Zychal, Maddie Tchou, River Terry (Amanda Snider)**

12:50 p.m. #71 Logos: Natural Change or Artificial Construct– This project is a narrative essay in the form of a multimedia presentation. Through a critical lens, the essay examines the incomplete framework of reasoning as descended from Greek philosophy. Heraclitus, an ancient Greek philosopher from approximately 6th century BCE, is analyzed as the listener's proxy for that era of philosophy. Luce Irigaray, a contemporary French philosopher, provides the feminist perspective that fills in the missing context of ancient Greek philosophy. Through the presented analysis that requires no prior knowledge of philosophy or the philosophers examined, listeners will gain a focused understanding of both philosophers and their interplaying philosophies. **Dimitri Nearchos (David Spitzer)**

1:10 p.m. #72 Negative Space: Memoirs in Animation– Negative Space is a memoir written in comic form, exploring themes of childhood neglect and overcoming the physical manifestations of it. How do stories translate into a visual medium? How do we choose the most important aspects of the story we want to tell? Furthermore, how does excluding information accentuate the themes of a story? **Max Membreno (Robin Yaure)**

1:30 p.m. #73 Trauma in College Students: Understanding How Personal Traumas May Be Linked to Mental Health Issues– During the 2021-2022 academic year, the Healthy Minds Study found that over 60 percent of college students fit the criteria to have at least one mental health issue (Lipson et al., 2022). The prevalence of mental health issues and diagnosed illnesses has continued to grow despite the efforts of many universities to incorporate tools to navigate these issues. The purpose of this research was to determine whether traumatic events in adulthood and/or high ACE (adverse childhood experiences) test scores affect college students in their daily functioning and their general mental health. The study also aimed to discover if college students are using emotion regulation strategies to manage any present mental health problems. This research was conducted on campus through a survey to determine if there is a correlation between the variables mentioned previously. **Clara Geesaman (Robin Yaure)**

1:50 p.m. #74 Tweaked Technology of Blockchain /Block-UPON-Block– A fun, educational performance will show the audience exactly how BLOCKCHAIN technology works and how it can be employed in critical systems to safeguard important data. We come to present an entertaining approach to one case within the healthcare industry to illustrate the knowledge of obtaining a new technology that can be used to make business easier and more efficient. **Darrius Bush (Liz Denlea, Robert Connors)**

2:10 p.m. #75 The Ethics of International Adoptions– International adoption is a subject that has sparked a great deal of ethical debate. Families sometimes welcome children from other countries into their homes without understanding the magnitude of this homecoming and its long-lasting effects on adoptees. The purpose of this presentation is to shine light on the positive and negative aspects of international adoptions through an ethical perspective. This will bring awareness to the concept and help the audience determine how ethical international adoption truly is. **Hannah Hite (Denise Salters)**

2:30 p.m. #76 COVID-19 and Burnout in Critical Care Nurses and Their Coping Strategies– Critical care nurses (CCNs) faced an undue amount of stress and abuse during the COVID-19 pandemic. As a result, a large focus of current research in nursing is related to burnout, job satisfaction, and high turnover rates. The purpose of this study is to expand on existing knowledge regarding these topics and uncover what coping strategies these CCNs used to deal with the stress of nursing during a global pandemic. It was found, from the fourteen participants studied, that these CCNs experienced a variety of negative emotions, including mental exhaustion, burnout, and feelings of unappreciation because of the pandemic. CCNs reported not feeling supported during the pandemic, and some report continuing to feel this way even post-pandemic; however, CCNs continue to use positive coping strategies to cope with these emotions. **Nicole Jones, Andrea Fox (Stephanie Unger)**

Thanks to the following for their assistance:

Francis Achampong, Randall Ackerman, Brandi Biesecker, Michael Doncheski, Patty Gochenauer, Angie Hissong, Charlene Saeman, Mary Jo Stevenson, Curt Wengert, Brad Kendall and the Physical Plant Staff, The Housing and Food Services Staff, The IT Department, The Student Affairs student workers, The Student Activity Fee Committee for graciously funding the refreshments, University Libraries, faculty and staff for financial donations, and all the faculty mentors (listed in parentheses) for giving of their time, energy, and creativity.

2024 Academic Festival Sponsors



Penn State Mont Alto Alumni Society Penn State Mont Alto Faculty and Staff

This publication is available in alternative media on request. Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability or protected veteran status. UBR MAO 24-45.