



April 4, 2024

**Complete Chronological
List of Presentations
with Abstracts**

Morning Presentations

Adams Hall and Bareis Hall

Horizon Prison Initiative: Insights from Participants

Dr. Sarah Lazzari, Madeline Moore, Hope Kreais, Logyn Chamberlin, and Paige Collins

ADA 101 | 9:00 AM

The Horizon Prison Initiative (HPI) has been in existence for over 20 years. They provide programming for incarcerated men and women, and work with them as they reenter society. HPI has not had the opportunity to begin any type of program evaluation. The current study is the first to examine the impacts of the program. The study will also provide program administrators and prison officials a chance to determine if their goals for the program align with what the women are experiencing. The current study is exploratory and examined HPI at a women's prison in Ohio. Funnel style focus groups and surveys were administered. The survey included the Measure of Criminogenic Thinking Styles, which has yet to be used with incarcerated women (Mandracchia, 2018). Half of the participants had just started the program, while the other half had completed at least one cycle of the program. Results and policy implications will be discussed, including the next steps of the larger program evaluation.

Cultural Traditions and Rituals Surrounding Eclipses Worldwide

Kristen Harrah and Olivia Perry

ADA 104 | 9:00 AM

This research discusses how certain European countries express their cultural traditions and celebrations toward lunar and solar eclipses. Eclipses are a natural phenomenon that cultures have built religious practices, stories, and architecture around. This study conducts a cross-cultural approach where different cultures are examined on how they interpret and celebrate eclipses. Using a variety of stories, history, primary, and secondary sources, the aim is to understand why certain groups celebrate this celestial event in such different ways. This research will identify the uniqueness of each European culture examined. From ancient mythology to modern-day practices, the exploration of these cultures will help to build knowledge about the connections that are formed among humans. The research examines the different disciplines of science, art, humanities, and social science by looking at how cultures view solar and lunar eclipses. Ultimately, the study conducted is a cross-cultural application. The research applies multiple disciplines to understand further the basis of human rituals and celebrations relating to eclipses.

Policy of Mayors in Akron, Ohio

Isaiah Young

ADA 201 | 9:00 AM

My research is a critical look into the policies that mayors, specially in Akron, OH, have been able to implement to produce economic development. My research includes qualitative analysis as well as quantitative analysis of past, current, and future mayoral policies in Akron, OH.

Milkman: an Original TV Series

Julia Schaefer

ADA 204 | 9:00 AM

“Middle Sister” lives in Belfast during the Irish Troubles. Without even speaking to her, IRA strongman “The Milkman” convinces everyone in town that she is his. Cameras, gossips, and guns control their daily lives, and staying politically neutral is not an option. There’s another revolution brewing too, as violence on the mothers and daughters of the reformers begins to cut too deep. Simultaneously stalked and ignored, will middle-sister be able to convince her tight-knit town to turn against one of their own? “Milkman” is based on the 2018 novel of the same name by Anna Burns. This Pitch Deck explores media criticism by analyzing contemporary trends in television networks, audiences, and themes. In addition, I gained practical experience in the research and development necessary to adapt a novel to an original TV Series.

Affects of Pre Workout on Batting Swings

Deanna Voris and Kailynn Kroll

BAR 310 | 9:00 AM

My partner and I are presenting how pre workout affects batting swings. We did a single blind experiment meaning that my partner and I know if participant uses either the placebo or the Pre-workout while the participant does not know what they are getting. The first substance we used was Promix pre-work out and the second substance, the placebo, was Kool aid. The group that we did the data on was the Heidelberg Baseball team. To collect the data, we used a VR headset and used a program called Win Reality in order to collect the data and place the pitches. We have found that our results were inconclusive due to the lack of participants in the study.

They can't run without their "SOX"?

Samuel Scheele

BAR 329 | 9:00 AM

This paper discusses the accounting profession in the post-SOX (Sarbanes Oxley) era. The SOX Act was passed in 2002 due to the many accounting scandals of the early 2000s. One of the largest factors that exists today that contributed to these cases was a lack of independence. This paper will discuss possible solutions to strengthen auditor and client independence. There will also be a discussion of what SOX is, and what has changed as well as the costs and benefits of complying with SOX regulations. There have also been many changes in the structure of work done in public company audits due to the creation of the PCAOB (Public Company Accounting Oversight Board). This has caused many auditing firms to change the processes of their public company audits in preparation for PCAOB inspections. This paper will discuss whether PCAOB inspections have increased audit quality. Lastly, there will be a discussion of the CPA (Certified Public Accountant) profession and its governing structure and importance.

The Effects of Glitter on Bluegreen Algal Growth (Dolichospermum and Microcystis)

Molly Cannon

FROST | 9:00 AM

Microplastic pollution has become a large concern in aquatic environments in the past decade. However, some microplastics continue to be overlooked, such as glitter, with all research being conducted within the last 2 years. Glitter is an item seen everywhere, on clothes, cards, makeup, etc. In nature, it can cause harmful effects through the breakdown process. Due to its commonness and composition, it is important to research the possible effects of glitter on freshwater species. This study examines whether the growth of two cyanobacteria (*Dolichospermum* and *Microcystis*) strains were impacted when exposed to different colors of glitter throughout growth. Each species had 5 different groups (4 different glitter colors, and 1 control) with four replicates in each group (n=4). Growth was monitored through spectrophotometry every 2 days for 3 weeks. Through a two-way ANOVA, spectrophotometry absorbance levels showed that glitter color and days had a significant effect on algal growth in both species. However, different trends of growth originated between the two species when exposed to glitter. This result shows that glitter affects the growth of both species, but may have differing effects based on the species, as observed with *Dolichospermum* and *Microcystis*. These results add to the growing knowledge of the effects of microplastics in freshwater environments and especially add to the little knowledge known about glitter as a microplastic.

Mental Illness in Prisons

Linzi Boos

ADA 101 | 9:30 AM

Mental illness is a large concern for prisons throughout the U.S. Research needs to focus on Attention Deficit Hyperactivity Disorder (ADHD)/Attention Deficit Disorder (ADD) especially because of the lack of awareness around it. The current study explores the association between ADD/ADHD and the frequency of arrests for any type of criminal offense. The data used is from a study conducted in 2016 by the Prison Policy Initiative, from a Survey of Prison Inmates which was conducted by the Bureau of Justice Statistics. The current study expects to find that those who have ADD/ADHD will have been arrested more frequently. The results showed that if an individual has ADHD/ADD, they are more likely to have been arrested more often than those without ADHD/ADD. These results highlight the importance of exploring the impact on the U.S. prison system.

Stereotypes are Ruining the Accounting Career Field

Reese Recker

ADA 104 | 9:30 AM

Throughout my three years at Heidelberg University, I was always told, in every accounting class I completed, that I will never have to worry about finding a full-time job as an accountant. After hearing this statement repeatedly, I was a little relieved and optimistic! However, as that statement kept playing in the back of my head, I asked myself, "Why are all of my accounting professors repeating this to me?" Obviously, this dilemma didn't appear overnight, so I began to research about this situation. I quickly realized that this accountant shortage has been an ongoing problem for years and it has the potential to worsen as time goes by. With that being said, this led to a bigger question, why is there an immense shortage in accountants? Why do people avoid pursuing a career in accounting? The main reason why there is a short supply of accountants is because accounting is promoted in a negative, stereotypical way and it isn't taught in majority of high schools. Throughout this essay, I will share why I think there is a shortage in accountants, share my research and findings that support my reasoning for the accountant shortage, and possible solutions that could help the employment rate grow for accounting positions.

The Latchkey Kids and Digital Natives: Exploring similarities and differences in leadership style, communication channels, and technology behavior

Dr. Lisa Kahle-Piasecki, Lillian Whitcomb, Carter Piasecki, Sarah Shoots, and Caitlyn Dems

ADA 201 | 9:30 AM

While generations have historically had difficulty understanding each other – the generation gap – in 2023 this gap became even more important in organizations because for the first time in history, five generations were (and still are) in the workplace. This study will explore the preferences for leadership style, communication channels, and technology behavior among two generations – Generation X and Generation Z to determine the similarities and differences. An online survey will be conducted in 2024 soliciting input from both generations. The study has broad implications for the workplace as the results of the study will be useful for training and development in organizations of both generations to avoid some of the complications of a generation gap that can ultimately affect productivity.

“So It Goes”: War and the Human Condition

Cameron Spraggins

ADA 204 | 9:30 AM

This presentation delves into the timeless connection between war and the human condition, exploring the complexities of conflict through the lens of literature, history, and philosophy. Drawing inspiration from Kurt Vonnegut’s iconic refrain in “Slaughterhouse-Five,” the phrase “So it goes” encapsulates the resignation and acceptance of the cyclical nature of human conflict, reflecting a broader existential truth about the human experience. This presentation examines the profound impact of war on individuals and societies, probing questions of identity, morality, and resilience in the face of adversity. By delving into literary works, historical accounts, and philosophical reflections, I explore the variety of human responses to war, ranging from trauma and despair to courage and compassion. Moreover, this presentation contemplates the role of storytelling in shaping our understanding of war, emphasizing the power of narratives to illustrate the universal truths and dilemmas of human existence.

The Acute Effects of Plyometric Training.

Ethan Bennington and Garret Dudley

BAR 310 | 9:30 AM

Our study had an in-depth look at the acute effects of plyometric training. The goal of our study was to see if doing a plyometric warmup before completing maximal/submaximal exercises would increase performance. Plyometrics increase strength and explosive power through movements that involve absorbing a force and exerting force back directly after absorbing the force. Research has shown that plyometrics can have both an acute effect and a long-term impact on performance increases. Our research wished to see if using plyometrics would be a valid form of warming up and preparing for maximal exercises. Our study consisted of having our participants complete a control day and a testing day where they were asked to complete a regular dynamic warmup and a plyometric warmup respectively. Afterwards they were asked to complete a vertical jump test and a 3 RM squat test. The data we collected was then used to see if there were any increases from our control day to our testing day.

Cercis canadensis (Eastern redbud)

Michael Woody

BAR 329 | 9:30 AM

Cercis canadensis (Eastern redbud) is a small tree or shrub that belongs to the Fabaceae family, commonly known as the bean family, and produces small seeded pods. *C. canadensis* has an umbrella-shaped crown and foliage colors varying from a deep purple to green to yellow. *C. canadensis* is normally found in temperate environments across the globe including most eastern parts of North America, parts of Asia, and the Middle East. *C. canadensis* can grow in different soil types and pH levels within closed forests, open woodlands, and forest borders, giving it a wide distribution. Dating back nearly 50 million years, *C. canadensis* is usually a self-incompatible tree, incapable of self-fertilization. The seeds inside the pods can be extracted and treated to affect germination rates. The goal of this study is to see what methods yield higher or lower seed germination success rates. Seed pods have been collected from in and out-of-state locations and shucked to identify viable seeds. Viable seeds will undergo sandpaper-based scarification, chemical scarification with both hot/cold water and acid treatments, a hormone-based treatment, and a control treatment. The treated and untreated seeds will go through a process similar to the process found in the environment to properly induce germination. Germination rates for all seeds will be observed, recorded, and compared. We expect the cold water scarification to yield somewhere between 0-5% germination success, while all other treatments are expected to yield 90-98% germination success. We also expect seeds collected in Northwest Ohio to have higher germination rates than seeds collected in Indiana, due to geographical and climatic factors favoring Ohio seeds over Indiana seeds.

The Effectiveness of Nitric Oxide–Releasing Patches in Wound Healing

Brynlee Vermillion

FROST | 9:30 AM

Nitric oxide (NO) is known to cause blood vessels to expand—vasodilation—which increases the amount of blood to the site of a wound. This vasodilation of vessels increases molecular messengers, like histamine, to the wound. These components are integral to modulating wound healing. Because of the correlation between NO, vasodilation, and wound healing, studies have evaluated the efficacy of NO–releasing patches. These patches are often non–woven, breathable patches, created through an electrospinning technique. This electrospinning technique utilizes an electric field and applies surface tension to pull a solvent from a capillary tube, onto a flat surface. The resulting charged polymer thrives in a moist wound environment, and often the patches are engineered so the moist environment promotes the release of the desired chemical. This study evaluated the role of NO in wound healing in male Wistar rats. It was determined that the group of animals who received NO patches initially experienced higher rates of healing (days 1–4). However, a significant weight loss was seen in the bandaged animals—indicating a need for a modified bandaging technique.

Mental Health or Mental Hell: Lingering Impacts of Incarceration on Mental Health

Ella Hoover

ADA 101 | 10:00 AM

Mental illness is an ever–constant reality in today’s society. The American Psychiatric Association found in 2022 that a little over a third of Americans (37%) report their mental health as “fair or poor”. After the COVID–19 pandemic, there has been an increased awareness on mental health and treatment. Previous research found that “as many as 80 per cent of Americans are struggling with anxiety, depression, grief, or isolation” (Nealon, 2021). Even as there becomes a much greater emphasis on mental health, there still seems to be a population that is not receiving the same care as everyone else. The incarcerated population is made up of individuals who typically have been exposed to different risk factors throughout their lives. According to The Center for Disease Control and Prevention (CDC) (2022), risk factors for engagement in criminal behavior include but are not limited to “poor behavioral control, high emotional distress, and history of treatment for emotional problems”. In this study, mental health is described by measurements of depression (CESd Scale), emotional regulation (DERS–SF Scale), and perceived social support (MSPSS Scale). Participants are 18 years old or older and have been incarcerated in prison (either state or federal). Through this study, researchers will be able to better understand how incarceration impacts mental health and influences behaviors after release from incarceration.

Navigating the New Normal: The Impact of COVID-19 on Accounting College Students.

Micayla Pluto

ADA 104 | 10:00 AM

This paper investigates the profound impact of the COVID-19 pandemic on accounting college students. Examining the challenges imposed by the sudden shift to remote learning, the study explores how students coped with technological barriers, changes in study habits, and the overall disruption to their academic routines. The economic fallout of the pandemic significantly altered career aspirations, posing unique challenges for accounting students entering an uncertain job market. Financial uncertainties and socio-economic disparities also played a role in shaping the educational experience. The research assesses the effectiveness of support mechanisms implemented by educational institutions and highlights the role of resilience and adaptability in navigating these unprecedented circumstances. By shedding light on the nuanced ways in which the pandemic affected accounting students, this study contributes valuable insights to educational institutions and policymakers seeking to enhance preparedness and support structures for students in times of crisis.

Baseball Talent in Japan

Robert Kramer

ADA 201 | 10:00 AM

Throughout the history of Major League Baseball, Japanese baseball players have dazzled the eyes of American fans for years. My purpose for this study was to show that there's more talent that the MLB has not yet fully seen coming from Japan. This research included the statistical analysis of Japanese hitters and pitchers in the current and recent MLB game. Through regression, correlation, and statistical analysis data used from Baseball Reference and other outside sources were used to compare how Japanese baseball players' contract size affected their tenure and performance in the MLB. Those variables were chosen due compensation being a large factor into professional baseball tenure in the league, and performance while they are in the MLB. Results found that the majority of Japanese baseball players have a short tenure in the MLB when making the change from playing in Japan. While the superstars are always apparent, there was significant data to prove the contracts Japanese players receive are far overvalued. Overall, my original assumption about the talent in Japan, and effectiveness in the MLB was not fully fulfilled in my research. However further research would be needed to come to further conclusions.

Self-Maid: Socially Situated Knowledge in Netflix's *Maid*

Dr. Julie O'Reilly

ADA 204 | 10:00 AM

Feminist standpoint theory posits that that “knowledge attempts are socially situated” and that those in marginalized positions are more cognizant of their environment than those who are privileged (Gurung, 2020, p. 108). It stands to reason, then, that domestic workers, “maids,” have insight beyond that of their more privileged employers. Televised representations of maids often have depicted these marginalized characters as using such insight, their situated knowledge, to the advantage of their employers. Netflix's limited series *Maid* (2021), however, changes this dynamic. While *Maid*'s lead character, Alex, does assist her clients, such assistance is a byproduct of and not a primary aim of her efforts. An analysis of *Maid* through the framework of feminist standpoint theory reveals a marginalized character (although one who benefits from white privilege and a talent for writing) who uses her situated knowledge to improve her own circumstances, a perspective not often depicted on television

Differences in FMS Scores Between Softball and Track Female Athletes.

Ryann Ramacciatti and Leandra Price

BAR 310 | 10:00 AM

Context: Injuries are common in almost any sport and can greatly affect an athlete mentally. This is why it is important to find ways to prevent injuries altogether. One method that can be used is the Functional Movement Screen (FMS). The FMS evaluates a variety of movements and is used to predict injury risk. However, little research has been done comparing FMS scores between softball and track athletes specifically. Objective: The purpose of this study was to compare FMS scores between softball and track female athletes at Heidelberg University based on the upper or lower extremity nature of the sport. The second purpose was to compare FMS scores between injured and uninjured athletes. Participants: Four softball and four track athletes. Study Design: Cross-sectional design. Protocol: Participants completed informed consent, the 2023 PARQ+, and an injury questionnaire. All participants were given a demonstration of the seven FMS tests, and each participant completed the tests in the same order. Results: Overall, softball players scored slightly higher on lower extremity movements, while track athletes scored slightly higher on upper extremity movements. Injured athletes scored lower on multiple tests and had a lower composite score than uninjured athletes. Conclusions: Results were not statistically significant, but there were tendencies and relationships that proved differences in softball and track athletes based on upper and lower extremity movements. There were also relationships that justified injured athletes scoring lower than uninjured athletes.

The Portrayal of Mental Illness in Media and Its Impact on Public Perception

Liliane Helms

BAR 329 | 10:00 AM

In this presentation, various pieces of literature will be discussed that dissect how mental illness is portrayed throughout the media. Through the studies that were examined, which focused on media including TV programs and news articles while also crossing a wide range of targeted age groups, children's TV programs in particular had almost half of the media contain depictions of mental illness, with the majority of these being shown in a negative light. In addition, other studies found that negative wording and the usage of negative stereotypes in media involving mental illness caused more stigmatization against not only mental illness but also the likelihood that someone with a mental illness would seek psychological help. After reviewing these findings, it can be reasoned that through negative stereotypes, lack of recovery stories from people with mental illness, and lack of stories covering opinions of psychologists' about mental illnesses; media creates a skewed public perception of mental health. In the future, a more nuanced showing of mental illness could positively impact how society views mental illness and the struggles surrounding it.

The Manga *Berserk* and the Anime *Fullmetal Alchemist*

Kerrick Fanning

FROST | 10:00 AM

The manga *Berserk* and the anime *Fullmetal Alchemist: Brotherhood* are both considered by many to be the greatest works of their respective genres. Interestingly, both feature eclipses as prominent events, and the eclipses' serve similar roles both in symbolism and in the plots of their respective narratives. Through a multidisciplinary approach that combines literary and film analysis, historical research, and astronomical data, the role of eclipses in Japanese culture and history is examined to determine how narrative and symbolic use of eclipses originated and evolved in order to explain why eclipses feature so prominently in these two seminal works of Japanese fiction.

Exploring Oyster Mushrooms as a Potential Sustainable Food Resource

Hannah Watson

ADA 101 | 10:30 AM

Oyster mushrooms (*Pleurotus* sp.) are a fast-growing nutritious food source globally recognized by the food industry for their appealing taste and smell. They require minimal space and light and grow easily in woody or grainy substrates not well suited for traditional grain and vegetable crops (Owaid et al., 2015). This research compares growth rates for three different species (*Pleurotus djamor* (pink), *Pleurotus ostreatus* (pearl), and *Pleurotus pulmonarius* (Italian)) in two different growth environments: greenhouse and humidity grow tent. Additionally, after harvesting, I dried the mature mushrooms to ascertain potential shelf-life. Jegadeesh et al. (2018) determined that pink oyster mushrooms are a fast-growing species (16 days), but did not compare this species to others. Owaid et al. (2015) harvested pink oyster mushrooms within 5 days, but found that pearl oyster mushrooms took 9 days. My research suggests that all three *Pleurotus* species are harvestable in 16 days or less, but there is not a significant difference in growth rate between them. Preliminary results indicate all dried unsealed mushrooms were refrigerator stable for at least 2 weeks.

Ankle Sprains

Sara Chilton and Caitlyn Weirich

ADA 104 | 10:30 AM

Ankle sprains are one of the most common injuries that athletes could experience throughout respective sports of high intensity. One of the main problems as a result of ankle sprains are residual symptoms. Residual symptoms occur after an injury has healed, but an individual has feelings of chronic instability. This includes the feeling of the ankle “giving out” and can occur at any point. Of these injuries, 73% experience the residual symptoms that could occur (Brown & Mynark, 2007). To determine if there are any deficits or instability, the tool used to determine this is called the Y Balance Test. The Y Balance Test is used to test functional movement in the ankle and importantly screen people if they are at risk for an injury (Shaffer et al., 2013). When using the Y Balance Test, a baseline test is performed where an individual will push three different blocks at three different angles: one forward, one off to the side, and one where the leg crosses back behind the one foot planted on the Y Balance board. The test could be helpful in determining whether or not an individual would need some form of preventative measure when playing sports. By evaluating collegiate athletes, this could help those understand their ankle injury more and reduce sprains in future play.

Eclipses

Madison Wise, Anthony Grecol, Owen Frizzell, and Reece Paul

ADA 201 | 10:30 AM

Eclipses, celestial events that only happen during certain periods, have numerous effects on the well-being of humans. These effects can range from psychological and sociological to superstitious and mythical. The following information synthesizes previous research that examined the intricate relationships between eclipses and the implications it places on the human mind. Through extensive literature review, there are many ways in which an eclipse can have an impact on mental health. This research broadens discussions in psychology and health, while also interpreting a solar eclipse. Through the examination of various articles we were able to culminate information on how eclipses affect humans in different ways. Researchers have indicated that eclipses have a positive relationship with overall mental well-being during the period of an eclipse. Using knowledge from this research, psychologists are able to better understand the ways in which eclipses impact individuals. Going forward, researchers and psychologists alike can benefit from the many possibilities offered by solar eclipses.

AI's Influence on the Accounting Field

Liam Batten

ADA 204 | 10:30 AM

In our ever-growing environment surrounded by modern technology, AI is a generally newer development that has great potential to change everyone's life in the near future. More specifically, the accounting field is facing some struggles with this new technological development. I wanted to highlight some of the rising concerns with not only the industry itself and how it will be affected, but also, and arguably more importantly, the job market in the accounting field. This information is not only important to the current and future accountants, but everyone in the workforce. A majority of people in today's world use accountants for the financial aspects of their life, if these accountants and their jobs disappear, it will affect a large percentage of the population. In my presentation I will dive into AI and how it is changing this realm of the workforce, while trying not to drown in all the new developments and constant changes happening as we speak.

Effects of Leg and Hip Flexibility on Speed

Katelynn Helminiak, Isaura Renteria, and Mackenzie Murray

BAR 310 | 10:30 AM

For our presentation on “Effects on hip and leg flexibility on speed” the rundown will start with the presentation of an introduction, research design and description of participants, and some of the procedure then the results found at the end of the study. The stats are in graphs and we will be stating numbers along with facts about the study. The results are an important part and will be made sure to help our study and those who are looking to compare. Next we will go over all the tests used which are the sit and reach, goniometer and y balance test. Also the details of the procedures of how the test were conducted and what was needed for it to be completed. Depending on if there is a result she will also go over that in discussion along with other articles. Mackenzie Murray will talk about the procedure, results and discussion of the strengthening portion.

Determination of the Mutagenic Properties of Insecticides and Food Additives Using the AMES Salmonella Test

Crimson Stuckert and Mac Metz

BAR 329 | 10:30 AM

The AMES Salmonella typhimurium or microsome mutagenicity test is a chemical assay that can be used to assess phenotype changes in bacterial strains as an effect of genetic damage causing mutations. Insecticides are chemicals commonly synthesized to kill insects by the agricultural industry. Food additives are chemicals added to foods for preservation and appearance purposes. AMES assays were used to investigate the mutagenic properties of some common insecticides and food additives. These chemicals were evaluated for inducing mutation rates of Salmonella typhimurium strains TA 98 and TA 100 using microbiological techniques. Various mutagenicity ratios obtained for each bacterial strain indicated differences in the types of mutations that occurred based on the genomic properties of the salmonella strains.

Significance of Diverse Representation in Higher Ed.

Yaniah Powell and Kayliana Barbee

FROST | 10:30 AM

Higher education stands as a gateway to societal advancement, yet disparities in representation within institutions highlight broader inequalities. This abstract examines the vital role of representation in higher education, emphasizing its impact on equity, diversity, and academic achievement. Firstly, representation fosters inclusive learning environments that embrace diverse perspectives, enriching intellectual discourse and preparing students for a diverse world. It cultivates empathy, cultural competence, and awareness, essential skills for navigating interconnected societies. Secondly, equitable representation addresses historical injustices and dismantles barriers for marginalized groups, fostering mentorship and amplifying underrepresented voices. This diversity among faculty and leadership mitigates biases, enhancing academic opportunities for all. Furthermore, diverse teams in higher education encourage innovation and excellence, as evidenced by their heightened creativity and problem-solving abilities. Leveraging varied perspectives enriches scholarship, driving societal progress. However, achieving meaningful representation demands proactive measures, including targeted recruitment, inclusive admissions, and supportive policies. Fostering a culture of belonging is crucial for realizing the benefits of diversity. In conclusion, representation is not solely a matter of justice but a prerequisite for vibrant, inclusive academic environments. By prioritizing diversity and inclusion, institutions can advance knowledge and empower future generations to create a more equitable world.

Poster Presentations

Wickham Great Hall | 12:30 PM

Is Homework a Benefit to the Classroom?

Murissa Drown

Rat Treadmill Training Regimes

Kirsten Kracht

Is the Current Way Children Are Using Technology in the Classroom Incorporating the 6 Global Competencies?

Alyssa Bennett

How do we implement UDL in the classroom?

Victoria Perez

Enhancing Predictive Accuracy for Cold-Stunning Events in Laguna Madre, Texas: A Cross-Validation Approach

Jarett Woodall

In what ways does Universal design for learning support all learners?

Mackenzie Damsa

Dyslexia

Brooklyn Gillig

A Trauma-Informed Classroom

Maria Welter

Differences between Biological Male and Female Brain Development

Kalie Rettos

Afternoon Presentations

Adams Hall and Bareis Hall

Truth and Lies: Stereotypes and Their Impacts on White Collar Crime

Ella Hoover

ADA 101 | 1:30 PM

As much as we try to discourage them, stereotypes plague our world. They define our underlying attitudes and behaviors. They can lead us to jump to conclusions too quickly, or they can lead us to not jump to conclusions at all. Common perceptions paint accountants as socially inept, nose in the books, and awkward. These characteristics are, coincidentally, left off of most lists of criminal risk factors. According to The Center for Disease Control and Prevention (CDC) (2022), risk factors for criminal behavior typically include, but are not limited to, a history of violence, both victim and perpetrator, low IQ, and poor behavioral control. The inconsistencies between stereotypes of accountants and criminal risk factors have the potential to mislead regulators into overlooking accountants as perpetrators for white collar crime. In this study, the impacts of stereotypes on the trajectory of white-collar crime is being questioned. It is hypothesized that accounting stereotypes are correlated with an increase of white collar crime, as they have the potential to lower suspicion of the accounting profession and therefore discourage controls to prevent white collar crime.

Awareness of HPV Among Heidelberg Undergraduate Students

Kylie Rice

ADA 104 | 1:30 PM

Human papillomavirus (HPV) is the most common sexually transmitted disease in the United States. There are high-risk oncogenic strains of HPV that cause a large proportion of various cancers in men and women. FDA-approved HPV vaccines offer protection against the most common, high-risk strains of HPV, and they are projected to protect against 90% of HPV-associated cancers. However, despite these statistics, only 58.5% of U.S. adolescents have received the HPV vaccine as of 2021, and this value is well below the U.S. Department of Health and Human Services' Healthy People 2030 goal of 80% vaccine coverage. Studies have shown that vaccine coverage is connected to vaccine and disease knowledge. To assess undergraduate students' knowledge of HPV at Heidelberg University, an online survey was administered campus-wide. The results of this survey were also used to identify correlations between the extent of HPV knowledge and demographic information such as academic major and gender.

Eclipsed Perspectives: Exploring the Psychological and Physiological Effects of Solar Eclipses on Human Experience.

Aubrey Baker, Rayce Septer, Logyn Chamberlain, and Micayla Pluto

ADA 201 | 1:30 PM

With Tiffin being a hot spot for the up-and-coming solar eclipse, we thought covering the psychological, physiological, and hypothetical what-ifs would help prepare those wanting to observe the solar eclipse. Overall, we will talk about health concerns surrounding solar eclipses, why humans should use the correct eye protection when observing solar eclipses, and the positive and negative effects on the human brain and body. Also, we will look deeper into crime history in towns that have already experienced a solar eclipse to see if the solar eclipse had any effect on the change in crime compared to a regular day. This will all be connected around what-ifs and what would happen if the sun disappeared completely. We will talk about how it affects humanity as well as how the sun disappearing would also affect our psychological, physiological, and hypothetical world. as how the sun disappearing would also affect our psychological, physiological, and hypothetical world.

The “Veteran Effect”

Michele Schultz

ADA 204 | 1:30 PM

Those who serve in the U.S. Armed Forces are more commonly being entered in the criminal justice system due to the “veteran effect”, history of brain injury including Post Traumatic Stress Disorder (PTSD) and Traumatic Brain Injury (TBI), etc,. This study was conducted through a secondary research analysis to analyze the correlation between those who served in the U.S. Armed Forces and the number of write ups. The primary analysis is titled “Survey of Prison Inmates, United States, 2016 (ICPSR 37692)”. The primary analysis study was conducted with 20,064 participants from a state prison. From this study, we analyzed RV0023 and V1397. RV0023 is labeled as “Served in the U.S. Armed Forces”. V1397 is labeled as “# of write ups since admission to prison.” In this study we ran a point biserial correlation to determine the relationship between serving in the U.S. Armed Forces and the number of write ups since admission to prison and an Independent Samples T-Test to compare the number of write ups to those who served in the U.S Armed Forces. The results of this study reveals that those who served in the U.S. Armed Forces are less likely to receive a higher number of write ups. Therefore, there is not a statistically significant correlation between these variables. Results follow similar patterns to previous studies. In future studies, researchers should look at veterans who are incarcerated rather than looking at samples that include veterans versus nonveterans that are incarcerated. Specially looking at veterans could create accurate data.

Machine Learning and Data Structures

Jessica Harness-Koehnle

BAR 329 | 1:30 PM

Machine Learning is a subfield of artificial intelligence that is used to help make predictions and assumptions about big data. In our online world, we generate thousands of pieces of information about ourselves that companies can use to make predictions about our shopping habits, what we prefer to watch on Netflix, and help us draft our emails. But how do machine learning algorithms actually work? How do you build a machine learning model from scratch? This project explores that question in detail, with the understanding that machine learning and data structures go hand in hand. Data structures are one of the most fundamental elements of computer science. Data structures speed up data processing in a multitude of ways, from decreasing the amount of time and memory it takes for a process to run, to ensuring easy access for data processing and comparisons. Nowhere is the importance of data structures more clearly illustrated than in the field of machine learning.

Erythrocyte Oxidative Stress, Salivary Cortisol, and Oxygen Consumption with Low-Intensity Blood Flow Restricted Resistance Exercise Before and After Training

Dr. Morgan Kocher

BAR 310 | 1:30 PM

This study compared oxidative stress in erythrocytes, salivary cortisol, and excessive post-exercise oxygen consumption (EPOC) during traditional high-intensity and low-intensity with blood flow restriction (BFR) back squats as well as the effects of two weeks of training. Sixteen trained (n=8) and untrained males participated in the study. When comparing Low-Intensity with BFR to High-Intensity, plasma lactate values were significantly increased immediately post-exercise compared to other timepoints ($p < .013$), the $V(C=O)$ bond significantly decreased in untrained individuals at the 30-minute and 24-hours post-exercise timepoints, and the immediate post-exercise timepoint was significantly increased in Untrained individuals with low-intensity exercise with BFR and the 24 hours post-exercise timepoint was significantly increased in Trained individuals with low-intensity exercise with BFR. When comparing acute responses pre- and post-BFR training, plasma total spectral area decreased at 30-minutes post-exercise ($p=0.004$), and plasma lactate immediately after exercise was significantly higher than 30 minutes post exercise ($p=0.022$) and 24 hours post-exercise ($p=0.005$). The $V(C=H):Vas(CH_3)$ ratio increased with training in Untrained individuals, but decreased in trained individuals and the $V(C=O)$ bond was significantly reduced at 30-minutes post-exercise compared to 24-hours post exercise. There were no significant differences between conditions or with training in EPOC magnitude or duration, but both of these measures were significantly different between trained and untrained individuals ($p < 0.05$). Additionally, two weeks of training significantly increased three-repetition maximum strength in all participants, although untrained participants increased significantly more than trained participants.

Exploring the Impact of Mindfulness on Wellbeing: A Systematic Review and Empirical Insights

Dr. DoHee Kim-Appel

FROST | 1:30 PM

Mindfulness has emerged as a prominent concept in the therapeutic landscape, offering a holistic approach to health and well-being. Defined as the intentional and non-judgmental awareness of one's present moment, mindfulness has garnered significant attention as a cognitive strategy fostering a deeper understanding of thoughts and emotions (Kabat-Zinn et al., 2002; Appel & Kim-Appel, 2009). Mindfulness has emerged as a tool for enhancing personal growth and positive emotion, thereby promoting overall well-being. This presentation presents a systematic review of empirical studies exploring the effects of mindfulness on well-being. By synthesizing existing research, one can reveal the theoretical and empirical underpinnings of the relationship between mindfulness and health and acquire a deeper understanding of mindfulness's role in fostering mental well-being and enriching personal lives.

Hatfield Internships

Tristen Hatfield

ADA 101 | 2:00 PM

Tristen Hatfield will discuss their internships.

The Effects of Cutting Weight Among Male Collegiate Wrestlers

Katie Emling

ADA 104 | 2:00 PM

To understand psychological and physiological changes during strict diet control, I am conducting an observational study on the men's wrestling team at Heidelberg University. Previous studies have heavily focused on observing the effects of weight loss on those who fall under the obesity spectrum. Even then, few researchers have studied the effects of weight loss, or weight cutting, on athletes, and even more specifically, at the Division 3 level. I am gathering quantitative data on the DIII wrestlers here at Heidelberg University and will be able to gather data regarding aspects of their mental status and changes in physiological symptoms they may be experiencing. Physiological studies have been limited in recent years, and I would love to showcase my results and drawn correlations from this study. My goal is to provide others with findings that could be applied to future studies as well as answer any questions others may have!

Involvement of Knee Strength and Flexibility in Speed of a Kicked Ball

Madison Lause

ADA 201 | 2:00 PM

Among Heidelberg college students, how does quadricep strength and quadricep/hamstring flexibility affect the speed of a kicked soccer ball? The purpose of this study is to see how leg strength and flexibility affect the speed at which we are able to kick a soccer ball. It is believed that flexibility plays a role in athletic performance. As our flexibility levels go up so should performance rates. It is also believed that strength levels help to benefit our sports performance. Individuals who have higher levels of strength should be able to kick a soccer ball at a faster speed. My study assessed these two measurements to further determine the ways in which they affect kicking speed.

Budding Opportunities: Exploring the Financial Landscape of the Marijuana Industry from an Accounting Perspective

Collin Hubbs

ADA 204 | 2:00 PM

This presentation is going to show the implications of the merging marijuana industry on accounting. The tax implications of marijuana are very biased but has so much data to back it up. The rising marijuana industry has federal tax implications. This will show you what you need to know regarding the emerging industry.

Military Services and Violent Crimes

Natalie Hicks and Natalie Lutz

BAR 310 | 2:00 PM

The men and the women of the armed forces experience a wide variety of trauma during their active service time. Many individuals experience Post Traumatic Stress Disorder (PTSD) symptoms after they are discharged from their service. PTSD symptoms, if left untreated, could lead to some bad behaviors, or even criminal behaviors. The current study is exploring a possible connection between military service and if an individual has served for a violent offense using a secondary data analysis. The results of this study are contradictory to previous research. Therefore, future studies need to continue to explore the factors that influence why people engage in violent criminal behaviors and actions.

Visual and Spatial Investigations in Plant Anatomy

Dr. Noel Anthony Mano

BAR 329 | 2:00 PM

Plants adapt to environmental conditions by altering their anatomical structures and internal physiology. The molecular, genetic, and developmental mechanisms behind these responses are well-elucidated, but mostly only for model plant species and agriculturally important crops. Moreover, the environmental drivers of the allocation of a finite pool of stem cells in young tissues towards one type of cell or another are not well-understood. I describe several proposed experiments, to be performed with the students of Heidelberg University, towards addressing these gaps in understanding. One such experiment involves the cell identity of leaves. The stem cells that make up emerging leaves receive genetic signals that turn them either into hairs, pores, or regular 'pavement' cells as the leaves mature. We will investigate whether different varieties of soybean and other hairy-leaved plants have different preferences for making leaf hairs or pores during periods of drought stress, and which of a hair- or pore-preference strategy is more effective at promoting drought survival. Another project, intended to be the course-based research component of a new BIO 335 course, aims to construct a database of high-quality plant anatomical images that can be used as a reference by the scientific community. This will contribute to our understanding of the anatomical structures of non-model plants and help promote greater diversity in both basic and applied plant research. These and related projects are meant to be undergraduate-friendly opportunities to learn about plants and develop a range of biological research skills, particularly in genetics, microscopy, and cell biology.

Building a case for the possibilities of alternative 'field' experiences for effectively preparing teacher candidates: A pilot case study analysis of the Genius After School Program

Dr. Stacey Pistorova, Victoria Perez, Kylie Hoover, Aubrey Michaels, Abigail Nagy, Mackenzie Damsa, Adrienne Lucius

FROST | 2:00 PM

The landscape of the K-12 education world is constantly changing and calls to question how to best prepare teacher candidates for the profession. Education preparation programs work to find quality field experiences that support teacher candidates and connect to course content, but there is often a disconnect. In addition, such traditional field experiences rarely provide the context for candidates to make curricular choices based on their knowledge of the students, use data to inform their instruction, differentiate instruction, apply behavior management strategies, or engage with families. This presentation will include faculty and teacher reflections on the Genius After School Program and the potential such alternative 'field' experiences have on preparing future educators.

Gender affects on Crimes

Jacqueline Beach, Keshawn Harris, and Erica Thornhill

BAR 329 | 2:30 PM

This experiment investigates whether or not the gender of an offender significantly influences the number of victims they have. The current study is a secondary data analysis that utilized the Survey of Prison Inmates (BJS, 2016), the original study gathered data from over 20,052 incarcerated individuals in prisons throughout the U.S. The current study expected to find that men have more victims. However, the results did not support this hypothesis, which also contradicts previous studies. The findings hold the potential to inform students, teachers, refine intervention strategies, and contribute to a deeper understanding of the complex dynamics surrounding the gender of an offender and its involvement with the number of victims in various criminal contexts.

Types of stretches and their effect on lower limb power production

Nate Staib and Mirena Miller

ADA 101 | 2:30 PM

Power production in the lower limbs is very important for athletes. This can help them run, jump, and sprint more efficiently. When warming up prior to competition it is important to keep in mind what type of stretching you perform. Static and dynamic stretching can be very important do reduce risk of injury but can have different effects on power production in the lower limbs. Dynamic stretching prior to performing leads to more power production, while static stretching leads to decreased power production.

The Advantages of Foam Rolling

Morgan Woycitzky

ADA 104 | 2:30 PM

The popularity of foam rolling (FR) has grown significantly within the past decade and increases flexibility, improves recovery, and warms up the body before a workout.¹ These effects are expected due to the relationship between FR and myofascial release, as FR uses pressure to remobilize body tissues and reduce stress on the fascial system.^{1,2} However, since FR is such a new therapeutic technique, there are various results on the treatment, and other techniques, such as static stretching (SS), have more extensive and conclusive results. Although SS is known to increase flexibility, it also decreases muscular strength, whereas FR does not. This study was designed to compare the effects of FR and SS on hamstring flexibility to understand alternative options to SS. Ten participants were recruited via email to partake in the study. An initial hamstring flexibility measurement was recorded, followed by final data collection after an intervention. In the first testing period, participants underwent a five-minute SS routine, and in the second, they utilized a five-minute FR routine. The alpha level was set to $p = 0.05$ to analyze statistical significance. After averaging the data points, the mean degree change of hamstring flexibility for SS was 2.28 and 5.10 for FR. After using a t-test, it was determined that $p = 0.02$, signifying a statistical difference between the outcomes of the two protocols. There remain many limitations; however, this study suggests FR is a good alternative to SS for improved hamstring flexibility in college-aged individuals.

Public Opinion of the Finance Profession and the Future of the Industry

Aidan Belgiorno

ADA 201 | 2:30 PM

I am researching the public opinion on finance as well as the future of the industry. I am doing so with refereed articles, as well as a survey I am sending out to undergraduate students. I hope to not only learn more about the public's opinion on finance and the future growth opportunities in the industry, but identify how to better educate people on what finance is and possibly increase their interest in the financial industry. I also want to identify any racial, gender, or age barriers.

A study of the frequency of eclipse mythology and folklore across a variety of different cultures

Carly Jones and Gillian Borgio

ADA 204 | 2:30 PM

This study dives deeper into the frequency of eclipse mythology and folklore across a variety of different cultures, diving into the historical and cultural assumptions and stories associated with solar and lunar eclipses of the past, present, and future. Eclipses have been observed and interpreted by various civilizations throughout history. This research aims to provide an unbiased examination of the different mythological frameworks relating to these celestial events. Eclipses occur everywhere around the world, but some are more specific areas that have certain folklore different from America. This would include ancient civilizations such as Mesopotamia, Egypt, and Greece. In this research we will be covering all about these folklore and mythology throughout the world and their history. Eclipses often carry significance in different cultures as omens or divine messages. Additionally, this study explores the interpretations within different cultures, highlighting the symbolic importance relating to eclipses and also their impact on other cultural practices.

An Exploration of the Belize Barrier Reef and surrounds

Dr. Amy Berger

BAR 310 | 2:30 PM

In 1996, UNESCO designated approximately 12% of the Belize Barrier Reef (BBR) as a world heritage site due to its preserved reef development history, biodiversity, and important habitat for threatened species. The second largest barrier reef in the world and the largest in the northern hemisphere, the 40-km long BBR is home to nearly 1,400 different species. In the course Caribbean Biogeography (BIO 375), Heidelberg students travel to the BBR to investigate several different types of reef environments and catalog observed species. In this presentation we introduce this unique habitat and some of its more frequently-spotted organisms including stony corals, damselfish, parrotfish, shark, and turtle.

Characterization of honey in Northwest Ohio: an investigation of its contents

Emma Keto, Mikayla Sage, Carson Colahan, and Kiara Grow

FROST | 2:30 PM

Honey is a blend of several compounds: sugars, amino acids, vitamins, and other organic compounds. Botanical species vary widely across Northwest Ohio, and it is hypothesized that raw honey samples from across the region will exhibit broad variations in their chemical composition. This research aims to determine if characteristics such as color, free acidity, and reducing sugar content can be regionally specified or used to identify regional origins of honey samples. Raw honey samples from across Northwest Ohio were obtained and the following tests were conducted: free acidity by pH measurements, color via UV-Vis spectrophotometry and the pFund scale, moisture content, melissopalynology, reducing and inverted sugar content by using the UV-Vis spectrophotometry and the Lane-Eynon method. Raw, clover, and distilled honey are compared to commercial honey sources. Proper procedures and careful analytical protocols were performed to develop a database of these characteristics. Identifying and analyzing the honey's features will be used to determine if these traits are specific to that region of honey.

Twelve triggers of anger and why they invalidates all major theories of anger and aggression

Dr. Aaron Sell

ADA 101 | 3:00 PM

Most psychological theories of anger attempt to explain an extremely complex cognitive mechanism without using the only known scientific theory that generates complex mechanisms in organisms: natural selection. This leads psychological theories to be theoretically impoverished, e.g. traditional psychological theories of anger do not even attempt to explain why humans have a universal anger "face". Instead, they rely on metaphors or folk theories to explain anger. For example, anger is said to be the result of "goal blockage" or "a demeaning attack." This presentation reviews twelve identified triggers of anger and uses them to demonstrate the impotence of these non-evolutionary theories. A better way of understanding anger that makes use of natural selection will be briefly described.

Sports Related Injuries

Vincent Marimpietri

ADA 104 | 3:00 PM

Research shows on average, athletes are faced with nearly 52 days per year with a sports related injury. Additionally, of the injuries recorded, hamstring-related injuries are the most common. In the realm of rehabilitation from these injuries, stretching is a main focus both in the prevention of further injury by promoting active movement and strengthening. Previous literature also indicates there is a strong correlation between increased range of motion and a decrease in pain levels. There are three major stretching techniques present. The first being ballistic stretching, the second being static stretching, and the last is Proprioceptive Neuromuscular Facilitation, abbreviated PNF stretching. Based on previous literature it is hypothesized the PNF stretching group will increase their range of motion the greatest.

A total of six participants ($n = 6$) took part in the two-week stretching study. There was a total of two participants ($n = 2$) in each stretching group. The ballistic group increased their sit and reach by an average of 9.88 cm, the static group increased their sit and reach by an average of 6 cm, and the PNF group increased their sit and reach by 14.75 cm ($p = 0.01$). This data demonstrates the PNF group did indeed increase the greatest. Suggesting athletes and coaches to implement more PNF stretching time into pre and post activity to prevent injury from occurring and taking them out of practices and games.

Using a variety of resources and teaching strategies to engage students in a real-world problem and cutting-edge research

Dr. Justin Pruneski

ADA 201 | 3:00 PM

I have worked with a team of collaborators at other institutions to develop curricular materials and strategies to teach students about the Antibiotic Crisis using powerful and elegant published research. We have developed an interrupted case study consisting of four major parts: 1) an opening hook activity to capture students' attention and an animation to introduce the topic 2) a Jigsaw activity to help students gain foundational knowledge on the topic 3) a discussion activity of key takeaways using a video of the experimental setup and results, and 4) three deeper analysis activities that help students practice important skills of experimental design, data interpretation, or reading primary literature. Although these materials were built to address a specific topic in certain Biology courses, the methods employed can be broadly applied to other topics, courses, and disciplines.

Total Solar Eclipse in Tiffin, Ohio

Josh Ferdon, Micah Willink, Emerson Brown, Olivia Dulay, and Stephen Gabel

ADA 204 | 3:00 PM

The present research covers the total solar eclipse impacting Tiffin, Ohio, on April 8th, 2024. Being located in the path of totality, Tiffin is poised for increased tourism and an economic surplus. Considering Tiffin's lack of astronomical history, the upcoming event will be the city's first encounter with a worldwide astronomical event. With hotels selling out for absurd prices and schools shutting down, Tiffin is already preparing for a complete transformation of the city. Many cities have been through this situation prior and the goal is to determine the positive and negative effects they have faced. In return, this knowledge would be used to create a better plan for Tiffin. To find out how the city is preparing, business owners and citizens were interviewed to understand better how non-college students are getting ready for April 8th. Tiffin is poised for a day in the spotlight, and the city is preparing in a magnitude of ways. Further determination of how the city is impacted won't be understood until days after the eclipse; however, implications show that this event will bring much recognition to Tiffin, Ohio.

Effects of Suspension Training

Jared Crawford and Cameron Chappell

BAR 310 | 3:00 PM

The research was looking at the effects of suspension training compared to stabilized training on the Functional Movement Screen protocol (FMS). The hypothesis was that suspension training would have an effect on the FMS procedure. There were two regimens involved, one was a TRX and the other was machine weight training, in total there were six subjects and they each had three separate visits to the exercise science lab. All subjects were healthy individuals that had lifting experience for at least three months. There was medical screening done during the first visit with a familiarization trial over FMS then there would be pre measures done with FMS then there was a coin flip to see which regimen the subject would do first. On the second day the subject would do whatever regimen they were randomly selected then complete the FMS procedure again for mid measures. On the third day the subject did the other regimen and obtained post measures. After data analysis was done it showed the data was skewed and there was no significance ($p=0.96$) for all modalities. The average scores for TRX total was 15.66 and for MW was 15.833. In conclusion there was no sign in this study that suspension training was effective on FMS scores.

Southern Accents: Unraveling the Melodies of the American South

Professor Karla Kash

BAR 329 | 3:00 PM

Join me on an exhilarating journey as we explore the unique cadences of the Southern Drawl and the Southern Twang, deciphering the subtle nuances that make these accents distinctive to the American South. By distinguishing between the soft “r’s” of the drawl and the sharp “r’s” of the twang, we will embark on a linguistic adventure to understand the historical, cultural, and geographical factors that have shaped these captivating accents. From the melodic tones of the drawl to the enchanting twang of Texan speech, we will delve into the rich tapestry of Southern linguistic diversity. This presentation aims to uncover the roots of the Southern accent and celebrate its evolution, providing participants with a deeper appreciation for the cultural heritage embedded in the spoken word. So, buckle up and get ready to explore the fascinating world of Southern linguistics!

How do Theaters Get their Money and Who Owns Broadway?

Zach Abraham

FROST | 3:00 PM

In this presentation, theatre and accounting double-major, Zach Abraham will answer the titular question: how do theatres get their money, and who owns Broadway?

“And Then What Happens?” The Creation Process of the Mystery And Then There Was One

Dr. Michele D. Castleman

ADA 101 | 3:30 PM

And Then There Was One is a YA mystery that Michele Castleman will be publishing with Bold Strokes Books in June. In this session, Michele will discuss the inspirations for her novel and provide actionable advice to other writers.

Hamstring-to-Quadricep Ratios in Soccer Players

Laura Miller and Kingston Mabatah

ADA 104 | 3:30 PM

Previous research primarily focuses on soccer athletes, athletes from other countries, professional athletes, or other healthy individuals. Past research found that quadriceps were weaker compared to hamstrings in recreational active people who had a mean age of 20 years old.¹ In sports, one of the most common injuries is to the hamstring.² Achieving and maintaining a balanced ratio will reduce the likeliness of hamstring and quadriceps injuries. Fewer injuries will keep the athletes healthy and able to participate at a higher level. The purpose of this study is to identify if there is a difference between male and female quadriceps and hamstring ratio. The data will display information on aspects that can be improved upon. Unbalanced ratios will hint at what muscle group needs to be strengthened because an unbalanced ratio can lead to hamstring or quadriceps injury and time away from the sport. Unbalanced ratios can lead to injuries such as the tearing of the anterior cruciate ligament also known as the ACL. This study will measure the isometric knee flexion and knee extension of the participants. The participants will be tested on their dominant leg only. For each participant, a hamstring-to-quadricep ratio will be figured. All ratios will be compared and analyzed. We hypothesize there will not be a significant difference in the male and female hamstring and quadriceps ratio.

Influence of U.S. Military Portrayal on TV on Public Perception

Cameron Spraggins

ADA 201 | 3:30 PM

This paper explores the relationship between late 20th-century American television and its portrayal and subsequent impact on shaping public perception of the military. The changing portrayals of military themes and characters on TV during this era is a significant cultural artifact that reflects and influences societal attitudes toward the armed forces. By analyzing a sample of TV shows spanning genres from drama to comedy, I examine the nuanced representations of the military and their implications for public perception.

Through a synthesis of cultural studies and media analysis, this paper uncovers the ways in which television narratives construct narratives of heroism, patriotism, and conflict, thus shaping audience perceptions of military personnel and their missions.

Eclipse Economics: Profiting from Celestial Events

Dylan Drake, Jason Malone, Keyshon Upchurch, Gavin Reineke and Andrew Hanson

ADA 204 | 3:30 PM

The presentation introduces ways to improve business performance and increase more profits before, during, and after eclipses. We start with a summary that explains why eclipses are important and how they can affect the way in which customers behave. In order to give clear directions, Real World Examples will show how different industries employed tactics during the past eclipses. The Profit Before part provides actionable steps for getting ready for the eclipse. This includes market research techniques, linking products/services with eclipse themes, and making exciting promotions aimed at generating excitement amongst customers. During this time there are many possible ways of cashing in on heightened interest by businesses. Profit During offers practical approaches such as selling eclipse-related products/services, building engaging experiences, exploiting social media to enhance brand visibility and drive sales immediately. Profit After suggests methods of keeping consumer engagement high; taking advantage of sustained curiosity; turning popularity into long-term profitability or riches. This offers a simple and effective map for companies' dealings with opportunities related to an eclipse while maximizing their profits.

The Differences in Back Squat Lower Extremity Kinematics Between Wide and Narrow Stance

Logan McCluer and Dominic Davis

BAR 310 | 3:30 PM

The back squat is a commonly used compound movement used by various types of people, from athletes to the average person “almost all individuals during resistance training.” The back squat is described as the subject standing upright with feet flat on the floor, knees and hips in a neutral position, and the spine upright allowing for their natural curvature. The traditional back squat movement begins with the descent phase. This starts with a hip hinge and simultaneous knee bend, followed shortly thereafter by ankle dorsiflexion. The chest should be kept upright and the spine neutral throughout the entire motion. Once the thighs are parallel to the ground, the descent phase ends and the ascent phase begins. The ascent phase is often described as the triple extension from the ankle, through the knee, and finishing with the hip extension. The back squat requires the flexion of the knee using the group of hamstrings and the accessory muscles that help with that like the gastrocnemius or the calf and also plantaris muscle. And also requires the hip flexors to fire to flex the hip the ankle joint dorsiflexion helps engage the descent phase of the back squat. But depending on how much dorsiflexion there is in the ankle the foot position can be adjusted to allow an individual to work around restrictions in the hip and be adjusted to allow an individual to work around restrictions in the hip and knee to be able to squat deeper. The back squat has evolved to many different forms, there are all kinds of ways to perform the movement, but two of the most common adjustments to the form are foot width placement and angle of the foot. Along with those two, another factor that is seen as minor is the positioning of the bar, but this study will focus on the feet positioning. Over the years the squat performance

has been dominated by a narrow stance and wide stance, when examining the people who use these specific techniques it was hard not to notice that taller individuals were more likely to use a narrow stance. While a person not as tall takes on a wide stance to perform the back squat movement. Almosinino et al. reported a significant correlation between increased thigh length ratio and more knee flexion and ankle dorsiflexion during the narrow stance. Other form changes that come with a narrow stance are the chest of the participant coming farther forward, versus when the participant uses a wide stance it is much easier to keep the chest up when performing the movement. Another major characteristic seen with taller participants who often use the narrow stance is that they are able to achieve full range of motion, bringing their glutes and hips below parallel with their thighs. Changing the stance performed during the squat is an easily modifiable factor compared to range of motion. Ankle range of motion can be a negative or positive factor to squat mechanics. The proper form is described as feet flat and toes pointing forward, as the descent phase is starting the hip, knees, and ankles begin to flex. This is where some participants will run into some possible issues. If a participant is unable to keep their toes pointed straight and still achieve the proper depth of the back squat, then the participant is likely to begin modifying their squat form. If a participant is having a range of motion issues it is very common for the participant to adjust the angle of their feet to promote the ability to achieve proper depth. Since performing the back squat with different foot stances affects the performance of the back squat, including hip, knee, and ankle ROM. The purpose of this study was to assess the differences in sagittal plane joint angles measurements of the hip, knee, and angle at depth and assess the range of motion differences between the wide stance and narrow stance of a back squat when using a neutral or toe out foot placement.

Evolution and Challenges in Patient Confidentiality within Psychology

Anthony Grecol

BAR 329 | 3:30 PM

Anthony Grecol discusses the ever-evolving realm of patient confidentiality in the field of psychology.

When the educators get it wrong. Account errors in higher education

Josh Fiorentino

FROST | 3:30 PM

Presenting on accounting errors that have been made in higher educational universities financial statements that have been presented publicly. Also presenting on the different accounting regulations and standards that higher education universities have to follow.