

Student Research Symposium Proceedings



Missouri Valley College
Spring 2025





Missouri Valley College

Marshall, MO, USA

Student Research Symposium Spring 2025
Proceedings

05th May 2025

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ISBN xxxxxxxxxxxxxxxxxxxxxxxx

Published by

Missouri Valley College
500 E. College Street | Marshall, MO 65340

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Message from the President, Missouri Valley College

The flagship Missouri Valley College Student Research Symposium is a testament to our commitment to academic excellence, innovation, and student success. This event provides a platform for students to showcase their research and creative endeavors, fostering an environment where inquiry, discovery, and intellectual curiosity thrive. Through this Symposium, we celebrate the dedication of our students and faculty in advancing knowledge and contributing to meaningful academic discourse.

At Valley, we foster innovation, collaboration, and excellence in education. We welcome research or creative work from every academic school and discipline. We support student success by promoting research-based teaching practices, meaningful discussions, professional development, and experiential learning opportunities. Our initiatives align with Missouri Valley College's mission, enhancing intellectual inquiry through shared resources, feedback, and campus-wide partnerships.

This year, we are introducing a significant addition to the Symposium—the launch of post-conference proceedings that will be indexed with our library. This new endeavor provides a platform for showcasing the excellent work of our students and offers a strong means to highlight their scholarly and creative contributions moving forward. By capturing and preserving the research and creative works presented at the Symposium, we are reinforcing the importance of sharing ideas, fostering academic dialogue, and preparing students for professional and scholarly engagement during their time at Valley.

The Symposium provides ambitious, intellectually motivated undergraduate students the opportunity to present and defend their original research or creative work among peers, faculty, family, and friends. Through its emphasis on original research and creative work, the Symposium seeks to inspire undergraduate students to analyze, critique, and engage with the world around them. The addition of an indexed academic publishing opportunity further underscores our commitment to the professionalization of student work, ensuring that their contributions receive the recognition and longevity they deserve.

I extend my heartfelt congratulations to all participants and gratitude to the faculty and staff who make this event and publication possible. I look forward to witnessing the outstanding achievements of our students and the lasting impact their work will have within and beyond our academic community.

Dr. Joe Parisi -President

Missouri Valley College

Message from the Vice-President of Academic Affairs

Dear Missouri Valley College Community,

The Missouri Valley College Spring 2025 symposium highlighted the dedication, creativity, and academic excellence of our students, whose research spanned a diverse range of disciplines and reflected the depth of inquiry fostered at Missouri Valley College.

Research is at the heart of discovery and progress, and this event honored the hard work and perseverance of our student scholars. Their efforts-guided by the mentorship of our esteemed faculty exemplified the spirit of inquiry that defines higher education. Throughout the symposium, we celebrated student achievements while fostering collaboration, critical thinking, and the exchange of ideas that will shape the future.

This semiannual event is more than a showcase of research; it embraces celebration of the intellectual curiosity and commitment that drive academic success. Engaging in research and scholarly inquiry strengthens critical thinking, creativity, and problem-solving skills. These experiences open doors to scholarships, internships, and career advancements, reinforcing the real-world impact of student research.

Congratulations to all participants for their outstanding contributions to scholarship and innovation. Your ideas and discoveries matter, and your research has the potential to create meaningful change.

In pursuit of wisdom and understanding,

Cynthia J. Bice, EdD

Vice President of Academic Affairs

Dean of Graduate Studies

Message from the Co-Chairpersons / SRS 2025

It is our pleasure to present the proceedings for the Spring 2025 MVC Student Research Symposium. We are proud to honor the excellent scholarship of our curious, creative, and hard-working students and we are grateful for the time, resources, and care invested in the Symposium and the Proceedings by our faculty, staff, and administration. Special thanks to Dr. Tonya Eddy, Dr. Chamara Jayasundera, and Reid Ronsley for their indefatigable work to launch this publication.

Warmly,

Claire Schmidt and Jenn Livengood

Symposium Co-Chairs/ Spring 2025

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PROCEEDINGS

School of Arts and Humanities

Is Pop Culture More than Just Music?

Filippo Bianchi and Claire Schmidt

School of Arts & Humanities

Is pop culture just music? This project will examine how the market is providing pop culture and growing it to a point where pop culture is the ideology and the influence of a culture. The one that can define identities as well as trends of consumerism. Pop culture and pop music are all the same and all different from other kinds of pop culture: What pop culture and pop music sells is more than sound; pop culture and pop music do, of course, all their marketing. Through Henry Jenkins' *Textual Poachers* (1992) and Lutz, Maharjan, and Crawford's (2020) work on pop culture archives, they compare case studies of media immersion and marketing techniques in which marketing converts art forms into a product. The world at large is represented in emphasis of pop culture because products and experiences have been marketed towards a larger audience through the "pop". This, through which it influences global trends, influences social narratives and fades the division between art and consumerism allows people into pop culture as a vehicle for global trends, as well as narratives shaped by them.

Keywords: Music, Consumerism, Pop Culture, Marketing

Angel

Alexis Eddy and Mia Johnson

School of Arts & Humanities

The work is a graphite portrait on 11"x8" paper. It's a depiction of an angelic figure. There's a halo of sorts, framed by the wings around the face of the figure. There's long hair obscuring most of the figure besides their face, which is angled down. Two sets of eyes look to the left, unfocused, while the 'main' set of eyes looks slightly behind and above the viewer. The figure, and specifically the halo above them, is emitting brightness, lighting the background. For this piece, I was inspired by different depictions of angels, mostly those which talk about multi-winged and multi-eyed angels of lovecraftian proportions. Though, I wanted to humanize those descriptions a bit more, as many angels were also described as being human in form. For the halo, I was inspired by different Medieval paintings which depict angelic figures with intricate and ornate golden halos, with different designs and embossing.

Keywords: Graphite, Drawing, Illustration

Tracing My Roots

Jillian Fontaine and Claire Schmidt

School of Arts & Humanities

My project will be a timeline of my family history. The goal is to gain a clearer understanding of how my family history has shaped me as a person. I will be examining both sides of my family. My presentation will be mostly visuals, I will be including a lot of pictures. Additionally, there are almost no primary sources other than pictures so I will be relying on family stories and lore. The two disciplinary studies I will be using are history and psychology. My presentation will be a visual slideshow and a family tree for as far back as I have. I will be gathering my stories from my parents and extended family. Additionally, we have some visual primary sources such as furniture and handmade items. This project is not just for me but my Dad as well. He doesn't know a lot about his side of the family and gathering pictures and stories will help him gain a better understanding of his family history as well.

Keywords: Family, Fontaine, History

Inflation Impacts Lower Income Families

Darius Green and Claire Schmidt

School of Arts & Humanities

Inflation disproportionately hits lower-income families since inflation increases prices of absolute essentials as wages all too frequently lag behind. Increased food, shelter, transportation, and medical care expenses push these families into paying more of their limited household income for the essentials with too little remaining to save or even to make discretionary purchases. Inflation diminishes purchasing power of earnings and government subsidy programs as well, further reducing personal security. Low-income households, in contrast to higher-income groups, have fewer assets that appreciate in value over time, such as stocks or property, and thus it becomes more challenging for them to meet rising costs. Such a financial burden can lead to greater debt, reduced access to quality health care, and long-term economic instability. These issues must be addressed by specialized policies such as wage readjustments, social safety net extension, and attempts at price control of essential commodities and services. I will use a review of the recent literature on inflation and income to prove my point of how inflation affects lower income people.

Keywords: Inflation Effects, Income

EA

Octavious Griffin and Claire Schmidt

School of Arts & Humanities

This painting showcases a custom shoe turning into a unique piece of art. Splashing acrylic paint on canvas, I focused on the shoe's details, texture, and colors to highlight its originality from any other shoe designed. The painting blends realism with abstract elements making the shoe stand out as more than just footwear. This helps showcase the shoe as a representation of self expression. I used bold colors and shading to create depth making the shoe appear almost real. The background patterns and colors blend with the detailed shoe drawing attention to its design. This artwork reflects the creativity and personality that go into custom shoe-making to help celebrate sneaker culture and artistic freedom throughout the culture. I have always been inspired by different fashion and streetwear and this painting connects style and art as needed. It highlights the beauty of personal design and creation. I carefully painted details like material and certain effects to show how a shoe can be both practical and artistic in fashion today. This piece showcases viewers to see fashion as an extension of art and individual expression.

Keywords: Self Expression, Creativity, Pastoral

Parc Fermé: The Intersection of Motorsport, Art, & Femininity

Chané Higgo and Philip Gresham

School of Arts & Humanities

Motorsport is often characterized by speed, precision, and a hyper-masculine culture, yet its intersection with fine art reveals a more nuanced narrative. Parc Fermé explores the tension between motion and stillness, competition and grace, and mechanical precision and human expression. Through the fusion of motorsport imagery with organic elements, this research challenges traditional gender narratives and reimagines racing culture as a space of artistic and conceptual exploitation. By integrating themes of femininity, restraint, and performance, this work highlights overlooked nuances in an adrenaline-fueled world. Drawing from art history, motorsport aesthetics, and gender discourse to engage with it through a new, interdisciplinary lens.

Keywords: Motorsport Art, Industrial Design

AI in the Classroom: How Does AI Change Teaching and Learning?

Marco Iberle and Claire Schmidt

School of Arts & Humanities

What impact does the use of artificial intelligence (AI) have on the education system, and to what extent does it change the role of teachers and individuals learning? Artificial intelligence has the potential to make education more accessible, efficient and individualized. Through adaptive learning platforms, intelligent tutors, automated feedback systems, lessons can be personalized more closely to the needs of individual students. At the same time, artificial intelligence opens up new opportunities for teachers, for example by analyzing learning data or automating time consuming tasks such as corrections. Artificial intelligence-based tools including chatbots, speech recognition or personalized learning software can not only speed up learning, but also make it more equal. In conclusion, artificial intelligence is a valuable tool in education, but only if it is used wisely and supports rather than replaces the human relationship between teachers and students.

Keywords: Artificial Intelligence, Classroom Learning, Education

The Impacts of Medical Marijuana on Tourette's Syndrome

Kaya McCory and Claire Schmidt

School of Arts & Humanities

Tourette's Syndrome, also known as TS, is a motor and verbal tic disorder that must last for over a year (Artukoglu and Bloch, 2019). This disorder highly impacts people's lives by affecting their careers, education, and quality of life. I reviewed the recent literature on TS to solve my question of how medical marijuana impacts people with Tourette's syndrome. Since medical marijuana is used to help multiple neuropsychiatric disorders, including parkinson's, PTSD, epilepsy, and more (Stasiłowicz-Krzemień et. al, 2024). This review evaluates whether medical marijuana can improve the lives of TS patients. This review brings awareness to TS, explains current views on medical marijuana, and its impacts. I find that the literature shows that medical marijuana improves quality of life for TS patients, however, improvements are short term and there is not enough research yet to justify marijuana as a formal treatment.

Keywords: Tourettes, Medical Marijuana

Who Are You, Truly: Moving Beyond The Gender Binary

DeRel Morris and Claire Schmidt

School of Arts & Humanities

I offer an aberrant view on the gender binary and its effects on modern politics in America. I argue that to combat the valorization of politicians in their egregious attempts and violation of human rights, we must look at trans and gender nonconforming people as a paragon as means for defense. I elucidate that the reason for banned books and the attacks on human rights directly correlate to the upholding of the gender binary. People uphold the gender binary so ferociously, because they don't want to confront their own lovelessness. The upholding of the gender binary affects us all as we mistake dissociation as an identity and a virtue. All of this pain shows up as resentment towards the ones that actively go against the gender binary; trans and gender nonconforming people. I offer an in depth look at the ways in which we uphold the gender binary and how it affects us. Amplifying trans voices I demand an interrogation of all of us to ask the question: Who are you, truly? I want this question to be answered if we got to choose our life on our own terms without the gender binary.

Keywords: Gender Binary, Queer, Trauma

The Synthesis of Tyranny and Modern Aged Social Media

Tru Naumovitz and Douglas Roberts

School of Arts & Humanities

The biggest threat to democracy will always be tyranny. If you can convince the general population of a democracy that tyranny should be voted in, then this is a direct process of uprooting democracy as we know it. One of the main ways to convince a population of such a thing is through indoctrination. In the modern era, most of the information that we intake comes from social media. How is tyranny planted in our social media, and how does it affect us? Using the works of Cass Sunstein, *#Republic: Divided Democracy in the Age of Social Media* (Princeton: Princeton University Press, 2018) and Timothy Snyder, *On Tyranny: Twenty Lessons from the Twentieth Century* (Crown: New York, 2017), I will seek to answer this question.

Keywords: Democracy, Tyranny, Social Media, Indoctrination

The Katy Trail Issue

Reid Ronsley and Claire Schmidt

School of Arts & Humanities

The Katy Trail State Park, which stretches over 240 miles in Missouri, has been enjoyed by many since its creation in the 1990s. However, in the time before it was opened to the public, the formation of the Katy Trail elicited much ire from landowners as a result of what they claimed was a violation of their rights. The Katy Trail was built from the abandoned Missouri-Kansas-Texas Railroad, which acquired the land through easements; at the time the State attempted to purchase the land from MKT, the owners of the land were Missouri residents, who were not consulted and did not consent to their land being used for a public trail. Using an article from *Capital News* in Jefferson City titled “Katy Trail issue spurs divergent views,” written by Gary Heldt and Darwin Hindmad in August of 1989, this project delves into the tense relationship between landowners and the Missouri State Government and analyzes the motivations and fears behind each side of the debate.

Keywords: Katy Trail State Park, Primary Document Analysis, Civil Rights Violation

Purple Patch 24th Edition Editor's Choice Showcase

Alexandrea Sutter and Chané Higgo and Claire Schmidt

School of Arts & Humanities

The 24th edition of the *Purple Patch* by Sigma Tau Delta will present its editor's choice winners for each category of submissions, including fiction, creative nonfiction, academic prose, poetry, and artwork. Winners will be chosen by the editorial board who review all submissions from each category. Winners will read and discuss their submissions during a presentation of their piece before opening up to questions for both the winners and editors in chief Chané Higgo and Alexandrea Sutter.

Keywords: Purple Patch, Academic Journal, and Editor's Choice

School of Business and Technology

Marketing Evolution: Standing Out in a New Era

Lucía Valdivia Escabias and Tsvetan Todorov

School of Business and Technology

Marketing has evolved in many different ways during the last decade. The activity of creating, capturing, communicating, delivering and exchanging offers has become a difficult area to single out. The new tools of artificial intelligence, and the so-called z generation with their proficiency in the use of new technologies and social networks have made it possible for any individual to advertise products and services. However, differentiating oneself from common patterns and already promoted content is more complicated than ever. This symposium studies and analyzes the fundamental keys to create a distinctive marketing that captures the attention of the audience, differentiating the good or service from its competitors. Through real studies and comparisons between companies and modes of operation, you will discover the complexity of marketing and its wide results. Are you able to create successful marketing? It is not as easy as it seems... but after this presentation you will be closer to do it.

Keywords: Competitors, Differentiation, Marketing

The Golden Ratio: A Mathematical and Aesthetic Marvel

Mencia Rodríguez Medio and Liam Kahmeyer

School of Business and Technology

The golden ratio, often denoted by the greek letter phi, Φ , is a mathematical constant which for centuries has been a big mystery for mathematicians. It has taken a lot of different names throughout those centuries, but one of the main reasons for its mystery is that it appears in various fields, from art and architecture to nature and finance and it is a big mystery why it does. This paper explores its mathematical derivation, properties, occurrences, and significance in different domains, with a particular focus on its relationship with the Fibonacci sequence, and how the golden ratio is related to art, more specifically design and how you can see it and not even know it.

Keywords: Mathematics, Design, Mystery

Performance of Distinction in Debate: Dramatic Interpretation

Tru Naumovitz

School of Business and Technology

Dramatic interpretation focuses on the characterization and storytelling of anywhere from one to multiple characters. The event seeks to either advocate or raise attention or awareness to topics and themes the public may not be as aware of. This performance of distinction was a nationally qualified performance of distinction. Kevin Bacon, reflecting upon his role in *Taking Chance* by Ross Katz, stated: “The military’s care of the remains is something few people know anything about... They handle these details with a reverence and honor that is nothing short of incredible.” Bacon is certainly right in concluding that not many are aware of everything that comes with being a military escort. Very specific standards must be met in order to honor the sacrifice of those who have fallen. Not only this, but an immeasurable emotional burden comes with having to bring a fallen soldier home, back to their family and friends, and back to the brothers and sisters they shared the battlefield with. With the drama *Taking Chance* by Robert Katz, because it is time we acknowledge the unsung heroes of military valor: escorts.

Keywords: Escorts, Military, Debate

The Economic Impact of the 2026 FIFA World Cup & the Growing Soccer Landscape in the U.S

Tom Pelzer

School of Business and Technology

This presentation explores the economic impact of the 2026 FIFA World Cup. This is the largest tournament in history, and its significance for the U.S. economy and soccer landscape. It will highlight the financial benefits, including projected revenue, job creation, and tourism boosts across host cities. Additionally, the discussion will cover the rising popularity of soccer in the U.S., focusing on MLS expansion and investments. Finally, the presentation will examine the new USL Division One promotion and relegation system, its potential impact, and what it could mean for the future of American soccer.

Keywords: World Cup 2026 Economic Impact, Growth of Soccer in the U.S., MLS and USL Promotion & Relegation

Fourier Transforms in Visual and Signal Analysis

Rubal Man Pradhan and Liam Kahmeyer

School of Business and Technology

This paper explores the mathematical foundation of Fourier Transforms, particularly in solving Partial Differential Equations (PDEs) for visual and signal analysis. This paper explains the theoretical foundations of Fourier Transforms, emphasizing their role in spectral analysis and computational efficiency through the Fast Fourier Transform (FFT). Fourier-based techniques are widely used in image processing, noise reduction, speech recognition, and medical imaging. Additionally, Discrete Cosine Transforms (DCT), a variant of Fourier analysis, enable data compression in formats like JPEG and MP3. Advancements in fractional Fourier Transforms and their integration with machine learning further expand their applications. By bridging theory and practice, this paper highlights how Fourier Transforms remain indispensable in modern computational science.

Keywords: Fourier Transform, Partial Differential Equations, Signal and Image Processing

Mathematical Foundations of Origami and its Applications in Medicine and Biology

Paula Romero and Waylon Hiler

School of Business and Technology

This research analyzes the mathematical foundations of origami together with its expanding medical and biological applications. The study covers the seven axioms of origami, rigid origami, and flat-foldability theorems that create mathematical guidelines for origami design. The research investigates material folding behavior through Gaussian curvature and developable surfaces. Finally, the work explores growing DNA origami implementations in biomedical applications including biosensing systems, drug transport methods, and cancer therapy, as well as origami design for tissue engineering, stents, and microfluidic devices. The study seeks to establish connections between the mathematical theory of origami and the adoption and implementation of medical technology.

Keywords: Mathematics, Applied Mathematics, Origami, Medicine, Biology

Knot Theory and Its Real-World Applications

Coy Smith and Liam Kahmeyer

School of Business and Technology

Knot theory is a fascinating branch of topology that examines the properties of closed loops in three-dimensional space, focusing on their classification and transformation without cutting or rejoining. Even though this theory is deeply rooted and benefits from topological language through accessible illustrations of shapes in a three-dimensional plane, knot theory also has strong connections to algebra, specifically through knot invariants and polynomial representations. Despite its foundation in pure mathematics, knot theory applications extend into the real world, playing a crucial role in fields such as biology, chemistry, and physics, including DNA replication, molecular stability, and quantum field theory advancements.

Keywords: Knot Theory, Knot Invariants, DNA Replication, Molecular Stability, Quantum Field

The Economic and Cultural Impact of College Athletics on Small Communities

Santiago Trejoluna and Claire Schmidt

School of Business and Technology

University athletics are the economic and cultural heartbeat of small towns, generating a revenue stream for schools and communities. The research in this project examines the economic impact of Missouri Valley College (MVC) athletics on Marshall, Missouri as a case study. This project draws from qualitative ethnographic interviews with local business leaders and college directors, as well as quantitative data from government sources and university reports. This research analyzes the athletics' impact on institution budgets, business enterprise, and local identity. In addition to economic returns, sports also consolidates community investment and identity, and women's sports continues to take root as an integrating manner. By analyzing archival documents, economic statistics, and individual testimonies, this research uncovers the major contribution of college sports to the economy of small towns. The work of writing offers suggestions to educators, policymakers, and businesspeople who want to gain maximum advantages from sports.

Keywords: College Athletics, Economic Impact, Communities

School of Education and Social Sciences

Learning Disabilities

Isabella Almazan and Rhonda Rhyther

School of Education & Social Sciences

My poster aims to raise awareness about learning disabilities, detailing their causes and emphasizing the significance of early intervention and support. I will be talking about how learning disabilities affect a person's ability to process information, making tasks like reading, writing, or solving math problems more difficult. These disabilities are often caused by differences in the brain, and they can run in families. It's important to remember that a learning disability doesn't mean a person is not smart; it just means they learn differently. Early identification and support are crucial because they help individuals build the skills they need to succeed in school and life. With the right help, such as specialized teaching methods, therapy, and accommodations, people with learning disabilities can reach their full potential. Raising awareness can reduce misunderstandings and ensure that those with learning disabilities receive the support they need to thrive.

Keywords: Disability, Learning, Support

The Impact of Police Body Cameras on Complaint Rates: Examining Accountability and Professionalism in Law Enforcement

Javier Alvarez Toribio and Karen Reeter

School of Education & Social Sciences

The use of body-worn cameras (BWCs) by law enforcement has become a significant topic in discussions on police accountability, transparency, and public trust. This research project explores the impact of BWCs on the number of complaints against officers, examining how these devices influence both police and civilian behavior. Research suggests that BWCs contribute to a decrease in complaints by promoting professional conduct among officers and encouraging civilians to behave more cooperatively. Additionally, the presence of video evidence enhances transparency and helps resolve disputes objectively. However, the effectiveness of BWCs depends on consistent implementation, clear policies, and ethical considerations regarding data storage and privacy. While BWCs are not a comprehensive solution to policing issues, they represent a crucial tool for fostering accountability and improving law enforcement practices.

Keywords: Body-Worn Cameras, Police Accountability, Law Enforcement Transparency

Inclusion of Students with Disabilities in General Education

Anthony Banuelos and Rhonda Rhyther

School of Education & Social Sciences

This study will examine how students with disabilities are included in general education classrooms and the effectiveness of these practices in real world settings. It explores the benefits of these inclusive classes and the improved academic outcomes of the students with and without disabilities. The research additionally digs into the challenges faced in these inclusive classes, including the need for paraprofessionals, individualized instruction, and possibilities of social tensions between students. The role of general educators and paraprofessionals supporting inclusive classrooms is considered and highlights their critical contributions in creating a supportive and collaborative atmosphere that meets the diverse needs of all students.

Keywords: Inclusion, Disabilities, General Education

Willingness to Help, Empathy, and Knowledge in Relation to Natural Disasters

Beatriz Bartolome Kateb and Jennifer Livengood

School of Education & Social Sciences

This study explores the relationship between willingness to help, empathy, and knowledge in the context of natural disasters. It examines how individuals' awareness and the way they acquire knowledge of natural disasters—through video, reading, or no prior information—influence their empathy and helping behaviors. Approximately 100 students from MVC will be randomly assigned to one of the three conditions in their classroom setting. They will complete a survey measuring their empathy, willingness to help and knowledge. The findings aim to explore the importance of humanizing natural disaster events and enhancing disaster education and preparedness strategies. The hypothesis is that exposure to the video footage of natural disasters is linked to a higher level of empathy, willingness to help and knowledge compared to other conditions.

Keywords: Empathy, Knowledge, Natural Disasters

How Students in Special Education Strengthen Social Skills Being in a Gen-Ed Classroom

Charles Bedosky and Rhonda Ryther

School of Education & Social Sciences

This research will discuss the ways that special education children placed in general education classrooms can develop and strengthen their social skills, and how important it is. I argue that placing these students in general education classrooms will strengthen their social skills. Students with special needs in general education classrooms can strengthen social skills by being around students who can communicate with their peers easier. They will also be able to do more group work and be more cooperative with their peers. The main goal is to show how important inclusion of special education students in general education classrooms is.

Keywords: Special Education, General Education Classrooms, Social Skills

Are Narcissistic Behaviors Present in Relationships

Maria Bertholdo and Jennifer Livengood

School of Education & Social Sciences

This research investigates the relationship between recognized leadership roles in friendship groups and narcissistic traits. It explores the potential for narcissistic characteristics in people who see themselves as group leaders. Based on earlier studies on friendship expectations, status in society, and self-image, the study focuses on Missouri Valley College undergraduate students. Some items from the Narcissistic Personality Inventory, the Rosenberg Self-Esteem Scale, and the Brief Social Desirability Scale, were used to help measure the narcissistic traits, as well as unique items developed by the researcher. The participants (N = 100–150) will fill out a questionnaire that evaluates demographic information and a Likert scale that will range from 1-5 to measure narcissistic traits as well as answering a “yes” or “no” question about whether they consider themselves as the leader of their group. The hypothesis is that regardless of how successful their group is, people who define themselves as group leaders will exhibit higher levels of narcissism.

Keywords: Relationships, Narcissistic Traits, Social Status

The Effects of Strength Training on Mental Health

Brent Clary and Jennifer Livengood

School of Education & Social Sciences

Strength training has been shown to impact mental health and overall well-being positively. This study looks at how resistance training affects depression, anxiety, stress resilience, and emotional regulation. Research suggests that consistent strength training can lead to improvements in mood, self-esteem, and cognitive functioning. It may also help individuals manage stress more effectively and develop a greater grasp on emotional control. To examine this relationship, an online survey will be distributed to college students and regular gym-goers. The survey will assess emotional regulation, psychological benefits, and stress management in relation to strength training. Mean scores will be separated into two separate categories: those who work out and those who don't. The mean scores will be used to explore the differences in levels of depression and anxiety, as well as how they respond to adversity. Adversity can be anything from a stressful situation to how they handle their emotions. The goal of the study is to provide insight into how strength training can serve as a tool for improving psychological well-being and overall quality of life.

Keywords: Strength Training, Well-being, Anxiety

Exploring the Links Among Financial Literacy, Financial Stress, and Money-Related Behaviors in College Students

Deshon Collins and Jennifer Livengood

School of Education & Social Sciences

Money management is a prevalent challenge among college students, leading to stress, poor academic performance, and negative impacts on mental health and social well-being. Recognizing this link can help identify strategies to support students' financial and personal well-being. This study explores the relationship between financial literacy, financial stress, and money-related behaviors among students at Missouri Valley College. Research indicates that students with higher financial literacy experience lower financial stress due to better budgeting skills, improved decision-making, and greater confidence in managing their finances. To examine these factors, this study will use an adapted Financial Literacy Scale to survey students. The survey, based on a 5-point Likert scale, will assess financial knowledge, budgeting habits, and financial self-efficacy. By analyzing these responses, the study aims to provide insights into how financial education can reduce stress, enhance mental well-being, and promote long-term financial stability and academic success for college students. This study hypothesizes that lower financial literacy is associated with higher financial stress, while students with stronger money management skills are likely to experience significantly lower stress levels. Lastly, students who engage in positive financial behaviors are expected to show signs of long-term financial stability and overall well-being.

Keywords: Money Management, Financial Stress, Financial Literacy

Teacher Resources for Students with ADHD in the Classroom

Jaksyn Crowe and Rhonda Ryther

School of Education & Social Sciences

In this presentation, we're going to take a closer look at how ADHD affects students, with about 8.4% of children diagnosed, according to the American Psychiatric Association. That's a significant number, meaning many classrooms are likely to have students with ADHD. Because of this, it's really important for teachers to be prepared to support these students in ways that work for them. ADHD can look different for each child, whether it's trouble staying focused, acting impulsively, or being hyperactive, and these challenges can make school harder for them. While many teachers have access to helpful resources like individualized learning plans, these tools don't always cover everything. Teachers need more than just paperwork; they need practical, real-world strategies they can use everyday. In this presentation, you'll see several teaching strategies, hands-on techniques, and training programs to help teachers build more inclusive, supportive classrooms. The goal is to help students with ADHD not just manage their challenges, but thrive—academically, socially, and emotionally. We hope to give teachers the tools and confidence they need to help them reach their full potential.

Keywords: Attention Deficit Hyperactivity Disorder, Student Success, Teacher Resources

Effects of Marijuana Usage During Pregnancy

Sydnei Cummings and Claire Schmidt

School of Education & Social Sciences

Marijuana, while classified as a drug, has become more recreationally available in the U.S. in the last ten years. This project started for me when I started seeing TikTok narratives by pregnant women who were continuing to use marijuana throughout their pregnancy and breastfeeding. A 2024 study from the University of Georgia College of Public Health found that “about 6% of pregnant women reported using marijuana during the last month”. Marijuana use was also reported in the first and second trimester of pregnancy, “most of the pregnant who use marijuana were also in their first trimester, and use decreased as the pregnancy progressed”. Medical professionals have recommended that marijuana use should be none in order to not harm the unborn fetus. However recent arguments suggest that marijuana use during pregnancy is okay as it benefits the mother. I will use the methodology of scientific case studies to answer the question of how does the mother’s marijuana usage positively and/or negatively affect the unborn infant?

Keywords: Pregnancy, Marijuana, Fetus

The Effects of Playing Multiple Sports During Childhood on Cognitive Performance

Townsend Ellis and Jennifer Livengood

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Cognitive performance can be influenced by many things during childhood, including athletic activities. This study looks to find a distinction between levels of cognitive performance of participants that played multiple sports during childhood and those that did not. During this study, participants will complete a demographic survey that will determine the sports played during childhood. After completing this set of questions, participants will complete a cognitive performance questionnaire. Cognitive performance scores will be averaged and any differences of the groups will be analyzed. The current hypothesis is that participants that played in more than two sports during childhood will have a higher level of cognitive performance. These findings could be used to help increase the cognitive performance of the next generation, which is not only beneficial to the children but also to the future of society. We may want to encourage participating in a variety of activities to enhance cognitive development and performance. Other implications and future research will be discussed.

Keywords: Cognitive Performance, Athletes, Childhood Development

Understanding Gestalt Language Processing in Education

Jena Emerson and Rhonda Ryther

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This project examines Gestalt Language Processing (GLP), a unique language acquisition style commonly observed in autistic children. Unlike analytic language processors, who learn language by breaking it down into individual words and grammatical structures, GLP students acquire language in larger chunks, or scripts, before gradually breaking them down into meaningful parts. While this approach to language development can be effective, it often leads to difficulties in spontaneous speech, sentence formation, and overall communication, particularly in academic settings. Over time, with appropriate intervention, they can learn to analyze and restructure these chunks in flexible, meaningful language. However, a lack of awareness about GLP in educational environments can result in misinterpretation of these speech patterns, potentially leading to inadequate support or misdiagnoses. This research explores the characteristics, challenges, and diagnoses of GLP, as well as effective intervention strategies such as Natural Language Acquisition (NLA) and speech therapy approaches tailored to GLP learners. By increasing awareness and understanding, educators, therapists, and caregivers can implement strategies that foster meaningful language development and communication skills, ensuring that children with GLP receive the support they need to thrive academically and socially.

Keywords: Gestalt Language Processing, Autism, Education

How has Mental Health in Law Enforcement Changed for Better or Worse?

Richard Evaristo and Karen Reeter

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How has mental health in law enforcement changed over the years, and has it improved or worsened? This research paper examines these questions by gathering insights from both active and retired law enforcement officers, ranging from newcomers to seasoned professionals. Additionally, input was collected from non-law enforcement individuals regarding their perceptions of how mental health has evolved within the profession. One method used in this research was conducting interviews, which included questions about the strategies officers use to maintain their mental well-being while performing their duties effectively and ensuring the safety of themselves and the public. The research concluded that law enforcement officers now have access to various tools to support their mental health without compromising their effectiveness. However, the success of these resources largely depends on the department's ability to foster a healthy work environment.

Keywords: Mental Health, Burnout, Law Enforcement

Emotional Intelligence & Involvement in Music

Elise Falcetti and Jennifer Livengood

School of Education & Social Sciences

Emotional intelligence is something humans can be born with and develop throughout their lifetime. Many outside factors are responsible for the development of emotional intelligence from youth through adulthood, including a person's experience with music. Music is part of most people's lives but in different ways and in various amounts. Previous research has demonstrated a positive correlation between involvement in music in youth and higher scores of emotional intelligence later in life. The purpose of this study is to explore the relationship between involvement in music and emotional intelligence. The study will measure music appreciation and creation, and evaluate links between these and participants' emotional intelligence scores. Participants will complete a brief survey measuring the constructs, and data obtained will be analyzed using a comparison of means and correlation tests. The results of this study may be used to improve education and overall development of youth. The findings may also be helpful for adults who are looking to improve their overall well-being through the lens of emotional intelligence.

Keywords: Emotional Intelligence, Music, Development

The Impact of Surveillance Cameras on Campus Security

Noa Fernandez and Karen Reeter

School of Education & Social Sciences

Crime Prevention has been an issue confronting college campuses, most particularly in view of problems posed to student safety and institutional security by theft-related incidents. As a means toward solving this, many educational institutions have adopted surveillance cameras. But, by being dependent on video surveillance to an increasing extent, the question arises: How effective are surveillance cameras in preventing theft-related crimes on college campuses? This study hypothesizes that the use of surveillance cameras reduces theft incidents on campus. This hypothesis was measurable, as it allows for the comparison of theft rates before and after the implementation of surveillance systems, as well as an analysis of how students and faculty perceive security measures on campus.

Keywords: Surveillance Cameras, Theft, Campus

Sports Activity and Coping Mechanism

Geovonni Floyd and Jennifer Livengood

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Positive child development is vital as it predicts the ability of a person to function in society and develop into adulthood. Children from single-parent homes may be more likely to face emotional, social, and economic challenges that might hinder their physical and mental development when compared to their peers. This study focuses on whether or not sports can be a coping mechanism for children from single-parent families and how sports can improve emotional, social, and physical development. The research aims to determine if sport can alleviate some of the challenges faced by children in single-parent households and whether participation in sports can promote emotional regulation, socialization, and physical health. The study will survey 100 Missouri Valley College students in Marshall, Missouri, and they will answer an online survey questionnaire. The questionnaire will collect demographic information and seek participants' views regarding the function of sports in emotional, social, and physical growth, especially for single-parent families. By using Likert scale questions, the questionnaire will provide quantitative and qualitative responses. The hope of this research is to determine if sports can be used as a useful coping strategy for children in single-parent families to develop better emotional and social skills.

Keywords: Sports, Children, Single-Parents

The Link Between Childhood Trauma and Working Memory Function

Elizabeth Foose and Jennifer Livengood

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Trauma is a globally prevalent experience that can impact cognitive functioning, including working memory. Working memory is the ability to store and manipulate information temporarily. Additionally, trauma contributes to the development of mood disorders, which can also exhibit cognitive deficits. Given this overlap, the relationship between trauma, mood disorders, and working memory warrants further investigation. The study at hand aims to replicate previous findings by examining the association between childhood trauma, mood disorder symptoms, and working memory in college students. Participants will complete the Adverse Childhood Experiences (ACE) questionnaire to assess childhood trauma exposure and the Depression Anxiety Stress Scale to measure mood disorder symptoms before performing an online working memory task. It is hypothesized that greater childhood trauma exposure will predict poorer working memory performance, independent of mood disorder severity. Gender analysis will also be included, with the expectation that trauma will have a more significant impact on working memory in women, as they experience sexual trauma more frequently and its cognitive impact is greater.

Keywords: Working Memory, Adverse Childhood Experiences, Mood Disorders

Scars of a Nation: the Cambodian Genocide

Axel Garcia and Tiffany Bergman

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The Cambodian genocide, perpetrated by the Khmer Rouge between 1975 and 1979, was the result of historical, political and economic events. French colonization (1863-1953) exploited the country's resources, extracting wealth while imposing power structures alien to local needs. At independence, Cambodia was weakened, with a dependent economy and a fragmented society. France, after plundering what it was interested in, left the region without establishing solid foundations for stable development. In this power vacuum, and in the midst of the Cold War, the Khmer Rouge emerged, led by Pol Pot, with a radical ideology that sought to destroy any trace of foreign influence and modernity. His regime established an agrarian utopia based on terror, executing intellectuals, minorities and dissidents. The brutality of his rule left almost two million dead, making it one of the worst tragedies of the 20th century.

Keywords: Cambodia, Khmer Rouge, Pol Pot

Performance of Distinction in Debate: Slam Poetry

Maria Greider and Douglas Roberts

School of Education & Social Sciences

Slam Poetry in debate is a competitive event where participants write and perform their own original slam poems. The Slam Poetry presented in this performance received 6th place in the entire nation at Pi Kappa Delta Nationals. The event encourages original activism from the empowering of personal experiences in the individuals' lives. In this performance we will see the original work titled: Desires to Ashes. The piece is significant because it shows the stages of being in love or having love whether in a friendship or relationship and once you get hurt or trust is broken, you see that person differently and in a new light. This is important because we need to recognize that we don't need to find our worth or ourselves and other people and that sometimes getting that realization and seeing them differently will help in the long run.

Keywords: Poetry, Debate, Speech

Genetics in Down Syndrome

Zayne Hall and Rhonda Ryther

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Down syndrome is a genetic disorder caused by the presence of an extra copy of chromosome 21, a condition known as trisomy 21. This extra genetic material affects physical and cognitive development, leading to characteristic facial features, intellectual disabilities, and an increased risk of health issues such as heart defects and thyroid disorders. The genetic basis of Down syndrome results from nondisjunction during cell division, which leads to an embryo with three copies of chromosome 21 instead of the usual two. Understanding the genetics behind Down syndrome helps in early diagnosis, medical management, and supportive therapies to improve the quality of life for individuals with the condition.

Keywords: Education, Genetics, Down Syndrome

How Dyslexia Impacts College Students and Resources Provided for Students

Claryssa Jacobo and Rhonda Ryther

School of Education & Social Sciences

Within this project it will be explained how dyslexia impacts the daily life of college students. Evaluating resources that are provided to students to help them succeed in their academic career and to help overcome their disorders. Starting from the diagnostic process of the students, then using academic resources to support my thesis. I will further describe how this learning disorder impacts college students in their learning and daily life. Those who have dyslexia and those who do not experience this disorder will gain an understanding of the proper resources that can be provided to those who may need them.

Keywords: Dyslexia, Resources, College

State Trifold Brochure

Can Kemer and Penny Clair

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I created a trifold brochure to promote Florida by showcasing its natural beauty, entertainment options, and cultural richness. One of the main highlights is Disney World, one of the most famous theme parks in the world. I also featured Florida's stunning beaches, where visitors can enjoy the sun, swim, or try water sports. The brochure suggests taking a scenic drive to Key West as well—a special destination known for its beautiful sunsets and relaxing atmosphere. In addition to attractions and nature, I also included some of Florida's traditional foods. For example, "Key Lime Pie" is a popular local dessert and an important part of the state's culinary identity. Through this brochure, I aimed to present both the natural and cultural sides of Florida, and to inspire readers to experience an unforgettable vacation in the Sunshine State.

Keywords: Florida, Beaches, Disney World

The Impact of Birth Order on Conscientiousness, Neuroticism, and Goal Orientation

Tristan Liebenberg and Jennifer Livengood

School of Education & Social Sciences

This study examines the influence of birth order on conscientiousness, neuroticism, and goal orientation. It investigates how sibling position may shape personality traits and achievement motivation. Prior research suggests that firstborns tend to be more conscientious and achievement-driven, where-as laterborns may have higher neuroticism and a preference for learning-oriented goals due to differing parental expectations. This study utilizes a survey-based methodology, recruiting 100 undergraduate students to complete validated personality and achievement measures, including the Big Five Inventory (BFI-44) and the Achievement Goal Questionnaire-Revised (AGQ-R). This study predicts that firstborns will score higher in conscientiousness due to increased responsibilities. Laterborns are expected to exhibit higher levels of neuroticism, as they may experience greater instability and reduced parental investment. Additionally, firstborns are anticipated to adopt performance-oriented achievement goals, while laterborns will prioritize learning-oriented goals, focusing on mastery and self-improvement. These findings contribute to ongoing discussions on individual differences, personality psychology, and achievement motivation.

Keywords: Birth Order, Personality Traits, Goal Orientation

Doctor Black Father of MVC

John Lipscomb and Tiffany Bergman

School of Education & Social Sciences

Dr. William Henry Black was the first President of Missouri Valley College. However he was much more than just a president at a small town college. During his years of service to Missouri Valley College he was known as more than a president to the students and community surrounding the school. He spent his life attached to the Cumberland Presbyterian Church, first starting in Pennsylvania and then moving to St. Louis. After moving to St. Louis, he took the job as Missouri Valley College's first president in 1889. This was the beginning of a complete uprising for the school itself. He started with only eight instructors and not a single building; in his 37 years of service he saw the school rise to 33 instructors and eight buildings. Dr. Black was revered throughout the country for his literary works in Christian literature.

Keywords: Dr. Henry Black, Missouri Valley College, President

Characteristics of ADHD

Benjamin Mitchell and Rhonda Ryther

School of Education & Social Sciences

This project explores the disability ADHD, also known as Attention Deficit Hyperactivity Disorder, and how some of the characteristics of adults with ADHD may make them successful. This project explores the disability ADHD, and how some of the most successful people in the world have it. Michael Phelps, currently the most successful swimmer in the world. He boasts a total of 28 Olympic gold medals. Simone Biles has won 23 world championships in gymnastics. Finally, Bill Gates, the former richest man on the planet, all have ADHD. This project explores the disability ADHD, and how some of the characteristics of ADHD make adults more likely to be successful.

Keywords: Attention Deficit Hyperactivity Disorder, Success, Characteristics

The Links between Social Media Use, Self-Esteem, and Empathy

Giavanna Moore and Jennifer Livengood

School of Education & Social Sciences

This study explores the relationship between social media usage, self-esteem, and empathy among Missouri Valley College students. Social media and technology are continuing to grow and impact daily lives. Over the years this enhancement has changed the way people communicate and make friends. It has impacted mental health in both positive and negative ways. Overall, social media and technology has changed the way of life, in this study research examines whether high social media usage is associated with low self-esteem levels and how gender impacts that. This research will also examine how empathy levels impact levels of self-esteem. The methodology of this study includes a survey with social media, self-esteem, and empathy measures. The survey will be sent out to approximately 100 Missouri Valley College students. Findings from this research will contribute to a greater understanding of how social media usage impacts self-esteem and empathy levels, potentially enhancing future discussions among this topic.

Keywords: Social Media, Self-Esteem, Empathy

The Impact of Childhood Adversity on Mental Health in College Students

Nienke Nijendijk and Jennifer Livengood

School of Education & Social Sciences

Childhood adversity is a well-documented risk factor for poor mental health outcomes, yet its impact can vary based on cultural background and access to protective resources. This study aims to examine the relationship between childhood adversity and mental health in college students, with a focus on potential cultural differences and the role of social support as a mitigating factor. Approximately 100 undergraduate students will complete an online survey assessing their childhood adversity, mental health symptoms, and perceived social support. It is expected that students with higher levels of social support will report better mental health outcomes than those with lower levels of support, even when experiencing similar levels of childhood adversity. By analyzing these relationships, this study seeks to provide insight into how early life experiences shape mental well-being and whether social support can serve as a buffer against negative outcomes. The findings will contribute to a broader understanding of mental health disparities among students from different backgrounds and offer valuable implications for improving mental health support systems in higher education.

Keywords: Childhood Adversity, Mental Health, Social Support

Race, Ethnicity, and Students' Trust in Law Enforcement

Nienke Nijendijk and Karen Reeter

School of Education & Social Sciences

Trust in law enforcement is a critical factor in maintaining an effective justice system, influencing public cooperation, perceptions of fairness, and compliance with laws. However, existing research suggests that minority racial and ethnic groups exhibit lower levels of trust in law enforcement due to historical and contemporary experiences of discrimination, bias, and systemic inequalities. This study examines the relationship between race, ethnicity, and students' trust in law enforcement, exploring whether these factors shape perceptions of police legitimacy and fairness. Approximately 100 undergraduate students from a liberal arts college in the Midwest will complete an online survey assessing their trust in law enforcement, personal experiences with police, and perceptions of bias. It is expected that minority students will report lower levels of trust in law enforcement compared to their White counterparts, reflecting broader societal patterns of mistrust rooted in systemic disparities. By analyzing these relationships, this study aims to contribute to discussions on procedural justice, bias reduction in policing, and strategies for improving police-community relations. The findings will provide insight into the role of race and ethnicity in shaping trust in law enforcement and offer implications for fostering more equitable law enforcement practices.

Keywords: Trust, Law Enforcement, Race, Ethnicity, Perceived Bias

The Role of Social Media in Criminal Activity

Michael Nix and Karen Reeter

School of Education & Social Sciences

The purpose of this paper is to discuss how social media impacts criminal activity. The research involved conducting a survey with students from Missouri Valley College that vary from freshmen to seniors. The data collected involved gathering information related to the student's ethnicity, age, various social media platform usage, relationship status, mental health, and racism. The data collected supported the research proving the parallel relationship between using social media and criminal activity. The results from Missouri Valley College students surveyed highlighted the seriousness and amount of the influence social media can have on human behavior and mental health and how this connects to criminal activity.

Keywords: Crime, Mental Health, Social Media

The Role of Autonomy-Granting Parenting in Cultivating Antifragility and Independence Amongst Young Adults

Alonta Orange and Jennifer Livengood

School of Education & Social Sciences

This study offers information about how autonomy-granting parenting supports the growth of important characteristics in young adults, particularly independence, resilience, and self-efficacy. The study highlights the significance of creating an atmosphere where young adults are empowered to make their own decisions and overcome obstacles by examining the connection between parenting styles and the idea of antifragility. By encouraging a mindset that makes young adults more resilient to setbacks and able to use obstacles as chances for personal development, the study highlights how autonomy-granting parenting can influence independence. The study will use a quantitative, correlational approach to explore how autonomy-granting parenting influences young adults' independence, self-efficacy, and resilience. Data will be gathered through a cross-sectional survey, providing insight into the connections between parenting styles and outcomes related to resilience and independence. By collecting information from a diverse group of participants, the study aims to offer a clear understanding of the effects of autonomy-granting parenting on the growth of young adults.

Keywords: Autonomy-Granting, Self-Efficacy, Independence, Resilience

The Impact of Maternal Smartphone Use on Emotional Availability and Attachment Style

Autumn Perez and Jennifer Livengood

School of Education & Social Sciences

This study explores the impact of maternal smartphone behaviors on emotional availability and attachment style in parent-child relationships, with a focus on adult perspectives. Drawing on previous research, including Lederer et al., which examined the effects of maternal smartphone use on mother-child interaction, and Liu et al., which explored parental phubbing and its effects on adolescent life satisfaction, this study seeks to understand how maternal phone usage influences attachment in adulthood. Adults will be surveyed to reflect on their childhood experiences with their mothers, particularly in relation to emotional availability and attachment style. The survey will include questions on their perceptions of maternal smartphone use, their attachment patterns, and the perceived emotional connection with their mothers. This approach aims to shed light on how maternal smartphone addiction may shape long-term emotional and relational outcomes from the perspective of adult children.

Keywords: Long-Term Relational Outcomes, Maternal Phone Use, Attachment

Exploring Behavioral Interventions for ADHD: A Path to Improved Focus and Well-being

Alyseia Peterson and Rhonda Ryther

School of Education & Social Sciences

Attention Deficit Hyperactivity Disorder, also known as ADHD affects millions of people throughout the world, particularly students, making it harder to focus, stay organized, and succeed academically. This research will explore various behavioral interventions, such as cognitive-behavioral therapy (CBT), parent training, and self-regulation techniques, to better understand how they can help manage ADHD symptoms. By focusing on non-medication strategies, this project aims to offer practical solutions for students struggling with ADHD. The goal is to determine which interventions work best in real-life settings and improve overall well-being, so those with ADHD can thrive both in school and in their personal lives.

Keywords: Attention Deficit Hyperactivity Disorder, ADHD Interventions, Behavioral

Search and Seizure

Alicia Reyes and Karen Reeter

School of Education & Social Sciences

I am presenting the topic of "search and seizure" and the different reasons people are legally and illegally. The different reasons officers pull over individuals and if their reasons are valid along with asking different people their amount of knowledge regarding their rights. Search and seizure is important because it's something that occurs everyday and not all officers follow correct procedures. The method I used to get my information from individuals was a survey sent out by the IRB asking questions such as what their race is, how much knowledge they have regarding their rights, how they felt when being pulled over if ever, etc. I have used their answers and research online along with using research papers that were published by other students. I wanted to learn about the different experiences people had and if more information about their rights would have mattered or could in the future.

Keywords: Legal Searches, Fourth Amendment Rights, Illegal Search and Seizures

Providing Regular Classroom Experiences to Children with Autism and the Benefit to them Socially

Elena Sanchez Campos and Rhonda Ryther

School of Education & Social Sciences

This paper explores Autism Spectrum Disorder (ASD), from its definition to its causes. Explanations regarding some of the behaviors and characteristics of ASD and how they can be used as an advantage in learning are included. In addition, discussions about the advantages and disadvantages of providing educational services to children with ASD in the regular classroom. I will also provide student symptoms and how they affect the patient's daily lives, as well as the impact on their close environment. Finally, a personal experience will be included to provide a closer and more human view of the impact of the disease of autism on daily life.

Keywords: Autism Spectrum Disorder, Inclusive Education, Behavioral Therapy

Balancing Coaching/Teaching and Self-Care at an Institution

Leticia Seabra Lisa Rice and Kimberly Horsten

School of Education & Social Sciences

The focus of this presentation is discussing the challenges of a staff/faculty member at an institution to balance work duties and self-care and bring tools to improve self-care when centralizing one's own life as much as prioritizing the student needs and experiences. This presentation is for coaches and teachers, but it can be used by any student who will eventually graduate and work in an institution or companies and will be challenged to balance work life and personal life. The outcome of this presentation is pointing out the challenges of every faculty and staff member, since we all prioritize our students' needs and experience over our own. Therefore, establishing mental goals for self-care as much as we establish goals during the week to accommodate our students' improvement and success. There are many benefits when we, staff/faculty members, prioritize our health and take care of ourselves before the other and I will discuss them during the presentation.

Keywords: Work/Life Balance, Self-Care, Educators

Corruption, International Criminal Law, and Natural Resources: How Resources Exploitation Affects Vulnerable Economies

Tisha Solopa and Claire Schmidt

School of Education & Social Sciences

This presentation asks how international criminal law approaches corruption and mineral extraction in economically vulnerable countries such as Madagascar and Democratic Republic of Congo. I demonstrate that holding people and businesses accountable, encouraging transparency, and aiding international efforts to resolve conflicts, international criminal law plays a crucial role in combating corruption and the misuse of natural resources in at-risk economies. International rules and regulations are in place to deal with illicit trade and working conditions, such as Article 23 of the *Universal Declaration of Human Rights*. Additionally the UN Economic and Social Council (ECOSOC) has adopted a resolution to combat organized crime and minerals extraction and trafficking on the recommendation of the Commission on Crime Prevention and Criminal Justice. By reviewing these legal tools, this presentation evaluates how international frameworks support the struggle against illicit business and exploitation.

Keywords: Corruption, International Criminal Law, Natural Resources, Working Conditions

Obstacles Female Lawyers Encounter in the Workplace

Tisha Solopa and Claire Schmidt

School of Education & Social Sciences

My presentation responds to the question: What challenges do female lawyers face in the field of law that impact their professional growth and opportunities? I demonstrated that female lawyers encounter distinct obstacles in the legal profession, such as gender discrimination, unsustainable/unequal work-life balance, and underrepresentation, all of which can greatly disrupt their career development and restrict their chances for promotion as compared to the male counterpart. Research conducted by the writer Eli Wald's in 2010 highlights the issues of gender stereotypes with a focus on biased mentoring processes and support networks, while the writer Katrina Lee in 2022 illustrates issues of female underrepresentation of women belonging to different ethnicities in the legal practice. The implementation of preventive measures to ensure equity such as flexible working arrangements, mentorship programs and networking is shown to be successful. Thus addressing these barriers is crucial to ensure that female lawyers gain equal opportunities for career success.

Keywords: Obstacles, Female Lawyers, Workplace

Insight into the Prevention of Serial Killers: Nature vs Nurture

Rose Szymanski, Georgia Price, & Ellie Gutcher and Claire Schmidt

School of Education & Social Sciences

What we are going to explore is how to prevent the making of serial killers through using the debate of nature vs nurture. We will explore current methods that help to prevent serial killers while also suggesting less heard of and unique methods of prevention which the implementation of could help to not only catch but to avert serial killers. *Talking with Serial Killers* by Christopher Berry-Dee will provide our perspective with support allowing us to reference and analyse case studies further showing the need for new preventions. Other sources such as *Serial Killer Psychopathy* by Victor-Andrei Carcale will allow us to study childhood behaviour and traumas that are often related to people becoming serial killers. This will allow us to better understand the most effective preventions based on circumstances and trends that are often seen in young serial killers and psychopaths. We plan to use these sources to gain some unique perspectives into the potential preventions that can be put in place to reduce the chances of individuals becoming serial killers.

Keywords: Serial Killers, Psychology, Prevention

Was the So-called “Night of the Sixty”, that Occurred in Álora, in 1937, a Direct Response to Republican Actions in the Region, or was it Part of a Plan of Systematic Repression?

Lucía Torres Vizcaíno and Claire Schmidt

School of Education & Social Sciences

The “Night of the Sixty”, as the early morning of April 5th of 1937 is known in Álora, was the one that held the most deaths in the town during the Spanish Civil War, and has not been investigated like other events that took place during the war in the country. This research project investigates whether the mass executions that occurred that night were a direct response to Republican actions in the region, or part of a plan of systematic repression by the nationalists. I investigate this question by analyzing death penalty statements, newspaper articles, the Álora Prison Admission Book, the Provincial Commission for the Examination of Sentences of Malaga, personal experience narratives and other primary and secondary sources. While both sides used violence and repression before, during, and after the war, this study argues that during Álora's national mandate systematic repression was used as a method of domination and control, with the “Night of the Sixty” being a clear example of this and not a direct response to Republican actions in the region, although historians such as José María Zavala deny the existence of a plan, or like Ricardo de la Cierva affirm that Franco's repression was a "fair war" against communism.

Keywords: Spanish Civil War, Repression, Mass Executions

Weighing the Risks: When Should Police End a Pursuit?

Jewel Torres-Amaya and Karen Reeter

School of Education & Social Sciences

The purpose of this study is to show why it is crucial to know what precautions police take when making decisions on when to stop a pursuit because it could deal with the safety of the public and innocent bystanders. It is key to know that the police are making decisions for not only their safety but the safety of the public. Police pursuits are high risk to not only the officers but the public. When there are situations where innocent bystanders can be endangered. When this happens it is crucial for officers to take into consideration if it is safe to pursue the pursuit. This paper shows the importance of the key factors that should guide police decisions to terminate a pursuit especially when bystanders are at risk. High-speed chases can quickly escalate into dangerous situations, making it essential for law enforcement to evaluate when to stop a pursuit.

Keywords: Police Pursuit, Reckless Driving, Liability

Ethics Bowl: Exploring the Ethical Situation of the DNR and Improper Consent

Sha Wilson, Tru Naumovitz, Natulie Vera, Miliyah Pacheco, and Elizabeth McDonald and Douglas Roberts

School of Education & Social Sciences

Ethics Bowl is a debate event that challenges debaters to determine whether something is ethical or not based on a case study question. Students will be broken into two teams. One that will set up the case and set their view up, and another group that will respond which may agree or disagree with the prior group and encourage further development. Before the close of the situation the audience will have time to engage in questions to encourage if the debaters have fully considered the contexts of the ethical situation being examined. In this presentation, debaters will examine a case study exploring a hospital's failure to acknowledge a DNR (Do Not Resuscitate) and a cardiologist who operated on a man who allegedly gave consent at a time when they were unable to confidently establish, they were sound, body, and mind. This session will ask the question: is it ethical to pursue consent to operate on a DNR on a patient who has given consent who was not in a place to provide that consent?

Keywords: Ethics, Debate, Speech

School of Nursing and Health Sciences

Early Ambulation Post-Operative

Kassidy Abney and Tonya Eddy

School of Nursing & Health Sciences

One of the priorities for a patient after surgery is to lessen the risks of complications that can arise post-operatively. After a surgery, it is not uncommon to see patients ambulating hours after the procedure. There are many benefits to patients that ambulate early after surgery. Early movement could lessen the hospital stay for the patient and lower their chances of having postoperative complications. Ambulating early can also lower the risks of blood clots, pneumonia, and can improve healing and strength. Patients should be given information on the benefits of early ambulation after surgery. They should also be educated on the complications that can occur with late ambulation. An educational module was created to provide information to pre-operative patients about benefits of early ambulation as well as common postoperative complications. If a patient gets this information they can make an informed decision and will be more motivated to ambulate early

Keywords: Post-operative Care, Early Ambulation

EA Sports The Children's Casino

Jayden Briggs

School of Nursing & Health Sciences

Electronic Arts is one of the world's largest sports video game manufacturers and has a significant problem with one of its in-game features. In all of EA Sports games in the ultimate team section, you can buy packs with coins or spend real money on for virtual currency to get the packs. Open packs is like playing a slot machine with the odds of getting something very low, and most children fall victim to a gambling addiction they don't even know about. I fell victim to this addiction and spent tons of money for no reason. Most kids get excited about opening packs in the hope of getting something good, it's like pulling a slot machine in hope of getting a jackpot. I'm going to talk about this problem and attack a youth gambling epidemic, and to stop EA sports from making millions off of a children's casino and causing gambling addiction in young children.

Keywords: Children, Psychology, E-Sports

Lowering the Risk of Falls in the Elderly Population

Jenna Brown and Tonya Eddy

School of Nursing & Health Sciences

Falls are considered one of the leading causes of injury in people over the age of 65. Falls can result in broken bones, internal bleeding, and sometimes death, making it necessary to lower the risk of falls in this population. There are several techniques, strategies, and programs that are utilized by the elderly to decrease the risk of falling, resulting in less physical harm to the individual. Exercise programs, home safety checklists, aquatic therapy, and toileting schedules for confused individuals are a few techniques that aid in fall prevention. This educational guide will highlight each of these techniques and their effectiveness on fall prevention utilizing current research evidence. The goal of this education guide is to be a resource for the at-risk population, describing techniques to lower the chances of falls resulting in injury.

Keywords: Falls, Elderly, Health

Aquatic Safety Educational Module

Zoey Chrisman and Tonya Eddy

School of Nursing & Health Sciences

Drowning is the leading cause of accidental injury death in children worldwide. Many associated risk factors of the population make this a complex issue to combat. Education and implementation of aquatic safety interventions can reduce the prevalence of these risk factors. This educational module will provide knowledge to children and their caregivers on the importance of aquatic safety. This module will reinforce this importance and encourage caregivers to immerse their children in swimming lessons and aquatic safety programs. By exposing children and their caregivers to this knowledge, the module will accomplish its overall goal of reducing the rates of drowning in children.

Keywords: Aquatic Safety, Children

Emotional Health: Recognize, Restore, Renew

Angel Cleare and Tonya Eddy

School of Nursing & Health Sciences

Emotional health can be defined as a balanced state of mind that guides how individuals think, feel, and respond to daily occurrences in life. Young adults often deal with managing their emotions regarding stressful experiences such as academic pressures, career issues, and personal or relationship circumstances. There is a certain vulnerability for young adults as they are transitioning through life. Such adjusting phases can evoke heightened emotional reactions and contribute to mental health conditions such as anxiety, and depression. This project explores the role of holistic lifestyle modifications including physical activity, sleep, and nutrition. Understanding the role of these key factors can provide individuals with meaningful steps toward improving their emotional well-being. A pamphlet was developed to provide young adults with accessible, non-pharmacological strategies for maintaining emotional stability. By increasing awareness and promoting sustainable lifestyle changes, this project aims to empower young adults to recognize emotional challenges, restore balance, and renew their emotional health and overall quality of life.

Keywords: Emotional Health, Lifestyle Modifications, Holistic Strategies

Narrative Exposure Therapy for PTSD

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Inspired by working with a client with complex PTSD, this session explores the development, efficacy, and generalizability of narrative exposure therapy for application across diverse populations. Narrative exposure therapy evolved from the need for quick and effective treatment of complex PTSD in refugee camps where the need for therapeutic interventions was met with language and time barriers. Utilizing the neurobiological underpinnings of memory formation, therapists work through traumatic events to restructure memories in a systematic way that desensitizes them. Narrative exposure therapy offers clients with PTSD a way of contextualizing and processing their trauma. Unlike other modalities, the narrative exposure therapy framework addresses the entire trauma history within a timeline framework, working to attach traumatic events to a moment in time, thereby weakening the power of past events over the present. This presentation explores how using narrative exposure therapy to isolate each traumatic event and create meaning allows clients to redefine the narrative that shapes their life story.

Keywords: PTSD, Narrative Exposure Therapy, Narrative Therapy

Delayed Cord Clamping

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Delayed cord clamping (DCC) is an upcoming practice performed by physicians and midwives during labor after delivery of the infant but before delivery of the placenta. Waiting 1 - 3 minutes or longer before clamping the umbilical cord has shown benefits of increased oxygen saturation levels. DCC can reduce the risk of postpartum hemorrhage, has been shown to result in better health outcomes, and should be routine practice. DCC has also been shown to lower the risk of intraventricular hemorrhage (IVH) and death in preterm babies and improve hemoglobin and ferritin levels in term babies, reducing anemia. This project dives into the benefits of delayed cord clamping (DCC) for both newborns and mothers. An educational module was developed to educate labor and delivery registered nurses on the practice and significance of DCC. It is hoped that this educational module will increase the number of healthcare professionals wanting to utilize delayed cord clamping.

Keywords: Delayed Cord Clamping, Labor & Delivery, Nursing

Understanding and Healing Different Types of Loss

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Grief is a natural response to loss, extending beyond the death of a loved one to include changes in relationships, identity, health, or future expectations. It is a deeply personal and complex emotional experience that affects thoughts, behaviors, and overall well-being. While often associated with sadness, grief can also manifest as anger, confusion, or even relief. Unacknowledged grief may shape one's emotional landscape in unexpected ways, influencing daily life and mental health. This presentation explores the many faces of grief and its impact on individuals, offering perspectives on how to navigate loss in a meaningful way. Participants will gain insight into the different forms of grief and learn about approaches to coping and healing that support emotional resilience and personal growth. By understanding grief as a natural part of life, individuals can develop strategies to process loss while continuing to move forward.

Keywords: Grief, Loss, Healing

The Risks of Rapid Weight Loss in Combat Sports: An Educational Module

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Rapid weight loss is a common practice in combat sports. It is done to give athletes a competitive advantage in a lower-weight category. Examples of methods used to achieve rapid weight loss are caloric and fluid restriction, sauna suits, laxatives, and diuretics. Some of the sports that have been researched include judo, wrestlers, taekwondo, and MMA athletes. Rapid weight loss can lead to acute problems, including significant dehydration. It can also lead to more serious complications, such as kidney failure and eating disorders. These are only a few of the complications potentially caused by rapid weight loss. The educational module that was developed targets athletes who participate in sports with weight classes and is directed toward early athletes, potentially junior high and high school aged, and their coaches. This project hopes to educate athletes on the dangers of rapid weight loss so that they can participate in healthier options to lose weight.

Keywords: Rapid Weight Loss, Combat Sports

Pain Management Techniques in Healthcare - An Educational Module

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Postoperative pain management is a critical aspect of patient care in the ICU, and patient-controlled analgesia (PCA) has been widely studied for its effectiveness. PCA is when patients self-administer intravenous opioids through a controlled pump. This system allows patients to manage their pain relief within prescribed limits. Previous studies have shown mixed results regarding its effectiveness over nurse-administered analgesia (such as oral pain pills). Recent trials have compared various opioids used in PCA, such as oxycodone and fentanyl, which may affect both pain relief and patient satisfaction differently. This presentation evaluates research conducted on the effectiveness of PCA versus nurse-administered analgesia for postoperative pain relief in ICU patients and also presents an educational module that aims to inform physicians of which provides superior pain relief.

Keywords: Opioids, Pain Control

Educational Module to Help on Prevention and Management of Osteoporosis in the Elderly

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Osteoporosis is a disease process that develops later in life, affecting older adults and their quality of life due to increased risk for falls and bone fractures. The skeletal system changes as aging occurs: bone density decreases, causing bones to be more fragile. The process of aging can impact the body's systems and ability to adapt. This body change is often demonstrated by increased bone healing time in people over 65 years of age. Through the study of pharmacological and nonpharmacological interventions presented in current peer reviewed research, an educational module was developed. The purpose was to inform geriatric patients on methods to gradually implement interventions to promote bone health in their life. This project aims to educate individuals about management, importance of treatment and lifestyle changes to improve expected outcomes of osteoporosis.

Keywords: Osteoporosis, Elderly, Interventions

How Can Forming a Local Community for Physical Activities Help Prevent Prediabetes and Support Individuals with Type 1 & Type 2 Diabetes in a Small Town in Missouri?

Mariia Karabchevskaia and Claire Schmidt

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This research focuses on how forming a local community for physical activities can help prevent prediabetes and support individuals with type 1 diabetes in a small town in Missouri. At this stage, I am presenting the idea of this research, which will be fully developed through further planning and execution. Small towns often lack access to quality diabetes education and healthcare, making this initiative important for improving residents' health. The proposed methodology involves organizing an event where participants engage in light physical activities, such as walking and stretching. Before and after the event, surveys will assess participants' awareness of diabetes and attitudes toward physical activity. Additional medical data collection will depend on the available support, and the results will be used to evaluate the effectiveness of community-driven initiatives in promoting healthy habits. This project aims to create a sustainable community that will continue supporting diabetes prevention even after the research is completed, with potential for expansion to other regions.

Keywords: Diabetes, Community Health, Physical Activity

Migraines

Alexis Lark and James Menz

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“It’s estimated that up to 148 million people in the world suffer from chronic migraines.” Migraines have had an unfortunate impact on a vast amount of people in the world including myself, as well as my family members. Since I will be pursuing a career that can provide aid to victims of migraines, through various tailored treatments, I felt it appropriate to begin research towards this goal. “Migraines” is a research project focused on exploring the “how”, “what”, and “why” of migraines. Topics in this research include pathophysiology, the current treatment, and even possible non-pharmaceutical approaches that can be implemented by a physical therapist to help those suffering from migraines. Research indicates that physical therapists who can identify musculoskeletal dysfunctions, vestibular symptoms and postural control impairment can aid in better quality of life for individuals living with migraines. Interestingly enough, Botox, typically used for cosmetic means, can also be used to treat migraines. This project aims to examine the ways in which physical therapists can help those affected by migraines.

Keywords: Migraines, Migraine Treatment, Physical Therapy

Reducing Language Barriers with Basic Spanish Terminology Educational Module

Jennifer Medina and Tonya Eddy

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Language barriers can lead to medical errors, reduced satisfaction, lack of communication, and reduced adherence. Ineffective communication can lead to frustration from both the patient and the healthcare worker. Using a medical translator device can reduce medical errors, but it does not build that human connection between the patient and the healthcare staff. This project has the goal of providing basic Spanish terminology to healthcare staff to improve communication. An educational module with Spanish medical terminology was provided to the healthcare staff. This project provided Spanish terminology to healthcare professionals, which they will be able to apply to patient care. It is hoped that providing this module to nursing staff will improve treatment adherence and reduce medical errors in Spanish-speaking individuals.

Keywords: Spanish Interpreters, Healthcare

504 Plans: Level Up on Maslow's Hierarchy of Needs

Morgan Middleton and Adrienne Fuller-St.John

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Maslow's Hierarchy of Needs includes 5 different tiers of human needs. The first are physiological needs such as air, water, food, shelter, sleep, clothing and reproduction. The second is safety needs, such personal security, employment, resources, and health. The third is love and belonging, consisting of friendship, family and a sense of connection. The fourth consists of esteem, respect, strength, and freedom. Finally the last tier is self actualization, where one desires to become the most that one can be. Each tier depends upon the one before it is accomplished satisfactorily. For example, when an individual is not able to have even their physiological needs met it is difficult for them to then feel safe, not allowing them to progress beyond the first tier. In the education setting, there are 504 plans that allow for accommodation depending on an individual's diagnosis. These plans provide students the ability to have their needs met in order to enable them to succeed and reach their full potential.

Keywords: Maslow, 504 Plans, School Counselor

Post-Concussion Syndrome Educational Module

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Post-concussion syndrome (PCS) is a condition that affects individuals following a traumatic brain injury (TBI), often leading to longer than normal cognitive, physical and emotional symptoms. Usually a mild traumatic brain injury (mTBI), also known as a concussion, is diagnosed and resolved within 2-4 weeks, however delayed recovery can take multiple months or years. These mTBIs occur primarily in teens and middle aged adults and impact their daily lives and quality of living. Early interventions and diagnosis are vital for managing PCS and improving function and quality of life. This research gathers information and compiles it into an educational module, using multiple forms of reliable data resources, and informing others on the definition and complications related to mTBIs. It is hoped that this educational module informs and educates individuals with a mTBI and healthcare professionals, on the importance of early diagnosis, symptoms and treatments for PCS.

Keywords: Concussion, Injury, Nursing,

4K.E.E.P.S. Suicide Prevention Program: Addressing Teen Suicide in Rural Communities

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Teen suicide is a growing public health crisis, especially in rural communities where mental health resources are scarce. Through my work with the 4K.E.E.P.S. suicide prevention program, I gained firsthand experience in identifying at-risk students, conducting screenings, and implementing early interventions in school settings. This program plays a vital role in bridging the gap for students who may otherwise lack access to professional support, offering crisis response, coping strategies, and referral services. Drawing from Durkheim's sociological framework on suicide and social integration, I explored how isolation, academic pressures, and familial struggles increase vulnerability among adolescents. Engaging in this work strengthened my ability to conduct risk assessments, establish trust with high-risk students, and collaborate with school staff and families to create safety plans. These experiences have shaped my clinical approach, reinforcing the necessity of community-based interventions and early prevention efforts. My presentation will highlight the impact of 4K.E.E.P.S., the challenges of addressing suicide in underserved areas, and how this program has enhanced my skills as a counselor. By combining research, clinical application, and real-world challenges, I aim to contribute to the ongoing conversation on improving suicide prevention efforts in rural schools.

Keywords: Suicide, Rural Communities, Teen Mindset

Why We Must Help Refugees

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Every year, millions of people around the world are forced to leave their homes because of war, violence, or danger that is going on in their country. These people are also known as refugees, they have to leave their home and move to another country where they often face major challenges, such as finding a safe home, learning a new language, and adjusting to a different culture, which is never easy. Helping refugees is very important because it gives them a chance to start over and rebuild their life, go to school, and contribute to society. Many refugees become doctors, teachers, and leaders who give back to society. According to the United Nations High Commissioner for Refugees (UNHCR), there were over 110 million homeless people around the world in 2023. Refugees need our support because as a person who was a Refugee I know how it feels and the struggles. Without support, many struggle to find safe homes and end up in crowded camps, often face discrimination because they are not from that country, and struggle to find jobs because of no legal documents. By showing them our kindness and resources, we can make a big difference in their lives and they can feel welcome too. Helping refugees is not just the right thing to do, it makes our communities stronger and the world a better place for everyone.

Keywords: Refugee Support

State of Flow: The Key to the Ultimate Athlete

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Unlocking the State of Flow is crucial for improving your athletic performance. The State of Flow, often called ‘The Zone’, is a psychological state where someone becomes fully immersed in their activity. In this state, individuals experience deep focus, a sense of control, and effortless execution. Athletes tend to describe it as a state where time seems to slow down, actions become automatic, and self-doubt fades away. Achieving this state is not a matter of luck. It can be developed through training. There are some key factors that facilitate entering ‘The Zone’, such as finding the right balance between skills and challenge, setting clear and attainable goals, removing both internal and external distractions, and engaging in activities you like. By continuously applying these factors, athletes can enhance their capacity to enter the State of Flow, leading to improved performance, greater consistency, and the ability to perform at their best when it matters most.

Keywords: Athletic Performance, State of Flow

Nurse-led Prevention of Alcohol Abuse: Educating Adolescents for Healthier Futures

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This project is a nurse-led education module to warn adolescents about the effects of alcohol and its damage to health. The programme includes the physiological impact of alcohol on areas such as the brain, liver, and heart. In addition, the educational module will address short-term risks, such as impaired judgment, and long-term risks, such as addiction and chronic diseases. Adolescents will be equipped with the necessary tools through workshops and interactive games to resist the pressure of their environment. The educational module also highlights the importance of family and friends as support systems, along with open and sincere communication, to make progress. The project will assess the effectiveness of these strategies to make young people aware of the risks of alcohol and encourage them to lead healthier lives.

Keywords: Alcohol Education, Adolescents

Balancing the Burden

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Counselor wellbeing is essential to the ethical integrity and overall effectiveness of counseling as a practice. Client's welfare is the focal point of counseling, in fact, it is the first and arguably most important ethical code. The American Counseling Association's ethics code (A.1.a) refers to the client's welfare as the counselor's "Primary Responsibility". If the counselor develops maladaptive coping techniques, this can have a negative impact on the client's welfare. Maladaptive coping techniques have been related to counselor burnout and compassion fatigue. By highlighting the factors that contribute to compassion fatigue and burnout, this project will aid in assisting future counselors in identifying and combating such factors. Drawing upon the ACA Code of Ethics, relevant research, and insights gained through practicum and internship experiences, this project will demonstrate the critical role of healthy coping strategies, effective communication, and self-advocacy in sustaining counselor well-being.

Keywords: Play Therapy, Arrested Development, Addiction

Game Day Operations Internship

**Andrés Rueda de Leon, Jeremiah McNair, Blayne Kolb, Joan Marques, Shane Duckworth,
Dale Bratz and Kim Horsten**

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Game Day Operations plays a vital role in ensuring the smooth execution of sporting events, requiring careful planning, teamwork, and adaptability. This presentation provides an inside look at the responsibilities involved, from pre-event preparations like setting up equipment and coordinating logistics to real-time event management, including team reception, concessions, ticketing, and social media coverage. Through our experiences as interns and graduate assistants, we will share insights into the challenges we faced, the problem-solving skills we developed, and the rewarding aspects of working in this fast-paced environment. Additionally, we will reflect on how this hands-on experience has shaped our understanding of sports event management and contributed to our professional growth.

Keywords: Internships, Athletics

Restoration Therapy: A Powerful Framework that Grabs Truth that Sits as Deep as The Pain

Rachel Russell and Terry Hargraves

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Dr. Terry Hargrave's Restoration Therapy is an innovative therapeutic framework grounded in attachment theory, mindfulness, and emotional regulation. The model outlines three core steps: identifying destructive patterns, referred to as the "pain cycle"; transitioning to a healthier, more adaptive "peace cycle"; and incorporating emotional regulation techniques. By using this approach, couples can uncover primary emotions rooted in early relational experiences, enabling a deeper understanding of their feelings. Guided by skilled therapists, clients discover their authentic truths that sit as deep as their pain, empowering them to adopt new practices that support long-term emotional growth and transformation.

Keywords: Restoration Therapy, Pain Cycle, Peace Cycle

IV Push Medication Safety

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Medication errors are, unfortunately, a frequent occurrence in healthcare settings. Many of these errors are committed by newly graduated nurses. Medication errors could be life or death so it is important to know and understand how to administer the medications correctly. Intravenous (IV) push medications have the potential to be some of the more dangerous frequently administered medications. Nursing schools are limited in time so there may be some graduate nurses that do not have enough information or experience (even with clinicals) on some IV medications when graduating to prevent medication errors. Not all nursing schools provide the same information and not all nurses follow the correct protocol. These inconsistencies could create issues with medication administration that lead to an increase in medication errors. This project is to design a protocol to help assure new graduates and even current nurses are more consistent in administering IV medications. It is hoped that this project will help reduce the amount of IV push medication errors.

Keywords: Intravenous Medication Safety

Boundaries Matter: Cultivating Healthy Relationships Through Therapy

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Interpersonal boundaries can be found in all aspects of life. From familial relationships to work-life balance, boundaries are the foundation for some of the biggest influential relationships. When we lack in defining clear and precise bounds, our mental health is typically the first to be impacted. Through the use of Cognitive Behavior Therapy(CBT) with an emphasis on boundary work, clinicians and clients can see, first hand, the impact that healthy boundaries make. Through this implementation, clientele will be able to utilize beneficial frameworks provided through therapy to cultivate healthy boundaries in relationships. Ultimately, being able to observe the positive difference in the state of clientele's mental health and overall wellbeing.

Keywords: Cognitive Behavioral Therapy, Boundaries, Healthy Relationships

Sports as Play Therapy: Enhancing Development in Autistic Children

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Abstract Play therapy is used by a lot of counselors to help children develop social, emotional, and cognitive skills, especially those with autism spectrum disorder (ASD). This project explores how sports can also be used as play therapy to support autistic children. Sports provide a structured but fun environment where the children and young adults can improve their motor skills, communication, and social interactions with others while also helping with sensory regulation. By using sports as a therapeutic tool, children with ASD can engage in physical activities that encourage movement, teamwork, and self-expression. These two approaches together show the benefits of play therapy with sports structure to create a supportive and engaging experience. The project looks at different sports and games that can be adapted to meet the needs of autistic children, focusing on how they impact sensory processing, social skills, and overall well-being. Also this presentation will highlights strategies for parents, coaches, and therapists to use sports in play therapy settings effectively. By connecting physical activity with therapy, this project aims to show how sports can be a valuable tool in helping autistic children develop their essential life skills in an enjoyable and interactive way.

Keywords: Play Therapy, Autism Spectrum Disorder

ADHD Intervention Educational Pamphlet

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This capstone project was targeted at children who have been diagnosed with Attention Deficit Hyperactivity Disorder (ADHD). Many children and parents around the world are navigating through how to manage the symptoms and effects that ADHD has on quality of life. With symptoms of hyperactivity and inattention being the main aspects of the diagnosis, it can be difficult for children to stay focused on tasks and daily objectives going on around them whether in school or daily life. This project examines a beneficial non pharmacological intervention that can help improve physical and mental symptoms of ADHD. It evaluates the role of exercise in reducing hyperactivity and improving concentration and sleep patterns and comparing it to children who do not include exercise and instead use the more traditional types of pharmacological treatments. The goal of this project is to create an educational pamphlet to help teach both children and their parents about how adding physical activity into the treatment interventions for children with ADHD can enhance their quality of life and manage their symptoms.

Keywords: Attention Deficit Hyperactivity Disorder, Exercise

Importance of Early Prenatal Care

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Early prenatal care is designed to help identify any pre-existing issues the mother may have or could develop during pregnancy. Women often do not seek early prenatal care unless they are already under the care of a primary health care provider. Some women also live in underserved communities that have little to no access to health care. An additional common barrier is a lack of insurance or insurance that does not cover prenatal care. An educational module was developed to educate mothers in those underserved areas about the importance of seeking early prenatal care. It is hoped that completing this educational module will empower pregnant women to not only help themselves, but also their unborn baby. People of childbearing age must be properly educated and given resources on early prenatal care.

Keywords: Emotional Health, Lifestyle Modifications, Holistic Strategies

Coached by Culture: The Hidden Influence Behind the Athlete's Mindset

Nina Winter and Claire Schmidt

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Although athletes around the world often train according to similar principles, a significant factor in their performance is often overlooked: their mindset — especially how their culture and upbringing influence it. As a Psychology and Exercise Science major here at Missouri Valley College, with an international background and a passion for travel, I have noticed big differences in mentality between cultures. In my senior year in high school I wrote a Pre-scientific Thesis on mental health in competitive sport; now I want to dig deeper and research how much culture influences athletes' mental well-being and their success. By comparing, for example, the discipline-focused mindset seen in countries like Russia with the emotionally more open approach often observed in countries like Brazil, I hope to identify key cultural patterns in how athletes cope with pressure, failure, and motivation. With this knowledge, I hope to become a mental health coach who helps make sports psychology more culturally sensitive.

Keywords: Sports Psychology, Cultural Influence, Athlete Mindset

School of Science and Agriculture

Liraglutide and Semaglutide: Revolutionizing Glycemic Control, Weight Management, and Cardiovascular Health

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Liraglutide and semaglutide, long-acting GLP-1 receptor agonists (GLP-1RAs), have transformed the management of type 2 diabetes (T2D) and obesity. GLP-1, an incretin hormone, plays a crucial role in glycemic control and body weight regulation, leading to the development of these therapeutics. Both liraglutide and semaglutide were designed using rational chemistry to enhance albumin binding, extending their half-life while maintaining GLP-1R potency. These medications target GLP-1 receptors in the pancreas and brain, improving glycemic control and reducing body weight. Additionally, both drugs show significant cardiovascular benefits in T2D patients, with ongoing studies exploring their effects on non-alcoholic fatty liver disease (NASH) and the development of an oral formulation. Liraglutide is approved for obesity treatment, and semaglutide is under investigation for similar indications. In summary, liraglutide and semaglutide have made significant contributions to T2D management and hold promise for broader therapeutic applications.

Keywords: Biochemistry, Obesity, Diabetes

Biochemical Mechanisms and Pathophysiology of Enterolithiasis on Horses: Mineral Composition, Gastrointestinal Processes, pH, and Dietary Influence

Makayla Casjens and A.C.A. Jayasundera

School of Science and Agriculture

Enterolithiasis is a major cause of colic in horses, resulting from mineral concretions in the gastrointestinal tract. These stones are primarily composed of magnesium ammonium phosphate and calcium carbonate and form through biomineralization, where minerals accumulate and harden over time. Intestinal alkalization, characterized by an elevated gut pH, facilitates mineral precipitation and creates the ideal environment in the gut for stone growth. Recent research has identified genetic predispositions to enteroliths and microbiome influences on gut pH regulation. Advanced imaging techniques, such as computed tomography, have improved early detection. Dietary studies suggest reducing alfalfa intake and incorporating acidifying agents may lower the risk of enterolith formation. Diet remains a key factor, as alfalfa-rich diets, high in magnesium and phosphorus, are strongly linked to stone development. Trouble with gastrointestinal motility and slow intestinal movements further contribute to mineral growth. Metabolic imbalances, combined with dietary and intestinal conditions, promote stone nucleation and growth. Understanding the interactions between pH balance, mineral metabolism, and diet is essential for prevention. Modern advancements in nutrition, diagnostics, and microbiome research provide new strategies to reduce enterolithiasis risk in horses, improving overall equine health and management.

Keywords: Enterolithiasis, Calcium Carbonate, Mineral Metabolism, Biomineralization, Colic in Horses

Synthesis and Evaluation of Plant-Derived Growth Promoters as Antibiotic Alternatives in Livestock Feed

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Natural growth promoters have emerged as promising alternatives to antibiotics in livestock feed, addressing the growing concern over antibiotic resistance. The synthesis of plant-derived and bioactive compounds that can enhance growth and improve health in livestock without contributing to resistance is the subject of much research. These natural growth promoters, including essential oils and peptides, exhibit antimicrobial, anti-inflammatory, and antioxidant properties that support animal health and performance. Studies investigate the chemical synthesis of these compounds, particularly those derived from herbs, spices, and other plant sources, and their mechanisms of action in promoting growth. Key findings highlight the ability of these compounds to modulate gut microbiota, enhance nutrient absorption, and improve immune function in animals. Furthermore, research shows the stability, bioavailability, and safety of these natural growth promoters when incorporated into animal feed. While natural growth promoters show significant potential, challenges such as dosage optimization, regulatory approval, and cost-effectiveness remain. This research emphasizes the need for continued innovation in the synthesis of plant-based additives and their integration into livestock production systems. By developing sustainable alternatives to antibiotics, this study aims to reduce the reliance on antimicrobial drugs and promote healthier, more sustainable practices in animal agriculture.

Keywords: Natural Growth Promoters, Antibiotic Alternatives, Livestock Feed, Plant-Derived Compounds, Gut Microbiota Modulation

Cancer Cell Metabolism and the Warburg Effect

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Cancer Cell Metabolism has emerged significant attention due to its role in tumor growth and survival. Unlike normal cells, which rely on oxidative phosphorylation (OXPHOS) for energy production, cancer cells undergo metabolic reprogramming to sustain rapid proliferation. One of the most well-known alterations in cancer cells is the Warburg Effect, which is a phenomenon where cancer cells favor glycolysis for energy production even in the presence of oxygen. This shift from oxidative metabolism to aerobic glycolysis allows the cancer cells to rapidly generate ATP needed for uncontrolled growth and survival. The Warburg Effect was first observed by Otto Warburg in the 1920s, who noted that cancer cells exhibit high rates of glucose uptake and lactate production despite the oxygen availability. This adaptation provides several advantages to cancer cells such as: Increased Biosynthetic Precursor Availability: generated through aerobic glycolysis serve as precursors for nucleotides, amino acids, and lipids, which are essential for cell proliferation. To better understand cancer cell metabolism, researchers have employed various experimental techniques such as: Metabolic Flux Analysis: This technique tracks pathways using stable isotope-labeled substrates, such as carbon-13 glucose, to determine metabolic flux

Keywords: Cancer, Metabolism, Understand

Microhabitat Selection of Snakes in Marshall Junction Conservation Area, Saline County

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This study examines the seasonal variation in microhabitat selection and snake abundance in the Marshall Junction Conservation Area, comparing a south-facing and a west-facing slope. Snakes play a crucial role in ecosystem balance, making habitat preference studies essential for conservation. Using visual encounter surveys, we documented snake occurrences and environmental factors such as temperature, canopy cover, and ground cover. Unlike fall findings, spring data reveal increased snake abundance on the west-facing slope, potentially linked to reduced canopy cover and enhanced thermal conditions. Additionally, newly recorded species, including two potential county records, expand our understanding of local biodiversity. By comparing biodiversity shifts between seasons, we gain insight into how microclimatic factors influence snake distribution. These findings underscore the importance of seasonal habitat assessments in conservation planning. Data collection is ongoing, and further analyses will refine our understanding of habitat selection dynamics.

Keywords: Snakes, Reptiles, Biology

Determination of Blood Biochemistry Reference Intervals in Eastern Collard Lizards

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In the last few years the Eastern Collared lizard (*Crotaphytus collaris*) has gained popularity as an exotic pet. Many are drawn to their wide range of color variation which is similar to that of a bearded dragon. Nevertheless, there is little knowledge regarding the baseline biochemical parameters of the Eastern Collared lizard. Additionally, variables such as age, color variation, sex and snout-vent length (SVL) on these analytes remain uncharacterized. This study aims to evaluate the variations or biochemistry and provide diagnostic guidance for veterinarians who treat Eastern Collared lizards.

Keywords: Biochemistry, Lizards, Diagnostic Guidance

Protein Misfolding in Neurodegenerative Disorders

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Protein misfolding and aggregation play key roles in neurodegenerative diseases such as Alzheimer's, Parkinson's, and Huntington's, as well as prion diseases like Creutzfeldt-Jakob. Protein aggregation contributes to neuronal dysfunction, while prion diseases involve infectious, self-propagating misfolded proteins. Chaperone proteins play a crucial role in maintaining proteostasis by facilitating correct structural folding and preventing aggregation. In prion diseases, the accumulation of misfolded prion aggregates disrupts cellular homeostasis, leading to neuronal death. Protein aggregation is driven by structural changes that promote the formation of beta-sheet-rich structures, which contribute to toxicity. This research aims to explain the molecular interactions between chaperones and prions, with the goal of identifying potential therapeutic targets. Understanding the structural basis of prion accumulation offers critical insight into the molecular mechanisms driving the progress of prion diseases. Investigating the mechanisms by which chaperone proteins mitigate prion formation has led to the development of therapeutic strategies aimed at stabilizing protein structures and reducing aggregate formation. Advancing this area of study is essential for the development of pharmacological interventions that can halt or mitigate prion disease progression.

Keywords: Prions, Protein Misfolding, Neurodegenerative, Neuroscience

Concerns of Polymers in Microplastics on Human Health

Keyonie Gaddy and A.C.A. Jayasundera

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Tiny 5 millimeter pieces of microplastics enter our bodies everyday. How much we consume on a daily basis is yet to be known. While highly durable due to the polymer properties which create a prolonged shelf life, they are extremely harmful on the human body. Not only are microplastics bad on humans they are bad for the health of all ecosystems. Waste that gets dumped into different ecosystems like our oceans end up in animals most of which we consume like seafood. Microplastics can enter the human body through ingestion, inhalation, and skin contact, leading to various health risks. Once inside the body, polymers from microplastics may cause inflammation, disrupt cellular functions, and could possibly contribute to the development of chronic conditions, such as respiratory issues, endocrine disruption, and even cancer. There is a lack of information on the additives that are used in the plastic industry. With further research on the topic we could continue to learn all of the ways microplastics are harmful to the environment.

Keywords: Microplastics, Human Health, Polymers

Community Composition and Distribution of Freshwater Mussels in the Salt Fork Creek, Saline County, Missouri

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There are 297 extant species of freshwater mussels in the family Unionidae (Unionoidea), 70 of which reside in Missouri. Some of these mussels live as long as 60-70 years or even centuries, with a record longevity of 280 years. However, populations are in decline because of habitat loss, pollution, and invasive species, with more freshwater mussels becoming threatened or extinct each year. The Salt Fork Creek is home to a variety of freshwater mussels, but has been degraded by factors such as the reduction of riparian zones to maximize agricultural land use. This causes siltation and sedimentation of the benthos, which interferes with filter feeding, respiration, and reproduction. Also, nitrogen and phosphorus runoff from surrounding agricultural lands alters water chemistry of the stream. The purpose of this research was to examine community composition and distribution of freshwater mussels in the Salt Fork Creek.

Keywords: Freshwater Mussels, Conservation, Ecology

Spatial and Temporal Patterns in Water Quality, and Community Composition and Diversity of Fishes in the Salt Fork Creek, Saline County, Missouri

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A range of abiotic and biotic factors influence the distribution and abundance of fishes. Fish community composition can be used to assess the ecological health of a waterbody. Fishes, standard water quality parameters, and nitrogen content were sampled at three study sites along the Salt Fork Creek in the spring of 2025. These data were compared to data collected from the same sites in previous years. The purpose of this research was to examine the influence of agriculture on the integrity of the Salt Fork Creek.

Keywords: Ecology, Water, Conservation

How Narratives in Medicine and Literature Justify Medical Compromises for the Pursuit of Survival

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This research project examines how narratives in both medicine and literature justify ethical compromises in the pursuit of survival. By analyzing cases where ethical boundaries were crossed for perceived benefits, the study investigates the tension between scientific progress and moral responsibility. Key case studies include CAR-T cell therapy trials, which involve significant risks to patients, and *Maus* by Art Spiegelman, where ethical dilemmas arise in life-or-death situations. The research integrates perspectives from medical ethics literature, bioethics case studies, and, if possible, interviews with medical professionals. Drawing from utilitarian and deontological ethical frameworks, the project explores how historical and literary narratives shape our understanding of medical decision-making. As medical advancements continue to challenge traditional ethical boundaries, this study seeks to highlight the importance of balancing innovation with ethical integrity in patient care.

Keywords: Ethics, Medicine, Narrative

An Electrochemiluminescence Biosensor Used for Detection of Alzheimer's Tau Protein

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Alzheimer's is a neurodegenerative disorder that is characterized by an accumulation of Tau protein. Due to the Tau it is essential that Alzheimer's is detected and diagnosed early. This paper has presented a highly sensitive and selective electrochemiluminescence biosensor for the detection of the protein. It utilizes gold nanostar (AuNS)- decorated carbon nitride nanosheets as the signal-amplifying platform. The unique electrochemical properties of AuNS enhance the electron transfer and catalytic activity. The g-C₃N₄ NSs provide a stable and efficient ECL emitter. The biosensor used demonstrates a wide linear detection range with ultra low detection limits. In conclusion, this paper offered a good reproducibility and specificity against potential interference from biomolecules. Using the biosensor and the nanosheets there is great promise for early Alzheimer's diagnostics and clinical application. In recommendation, the biosensor should be used more in the research of Alzheimer's and should be used in the standard diagnostic process for Alzheimer's.

Keywords: Biochemistry, Tau Protein, Electrochemiluminescence Biosensor

Temperature-Driven Activity: Investigating the Link Between Environmental Temperature and Snake Activity in Saline County, Missouri

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Environmental temperature heavily influences metabolic activity in snakes. This research evaluates the link between environmental temperature and snake activity rates across Marshall Junction Conservation Area, Saline County, MO. Snakes were captured through chance encounters or targeted habitat searches. Both air and soil temperature were collected at each capture site, snake activity was measured by capture frequency. Research analyzes temperature-related variables to discover if increased temperature results in increased snake activity, which helps understand their ecological behavior. The results could help wildlife managers understand the local seasonal activity patterns as well as conservation strategies.

Keywords: Temperature, Snake Activity, Capture Frequency