

18th Annual Arts,
Research & Scholarship
SYMPOSIUM
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ABSTRACTS
April 30, 2024



CABRINI
UNIVERSITY





18th Annual Arts, Research, and Scholarship Symposium
April 30, 2024

Abstract Book

Poster Presentations

The School of Arts and Sciences

Psychology Department

Chasiluisa, Kevin

Faculty Sponsor: Dr.Ruta Clair

“Controversies surrounding the use of Cannabis in medical treatment”

The purpose of this project is to dive into the research of scientist Elise Donovan and how she advocates for the use of the beta-blocker propranolol to alleviate symptoms of post-traumatic stress disorder in returning soldiers. She argues that propranolol, by dampening memories rather than causing memory loss, can help soldiers reintegrate into society and reduce associated behaviors like suicide, domestic abuse, and substance abuse. We use this project to provide information on what PTSD is, what PTSD looks like in combat soldiers, and treatments for PTSD. This project also provides a view on why memory-dampening drugs might or might not be a good treatment for PTSD.

Cooper, Abeni

Faculty Sponsor: Dr.Ruta Clair

“Should Therapists Be Eclectic?”

The topic of if psychotherapists should use an eclectic approach is still up for discussion. The purpose of this presentation is to discuss therapeutic eclectic’s validity and differing views on

the potential implications this method poses on clinical practice. Instead of rigidly observing a particular theory of treatment, therapeutic eclecticism refers to the blending of methods and ideas from several theoretical perspectives. In an effort to have a comprehensive view of the subject, two professionals within the field gave their contrasting opinions on whether therapists should be eclectic. Counseling psychologist Jean A. Carter maintains in order for psychotherapy to be successful and grow over time, methods and theories must adopt an eclectic approach that incorporates many perspectives from psychology theory and practice. Don McDonald and Marcia Webb, professors of psychotherapy, argue that an eclectic approach inhibits the overall efficacy of treatment by producing an unorganized theoretical foundation for psychological concepts and practices. Although, both sides acknowledge that eclectic therapy is an effective methodology, concerns have been raised about the propensity to overlook theories that hold value.

Cornejo, Fernando and Omar Renteria

Faculty Sponsor: Dr.Ruta Clair

“The Importance of Fathers in Child Development: A Comparative Analysis”

This project discusses the influence of fathers on child development. Is the presence of a father essential for the healthy development of children? This is currently a controversial topic in psychology. Brotherson and White assert the involved fathers lead to better outcomes for children, while Waldfogel, Criagie, and Brooks-Gun argue that family structure doesn't solely determine children's well being. This project highlights the importance of considering diverse viewpoints to understand the role of fathers in shaping children's lives.

Delaney, Kaitlyn

Faculty Sponsor: Dr.Ruta Clair

“Are Violent Video Games Harmful to Children and Adolescents?”

My topic for the 2024 Cabrini arts, research and scholarship symposium debates if violent video games are harmful to teens and adolescents. The pro side of this debate, arguing that violent video games are harmful, claims that violent video games have negative neurological and psychological effects on children and adolescents. Some of these effects include aggressive thoughts and behaviors, reduced activity in frontal lobes, poor impulse control, and decreased focus. In addition the time children spend playing video games has increased in the past decade which takes time away from academic and physical activities such as reading, writing and sports. The con side of this debate, arguing that violent video games are not harmful, pulls evidence that shows there is not sufficient proof of video games being harmful to adolescents and children. The research arguing video games are harmful have methodological flaws. The studies are not able to prove causation between real world aggression and video games. Statistics also show us that violent video games are increasing while youth violent crimes are decreasing. In addition, there is some evidence that video games can be helpful for problem solving skills, hand eye coordination, fine motor skills, cooperation, and empathy. All in all I think that sufficient evidence has not been shown to prove violent video games are harmful. When video games are used in moderation, age appropriate, monitored by parents and used in conjunction with other activities there are very little, if any, harmful effects.

Exius, Nily

Faculty Sponsor: Dr.Ruta Clair

“Abortion and Mental Health”

Abortion and mental health is a difficult topic that has two sides based on beliefs. Does having an elective abortion cause psychological problems? How does research support it? Task Force on Mental Health and Abortion (TFMHA) was charged with reviewing all empirical studies published in peer-reviewed journals post-1989. The task force concluded that the risk of mental health problems of women who have elective abortions is no greater than those who have an unplanned pregnancy. The no side to the argument critiqued how the TFMHA did the review and argued that there were problems with methodology. Specifically, this side of the controversy argued that the work was politically motivated in the selection of studies and had a lot of biases. I think that having an abortion can lead to mental health problems, but as the article said a lot of the research has not included all the factors to say that abortion can lead to higher mental health problems than women who have unplanned pregnancies.

Gary, Jayla

Faculty Sponsor: Dr.Ruta Clair

“Should Neurolaw be used to inform law practices?”

Neurolaw incorporates law with neurological evidence to draw inferences and possible conclusions about behaviors, mental states, and future behaviors. Neurolaw focuses on using neurological evidence such as functional magnetic resonance imaging (fMRI scan), positron emission tomography (PET scan), and magnetic resonance imaging (MRI scan). Neurolaw evidence has been used in some cases, usually to understand a client’s mental state and see invisible abnormalities in the brain. The reasons both for and against using neurolaw in the courtroom are discussed. One possible effect of Neurolaw being used, is that it’s use may change our judicial and criminal systems from focus on punishment to being focused on rehabilitation and can possibly explain criminal behavior. However, neurolaw is still a new concept, neuroscientists still don’t know the link between the brain and behavior, and neuro evidence can raise unresolved constitutional issues. Neurolaw is important because it can impact how our judicial and criminal systems function.

Hack, Wayne

Faculty Sponsor: Dr.Ruta Clair

“Pornography: Is there potential Harm?”

The purpose of this project was to examine if pornography causes any direct or indirect harm to one and their mental health, and it assesses if the cons outweigh the potential pros, such as freedom of sexual expression. This is important because pornography has become more widespread than ever in the digital age, potentially exposing people to explicit material very young. Secondary research was conducted, first by looking at two differing sides of information regarding pornography and its psychological effects. Then, the study explores different ways that pornography may have an impact on mental health. This includes the idea of moral incongruence and nonconsensual pornography. Moral incongruence is the concept that discusses cognitive dissonance in the context

of pornography to explain feelings of guilt and higher perceived addiction levels. Nonconsensual pornography involves the posting of someone else's nudes or sexual content without permission, thus potentially ruining reputations of, causing depression, and forming suicidal ideations in the victims involved.

Harper, River, Edward Mincarelli, Ejinaiyah Massaquoi, and Colt Narciso

Faculty Sponsor: Dr.Ruta Clair

"The correlation between symptom duration and sex"

About 3.8 million cases of concussions are reported annually. A concussion is a traumatic brain injury caused by a sudden blow to the head or violent shaking of the head and body. Symptoms caused by a concussion can vary depending on the person and severity of the blow. Concussions have always been around, but recently, due to scientific discovery, we are beginning to understand the complexity of them. Is there an inequality in symptom duration between male and female individuals? Two surveys were given out to boys and girls ages 7-21. T-tests analysis was performed to analyze correlations between sex and symptom duration. With the abundance of concussion cases, research into symptom recovery is of the utmost importance.

Johnston, Clare and Ana Torres

Faculty Sponsor: Dr.Ruta Clair

"Emotional Intelligence"

What is more important having emotional intelligence or having intellectual intelligence? The concept of emotional Intelligence has become widely spread and misinterpretation of meaning has caused confusion. There is controversy as to whether this term is valid or not. Currently, there is a robust amount of material published on both sides of the issue. Can average people possessed the skills to be emotional intelligent to thrive in life or do only certain people possessed this trait? Can it be learned or is it something that comes naturally? What does it take to be emotionally intelligent? We provide the audience with an explanation of the definition of emotional intelligence and why it has become an important matter in the workplace. We also explore the skills and qualities employers seek in employees. We will discuss both controversial view points and why this topic matters. Finally, we review the function of the brains and how emotional intelligence is related.

Ley, Makalia

Faculty Sponsor: Dr.Ruta Clair

"Can sex be addictive?"

This project examines both the for and opposing arguments for incorporating sex addiction/hypersexuality into the DSM. Hypersexuality was introduced to the DSM-5 that consisted of set criteria involving reoccurring, and evolving intense sexual fantasies, urges, or behaviors for at least a duration of 6 months. Research developed in the 1980's suggested 3% to 5% of the adult population struggled with some type of sexual behavior disorder. However, the individuals used at the time were males who were entered into a residential treatment for years of abusing porn, different affairs, and prostitutes. Since then clinicians have identified an increase in sexual

behavior to the speed at which we are able to access porn and other sexual content, especially with the growth and expansion of technology over the past two decades alone. As technology started to boom in the late 90's, ironically, "sex addictions" was taken out of the DSM. The results proposed that due to lack of research in women and hypersexuality, along with little research surrounding withdrawal and tolerance, it would be most ideal for hypersexuality to be placed in the DSM-5 under "potential diagnosis requiring further research, since it lacks the criteria to be placed in "addictive disorders". This topic is important because of the reported rise in adults struggling with hypersexual behaviors that are effecting their everyday life.

Lloyd, Alayna

Faculty Sponsor: Dr.Ruta Clair

"Psychiatry or Pseudoscience?"

The branch of psychiatry has remained a controversial topic in terms of its role in the mental health and medical field. This presentation specifically addresses the opposing arguments about not necessarily if psychiatrists are needed but in what ways they are needed. The "yes" argument highlights the significance and influence of psychiatrists on the clinical field of psychology while addressing the need for more malleable and agreeable providers. The "no" side takes a "yes, but" stance as they point out the controversies behind the field and need for future direction. Personally, the psychiatrist job description needs to be redefined in relation to clinical psychologists to provide a more cohesive distribution of mental health care. Psychiatrists, physicians, and clinical psychologists should collaborate to provide practices that treat the whole person and fill the gaps between the three fields.

Lloyd, Alayna, Clare Johnston, and Adonya Francis

Faculty Sponsor: Dr.Ruta Clair

"Relationship between time since concussion injury and varying symptomology"

Concussions are a major public health issue and affect many people in the sports industry as well. Concussions are a form of brain injury that can occur when the head or body sustains a significant jolt. Concussion recovery impacts all aspects of daily life. There are both physical and emotional symptoms that emerge after a concussion. Physical symptoms include dizziness, headaches, nausea, and sensitivity to light or sound. Emotional symptoms often emerge, such as irritability, anxiety, depression and a feeling of being stressed. Both children and adults can feel this way. Data was collected from a pediatric concussion clinic to explore the relationship between time since injury and varying physical, psychological, and emotional symptoms. Statistical tests were run such as ANOVA and correlations to examine the relationship between symptoms and factors such as age (9 to 21 years) and the weeks since injuries (from 1 to 90 weeks). A concussion is an important topic because symptoms include physical condition, emotional, and cognitive domains. Concussions impact quality of life during recovery and sometimes beyond.

Maiorana, Rita

Faculty Sponsor: Dr.Ruta Clair

“Neuro Law in courtrooms”

Neuro Law is a field that is an interdisciplinary study that explores the effects of the discoveries in neuroscience on the legal rules and standards within the court. There are both pros and cons to the use of Neuro law in court. It is what people want to believe in the courtroom about if they should use brain scans, truth telling, lie detector tests. The pro side to the use of neuro law within the courtroom is that brain scans can help determine if a person is guilty or not guilty. Another thing is people really want it to be used in the courtroom just in case there is something internally wrong with the person they are trying to put away. The con side related to neuro law is that the brain scan they are trying to use in the court cannot yet provide the level of information needed to make decisions. Also, people that do not agree with using the brain scan, and lie detector test within the courtroom argue that some people may think it has been adjusted with. My opinion on this is that I think they should use these brain scans within the court because if the person has a mass or something on their brain, the doctors and court can say they did not mean to act out like that and that was not their true self doing the act that led them into jail. I think it should be used when needed by the court.

Maiorana, Rita and Autumn Schilke

Faculty Sponsor: Dr.Ruta Clair

“The effects of there emotions after a concussion.”

Concussion is a type of traumatic brain injury that affects about 5.3 million people each year. Concussion is a blow, bump, and jolt to the head or body that causes the brain to move quickly back and forth. Head injuries are associated with emotional concerns such as depression and anxiety. The method that was used was a survey using two measures related to how participants felt after the concussions. Pediatric patients age 9-19 were asked about their symptoms related the concussions that they experienced. The second survey explored their quality of life and their recovery process. The research question explores “ What are factors related to concussion and the impact on emotions after the injury?”. We are planning to run statistics such as ANOVA, T-Test, and/or correlations to explore how age is related to emotions experienced after a concussion. This is an important issue concerning concussion because, if symptoms are not addressed in the days after injury, it can cause an extended and difficult recovery.

Marshall, Dionne

Faculty Sponsor: Dr.Ruta Clair

“Memory Dampening Drugs”

This project will discuss the controversial topic of using memory-dampening drugs to treat PTSD in combat veterans. There will be an overview on both sides on whether or not people should agree or disagree to allow the usage of memory-dampening drugs for combat soldiers. The “yes” portion of the project will discuss the findings from scientists, at least Donovan, and her perspective on why memory-dampening drugs should be used to help veterans struggling with PTSD. The “No” portion

of the project will discuss the criticisms from Leon Kass,-- Council President on Bioethics-- on why these drugs should not be used. This is an important topic because medical doctors and clinicians debating this will and will continue how people are treated for PTSD in the future.

Melcher, Dejha and Lauren Belardo

Faculty Sponsor: Dr.Ruta Clair

“Solitary Confinement - should we use it?”

In 2023, 122,840 people were placed in solitary confinement in the United States. This number equates to 6% of the total U.S. jail and prison population at said time. This specific population experienced being placed in a cell away from other prisoners, with limited contact with others as a form of punishment and/or safety option. Some believe that the continuity of solitary confinement is crucial to use within prisons as it keeps certain inmates safe from the total population along with instances where they need to be protected from themselves. It is also used as a correctional method to ensure that inmates are working with the expectations of prison rules. On the contrary, others believe that it should be discontinued or closely monitored as it poses many negative mental health outcomes, research proves that it doesn't work, and the cost of using it isn't beneficial. With that being said, I believe that it should either be discontinued entirely or more closely monitored through data collection.

Miller, Madison

Faculty Sponsor: Dr.Ruta Clair

“Should Cannabis Be Used as Treatment for Psychological Disorders?”

There has been a long debate about the potential benefits and risks of using Cannabis. The legalization of recreational use as well as medicalization of Cannabis, particularly for physical conditions, has increased accessibility over the past twenty years. With the discovery of the endocannabinoid system and its connections to multiple physiological processes, cannabis has become attractive as a possible medication for multiple psychological conditions. There have also been concerns, however, that frequent Cannabis use can worsen certain psychological conditions, and also create dependency or a substance use disorder. There is little research about the most effective way to use Cannabis as treatment, however there is much research that discusses the risks and benefits of Cannabis as treatment and overall. More research is still required to come to a full conclusion about the effectiveness of Cannabis as treatment.

Miller, Madison and Dejha Melcher

Faculty Sponsor: Dr. Vinayak Mathur

“Localization of IFITM3 in the Brain”

Alzheimer's is a brain disease that causes a slow decline in memory, thinking, and social withdrawal. Recent research has examined the role of different genes in the pathology of Alzheimer's, specifically in mouse models. For this study, We analyzed data examining the localization of the IFITM3 gene in the brain by comparing 5xFAD, IFITM3/KO, and Wild Type mouse models. The knockout of IFITM3 will answer the question of how this gene plays a role in Alzheimer's

symptoms and neuron activity. The data will be analyzed using statistical tests to compare the different mouse models and determine if there is a difference in the hippocampus and prefrontal cortex. This research is important because it introduces us to possible genetic biomarkers of Alzheimer's that could be important for further research on therapeutic targets.

Rosario, Saige, Mariana Cruz-Sanchez, and Wayne Hack

Faculty Sponsor: Dr. Vinayak Mathur

“Emotional impact of concussions on pediatric patients over the span of weeks”

Concussions are traumatic brain injuries that hinder people every year by affecting both their physiological and psychological recovery. This injury is often sports related and has been associated with persisting cognitive, memory and motor deficits. Various studies have examined blood-based biomarkers and imaging studies like PET scans to analyze the central nervous system of patients who have experienced a concussion. Furthermore, other studies focus on more psychological factors such as emotional cognition in relation to weeks of recovery. In a pediatric study of 280 participants ranging from 10 to 21 years old, participants were analyzed for different traits resulting from a concussion. The two variables studied focus on the differentiating emotional behaviors transformed over the course of many weeks since the time of their injury. It can be inferred that participants will exhibit stronger negative emotions closer to the time of injury, however, as they recover the overwhelming emotions begin to dwindle. Further analysis must be conducted to ensure data reliability. Research on concussions will further ensure better treatment for pediatric development.

Stillis, A'Niyah

Faculty Sponsor: Dr. Ruta Clair

“Black Hair in Public Spaces”

Black hair in public spaces is a controversial topic yet it's also one of the most unspoken topics in public discourse. Many people and institutions such as schools and workplaces would argue that Black hairstyles are not professional. However, more recently there has been extensive discussion that hairstyles rooted in Black culture are in fact professional. I will be discussing both sides, the psychology behind these ideas, and my own opinion on the matter. California passed the CROWN Act in 2019 prohibiting discrimination in work places against race-based hairstyles. On the other hand, school and workplace dress-code and grooming policies ban hairstyles on the grounds of increasing conformity and reducing distraction. My opinion is that Black hair is professional and was only deemed unprofessional due to the years of normalizing “European beauty” as the standard.

Wilkerson, Shanise

Faculty Sponsor: Dr. Ruta Clair

“Hypersexuality: a psychological analysis of sex as an addiction”

Sex is an inherently healthy human behavior and is regulated within the hypothalamus of the brain alongside other natural functions like hunger and thirst. Dopamine, serotonin, and oxytocin are all

the chemical releases the brain experiences when in stages of happiness or pleasure, including but not limited to sex (Baskerville & Douglas, 2010), drinking, and drug use. While sexual behaviors are natural, they can become immoderate and destructive leading to hypersexuality or sex addiction. Such behavior has been excluded from deeper psychoanalysis and is continuously and controversially debated as a disorder (McGraw-Hill) This is due to the lack of supportive data and recognition of sex addiction as a disorder by the Diagnostic and Statistical Manual of Mental Disorder (Estellon & Mouras, 2012). Furthermore, the purpose of this project is to identify the concept of sex and its compulsive traits and side with the position that sexual addiction should be deemed a mental disorder as defined by the World Health Organization, a clinically significant disturbance in an individual's cognition, emotional regulation, or behavior (World Health Organization, 2024). This examination is important in the efforts to support social justice advocacy. More specifically prevention of individual isolation, future substance abuse, and/ or alcohol dependency and to prevent further spread of sexually transmitted diseases.

Williams, Raeven

Faculty Sponsor: Dr.Ruta Clair

"Is pornography harmful?"

The purpose of this project is to investigate the potential harm associated with pornography consumption, addressing the research question: Is pornography harmful? This inquiry holds significant importance due to the widespread availability and consumption of pornography in modern society, coupled with ongoing debates regarding its effects on individuals and society. In conclusion, it's clear that pornography has negative effects, especially on young teens as they grow up. This means it's important to address these problems early on. By recognizing the harm pornography can cause, we can work together to find ways to help young people develop healthier attitudes towards sex and relationships. This involves everyone - parents, teachers, and policymakers - coming together to find solutions that will protect the well-being of young people as they navigate through life.

Science Department

Barbera, Emma

Faculty Sponsor: Dr. Vinayak Mathur

"The Causes, Contributing Factors, and Effects of Down Syndrome"

Down syndrome, a genetic disorder that arises from an individual possessing three copies of chromosome 21, is the most commonly occurring chromosomal abnormality in humans, being found in 1 in 700 live births. Individuals with this disorder have unique facial features, stunted developmental growth, and have a low to moderate intellectual disability. While Down syndrome is a genetic disorder, it occurs completely random, through the process of nondisjunction and the absence of recombination. Research suggests that there are three contributing factors to this

chromosomal abnormality, increased maternal age, folic acid supplement intake levels, and a history of miscarriages. A mother being over the age of 35 and having a history of miscarriages can both be factors in the fetus developing trisomy 21, while increased folic acid levels have been shown to decrease the chances of a fetus developing this disorder. Currently there are numerous surgeries to help limit the impact of the different medical conditions, and endless amounts of interventions to help with delays in various developmental issues. While trisomy 21 is something that cannot for sure be avoided, there are ways to limit the chances of it occurring, and ways to limit the distress if it were to arise.

Beamer Bradley

Faculty Sponsor: Dr. Joseph Smith

“PFAS”

The studies investigate the prevalence, toxicity, and removal of per- and polyfluoroalkyl substances (PFASs) in both consumer cosmetics and water systems. PFASs, commonly found in consumer products like cosmetics, were examined in 231 U.S. and Canadian products using particle-induced gamma-ray emission (PIGE) spectroscopy, LC-MS/MS, and GC-MS. Despite limited ingredient labeling, PFASs were detected in 29 products, with notably high concentrations in foundations, mascaras, and lip products. This underscores the widespread use of PFASs in cosmetics, the inadequacy of ingredient disclosure, and the necessity for stricter regulations to address associated health and environmental risks. Meanwhile, the second study focused on water systems in central and southeastern North Carolina, where PFASs pose significant environmental and health concerns. Long-chain PFASs, previously used extensively, have been replaced with short-chain variants like GenX, which persist in the environment. The study evaluated the efficiency of point-of-use (POU) and point-of-entry (POE) filters in removing PFASs from drinking water. While reverse osmosis filters proved effective, activated carbon-based filters exhibited variable performance, albeit still reducing exposure and highlighting the crucial role of household filtration in mitigating PFAS contamination in drinking water.

Brown, Abigail

Faculty Sponsor: Dr. Vinayak Mathur

“Chronic Pain and its Implications on the Brain”

Chronic pain is a persistent and debilitating condition affecting 20.9% of adults in the United States. It is defined to be pain anywhere in the body, persisting for a minimum of three months, and poses a significant burden on individuals due to its association with impaired quality of life, restrictions on mobility, and increase rates of depression. The development of chronic pain is associated with changes in the central nervous system (CNS), and neuroplastic changes in the brain. There has been extensive research on chronic pain and its implications on the body and bodily functions, while its implication on the brain are still unclear. This thesis aims to provide an understanding of the neurobiological ramifications of chronic pain that encompasses functional and structural alteration in the brain's circuit and systems. Research on chronic pain comorbidities affecting brain function in sickle cell patients shows that chronic pain promotes hypervigilance and increased connectivity between and within cognitive brain networks. Physical therapy methods

have shown improved functional status and lower reported pain in individuals with chronic lower back pain. Studying chronic pain is crucial for advancing treatment modalities, improving quality of life for affected individuals, and addressing the significant socioeconomic burden associated with this widespread and debilitating condition.

Cummings, Kai

Faculty Sponsor: Dr. Vinayak Mathur

“From -raptors to Raptors: An Evolutionary Analysis of Cretaceous Dinosaurs and their Link to Modern Birds of Prey”

Avian evolution, like many forms of animal evolution, is key to giving us a better understanding of previous life using modern examples. For avians specifically, they are the only living link that we have to Dinosauria, meaning that they are the only living link to a large portion of prehistoric creatures. However, though many would have a hard time believing that a Tyrannosaurus rex is more closely related to a chicken than any living reptile, there are many similarities between the two species that become apparent the more they are studied. Here, we use a combination of Dromaeosaurid, Archaeopteryx, and modern avian skeletal and genetic remains and phylogeny to show the resemblance across the evolutionary line. In doing so, we are able to give credence to the claim that they are, in fact, all related.

Cummings, Kai and Ariana Mirenda

Faculty Sponsor: Dr. Vinayak Mathur

“Identifying instances HGT in tail tape measure between bacteria and bacteriophages”

Bacteriophages are viruses that infect bacteria and utilizes the bacterial cell proteins to replicate itself. During this process of infection, viruses sometimes pick up genes from their host or vice versa in a process referred to as Horizontal Gene Transfer (HGT). Horizontal gene transfer is the movement of genetic material between organisms that are not through parent to offspring. Horizontal gene transfer is specifically important for this study as we focused on genetic material transferred this way from bacteriophages to bacteria. For the methods of this experiment we used blast to determine the bacteria's most closely related to the phage to indicated HGT, then used comparative genomics and phylogeny to prove whether there was HGT. To analyze results of HGT the muscle results were analyzed to put the sequences in order. Once the sequences in order, we made a phylogenetic tree to see how closely related the bacteria was to the phage. The phylogenetic tree results showed that the bacteria being analyzed in this research is the most closely related to the phage being researched. The phage being analyzed had the accession number ASN67947.1 and the bacteria being analyzed had the accession number WP075804354.1. The phage was a uncultured Caudovirales phage. In conclusion, the blast results indicating that bacteria WP075804354.1 was the closest in relation to the phage ASN67947.1 were proven to be correct.

Fuller, Brian

Faculty Sponsor: Dr. Vinayak Mathur

“Antibiotic Resistance: Leveraging Extracellular Vesicles as Adjuvants and Monoclonal Antibodies to Combat Biofilm-Associated Infections in Clinical and Agricultural Settings”

Livestock farming is a prime example of antibiotic-resistant bacteria aggregation, and a significant contributor to antibiotic consumption globally, leading to concerns regarding antibiotic resistance (ABR) gene dissemination. Animal houses can be considered analogous to hospital settings where hosts are abundant and there is potential for large populations of antibiotic resistant bacteria to aggregate often resulting in biofilms. Biofilm formation, exemplified by some tetracycline-resistant bacteria, presents challenges to antibiotic treatment and its efficacy. However, extracellular vesicles (EVs) derived from pathogen biofilms such as *Staphylococcus aureus* (*S. aureus*) offer promising avenues for vaccine development. A study investigating EV biogenesis mechanisms, particularly the role of phenol-soluble modulins (PSMs), demonstrated the immunogenicity of genetically engineered non-toxic EVs. Leveraging EVs as vaccine adjuvants presents a novel strategy against antibiotic-resistant infections, though further research into their efficacy in larger animal models, other bacterial species or clinical settings is logical as a future direction for such a study. Monoclonal antibodies (mAbs) represent a potential solution for combating and eradicating biofilm-associated infections, notably nosocomial infections. Nosocomial infections commonly occur on prosthetics such as implants and catheters usually via biofilm formation. Through targeting of biofilm components, such as PNAG and surface proteins, mAbs offer diagnostic and therapeutic opportunities. Despite promising binding assays that have been performed, further exploration into the therapeutic potential of mAbs for biofilm eradication or prevention is necessary. Expanding the range of bacterial species studied would enhance understanding of mAbs' applicability across various pathogens. This immunotherapeutic approach demonstrates the novel strategies required to address the complex challenges posed by ABR and biofilm formation in clinical and agricultural settings. In conclusion, when desired, some biofilms present an effective adjuvant for vaccine development. However, when the goal is to combat biofilm, mAbs demonstrate an effective strategy for eradication.

Fuller, Brian

Faculty Sponsor: Dr. Vinayak Mathur

“Exploring Horizontal Gene Transfer Dynamics Between Bacteriophages and Bacteria: A Bioinformatics Approach Using Multiple Sequence Alignment, Phylogenetics and Synteny Analysis”

Horizontal gene transfer (HGT) between bacteriophages and bacteria plays a critical role in bacterial evolution and adaptation. HGT represents a mechanism known as transduction which includes DNA transfer from mature phage to mature bacteria enabling a wide range of potential transfers of genomic information. In this bioinformatics study, we investigated potential instances of HGT using phage protein sequences compared against the non-redundant (nr) bacterial protein sequence database via BLAST. The top ten hits were recorded and subjected to rigorous assessment criteria, including query coverage, E-value, and percent identity. Reverse BLAST analysis on the top bacterial hit against virus databases was conducted to confirm HGT events. A phylogenetic tree was constructed using MEGA11, with bootstrap analysis consisting of 300 replicates. Additionally, multiple sequence alignment was performed using MUSCLE, and synteny

analysis was completed using Mauve. Results revealed notable support for HGT in two instances. Accession number ASN69758.1, representing a Caudovirales putative tail tape measure protein, exhibited moderate support for HGT with a Staphylococcus epidermidis phage tail tape measure protein (WP_161388647.1); phylogenetic bootstrap value = 72. Accession number ASN69689.1, representing a Caudovirales hypothetical protein, showed strong support for HGT with an Acinetobacter variabilis transglycosylase SLT domain-containing protein (WP_313397480.1); phylogenetic bootstrap = 100. Both MUSCLE outputs displayed high levels of similarity between the bacteriophages and the aligned bacteria proteins with numbers. Despite the strong support, attempts to conduct synteny analysis using ASN69689.1, representing a Caudovirales hypothetical protein, the top bacterial hit WP_313397480.1 and similar proteins were hindered by the lack of nucleotide information in the NCBI database. However, results originating from a different Acinetobacter variabilis accession number (NZ_KB849403.1), showed nucleotide sequence similarity in the form of a gap at roughly 750-1000 position interval. This study demonstrates the complexity of investigating HGT and the challenges in understanding evolutionary dynamics between phages and bacteria. Further research using more comprehensive genomic data is needed to analyze the implications of phage-mediated HGT and bacterial evolution.

Fuller, Brian, Kai Cummings, and Samuel Geathers

Faculty Sponsor: Dr. Sheryl Fuller-Espie

“Soil Microorganism Enumeration of Actinomycetes, Bacteria, and Fungi”

This study investigated microbial diversity in a 1g soil sample, hypothesizing an abundance of bacteria and fungi. A dilution procedure was conducted, and three sets of Petri plates were prepared for actinomycetes, fungi, and other bacteria. Results showed prolific actinomycetes with an average of 34.33 colonies forming units (CFUs) on the 10⁻⁵ glycerol yeast agar plate, equating to 3.43x10⁶ microorganisms per gram of soil. Bacteria were observed on tryptic soy agar plates at dilutions 10⁻⁸ and 10⁻⁹, with average CFUs of 4.83x10⁹ and 3.1x10¹⁰, respectively. Fungi, however, presented "too few to count" (TFTC) colonies on Sabouraud Dextrose agar, suggesting low fungal presence. The results underscore the dynamic soil community, highlighting the prevalence of actinomycetes and bacteria while indicating limited fungal quantification. This research contributes valuable insights into soil microbiota and emphasizes the significance of methodological approaches in understanding the composition of soil microbial communities.

Harper, River

Faculty Sponsor: Dr. Joseph Smith

“Genetic contributors to addiction”

Addiction is an epidemic in the United States killing more people in the last 24 years than American deaths in all of our wars combined. To find a solution to prevent death, addiction must be better understood. There are two main factors that contribute to addiction susceptibility, environmental factors and genetic factors. The aim of this study was to explore the genetic elements of addiction in an attempt to find a new prevention and treatment option for those suffering from addiction as current rehabilitation centers see a success rate of barely 20%. The first topic explored was gene identification. Al-Eitan et al. (2021) identified the rs1799971 of the OPRM1 gene to be present in a

statistically significant number of addicts as opposed to non-addicted individuals. With these genetic differences, this study looked to identify specific phenotypic abnormalities found in the brain of addicted individuals. Using the information gathered in the study, new treatment options were explored in the last section of the study. For all the deaths that addiction has caused in the United States, it is time for a deeper understanding of the epidemic to save an abundance of lives.

Janetta, Julie

Faculty Sponsor: Dr. Joseph Smith

“Structure Activity Relationship of Pharmaceuticals and their Biochemistry in the Body”

Structure-Activity Relationship is an approach used to find a relationship between a compound's chemical structure and chemical property or biological activity with the goal of understanding how specific structural features influence pharmacological effects. SAR is linked to many key concepts of drug discovery. The first article highlights a major class of anesthetic pharmaceuticals, benzodiazepines, focusing on their mechanism of action, therapeutic applications, and a specific study on diazepam pharmacokinetics. Benzodiazepines act on GABA-A receptors in the brain, reducing nerve sensitivity and inducing calming effects. They are utilized for various medical conditions including anxiety, muscle relaxation, seizures, and sleep disorders. The study developed a physiologically based pharmacokinetic (PBPK) model for diazepam, predicting its pharmacokinetics after different administration routes. Utilizing the Simcyp® software, the model incorporated literature data and evaluated parameters to simulate IV, oral, intranasal, and rectal profiles. The evaluation demonstrated the model's accuracy, recommending non-oral routes of administration for diazepam in ambulatory settings due to the convenience and efficacy, especially in seizure management. Another major class of pharmaceuticals discussed includes therapeutics CBD and THC, highlighting their interactions with the endocannabinoid system and cannabinoid receptors, followed by a case series on CBD's potential in treating PTSD symptoms. The study found oral CBD administration to be associated with reduced PTSD severity through an 8 week, open-label administration trial based on scores of a patient-completed PTSD Checklist for the DSM-5 (PCL5) questionnaire. Each paper considers a specific class of pharmaceuticals with focus on the mode of action and intended use. Future directions include the application of Structure Activity-Relationship in drug discovery and design from primary evaluation to lead optimization.

Kennedy, Anne

Faculty Sponsor: Dr. Vinayak Mathur

“Identification of Horizontal Gene Transfer Present Between Bacteriophages and Bacteria Using Bioinformatics Approaches Including Multiple Sequence Alignment, Phylogenetic Analysis and Synteny Mapping.”

Bacteriophages are viral organisms that are able to rapidly infect bacteria. In the process of infection, Horizontal gene transfer (HGT) which is the movement of genetic material in a non-vertical manner (parent to offspring) can occur. HGT is important to study due to the ability it has to adapt and reshape species or genomes. This study is an investigation into the tail tape measure protein in different bacteriophages to identify HGT. Phage sequences were inputted into BLAST software and the top hits analyzed based on highest query coverage, percent identity, and lowest E-

value. Positive cases of HGT were identified using MEGA phylogenetic software, FASTA sequences of these bacteria were aligned and then constructed into a phylogenetic tree to assess relatedness between them. Synteny analysis was performed to validate the results from phylogeny. The results showed HGT was present between two separate uncultured caudovirales tail tape measure proteins (CAB4121518.1), (CAB4122135.1) positioned at different terminals with *Polynucleobacter paneuropaeus* (WP_215333607.1). The evidence for HGT was much stronger with the C-terminal positioned protein (CAB4121518.1) compared to one positioned at the N-terminal (CAB4122135.1). This study focuses on investigating HGT and understanding bacteriophage evolution. Future investigations might include more genomic data, expanding the search and evaluation of how phage evolution is affected by HGT.

Kennedy, Anne

Faculty Sponsor: Dr. Joseph Smith

“Particulate Matter with a Diameter of Less Than 2.5 Micrometers (PM_{2.5}μm)”

Particulate Matter with a diameter of less than 2.5 micrometers (PM 2.5μm) is a type of air pollution seen all around the world. Sources of this type of pollution are varying and the related health effects from exposure are extremely wide-ranging. The size of PM 2.5's is what differentiates them, making them more dangerous than other forms of air pollution. They are able to penetrate deeper into the human body causing further harm. They also have the ability to pass through methods of filtration or cleaning meaning they are harder to contain than other types of air pollution. This investigation takes a look at the proven health effects of these particles and the ways capturing methods for PM_{2.5}'s can be improved. An exploration of three different meta-analysis' revealed the association that exists with long term exposure to these particles and the contraction of preeclampsia (Yu et al., 2020), increased risk for heart failure (HF) (Chen et al., 2022), and development of Alzheimer's (Cheng et al., 2022). In terms of capturing methods for PM_{2.5}'s, the most promising discovery seems to be the use of an ultrasonic agglomerator that uses swirling flow (Khmelev et al., 2020). This method brings two new factors to play, the use of ultrasonic vibrations and the employment of a helical or swirling flow instead of rectilinear. The results of this study found that adding these components to a standard agglomerator increases the rate of collision between particles. Increased collision causes for these smaller particles to be increased significantly, where they can then be captured by more conventional filtering methods. Further investigations into other methods of cleaning and capture for these particles should be explored.

Klimek, Elixabeth

Faculty Sponsor: Dr. Joseph Smith

“Traumatic Brain Injury (TBI) Biomarkers and Their Application in Forensic Investigations.”

Traumatic brain injury (TBI), commonly known as blunt force trauma to the head, can be caused by many cases such as falls, sports-related injuries, and automotive accidents. TBIs continue to be a major cause of lower living standards since they frequently remove people from work and affect their social lives and attitudes. Traditional diagnostic methods, such as the Glasgow Coma Scale and instrumental imaging techniques, are still used in modern practices; however, the emerging

study of biomarkers has led to tremendous growth in new research areas and innovative ideas for faster diagnosis and prognosis of traumatic brain injuries.

Diving into two pivotal research papers, valuable imaging biomarkers utilizing Diffusion Tensor Imaging and immunohistochemical assays have been discovered. The left sagittal plane region of the brain and other related areas detect structural deformities and cognitive impairments that could provide valuable diagnostic knowledge in the medical setting. In addition, the investigation of the FOXO3a transcription factor and its correlation to apoptosis and secondary injury regulation encourages research and development, and rehabilitation approaches. Overall, biomarker research is ever-growing and provides avenues to enhance TBI diagnosis, rehabilitation, and the unique forensic application to post-mortem and ante-mortem investigative cases.

Mirenda, Ariana, Emma Barbera, and Avery Byrnes

Faculty Sponsor: Dr. Sheryl Fuller-Espie

“Determining the lag and log phase, generation time, and growth rate from a bacterial growth curve for Escherichia coli using serial dilutions and a spectrophotometer”

The purpose of this experiment was to determine the generation time, lag and log phase, and growth rate from a bacterial growth curve for Escherichia coli. This was done by using the methods of serial dilutions and using a spectrophotometer. The bacterial growth curve consists of 4 stages, those four stages being the lag, log, stationary, and death phase. A spectrophotometer is a technique the portion of the light that the substance uses either absorbs or transmits through the sample is measured. For the experiment 21 saline blanks were separated into the times 0, 30, 60, 90, 120, 150, and 180 (all in minutes). For 3 dilutions. Seven plates of 4 were labeled, 10-4, 10-5, 10-6, and 10-7. 5mL of E. coli was transferred into TSB container. The TSB with the culture was then placed into all dilution tubes. The TSB was placed onto the petri dish along with the corresponding dilution container. At 5-minute intervals, the culture was taken and placed in a cuvette to measure absorbance. These steps were repeated for all time periods. At the end, all plates were counted after being incubated for 24 hours. The results of the experiment show that as incubation increases, the absorbance and bacterial counts increase. The lag phase is determined to be between the 0–30-minute period and the log phase is determined to be between 30–180-minute period. The generation time is 48.94 minutes for E. coli. the growth rate was 0.020.

Mirenda, Ariana

Faculty Sponsor: Dr. Vinayak Mathur

“Analyzing the Different Types of Brain Tumors, the Mutations That Cause Them, and How They are Treated.”

A primary brain tumor is a cancerous or noncancerous growth of abnormal cells that start in the brain or spinal cord while a secondary brain tumor is one that starts somewhere else in the body and spreads up into the brain. There are many different types of brain tumors, but in this study, I will focus on astrocytoma’s, glioblastoma’s, meningioma’s, and metastatic. Astrocytoma’s, glioblastoma’s, and meningioma’s are all primary brain tumors while metastatic are secondary. These tumors are diagnosed by many different symptoms including headache, nausea, weight loss and lethargy. These symptoms are hard to diagnose but the psychiatric symptoms are even harder

because they are often overlooked and diagnosed as a mental illness instead. These tumors are treated using several different methods including surgery, radiotherapy, chemotherapy, targeted drug pathway, clinical trials, tumor treating fields, and rehabilitation, with surgery and chemotherapy being the most common treatments. There are also many proactive measures one can take to reduce their chances of getting brain cancer. These measures include avoiding smoking, vaping, radiation exposure, carcinogenic chemicals, pesticides, and insecticides. Taking these measures will not guarantee that one will not get brain cancer because there are other factors that play into it, but they will help avoid it. Some of the other factors that play a role in brain cancer development include genetics, radiation exposure, age, and smoking/vaping. Research has shown that there is no direct evidence supporting the idea that smoking causes cancer, but there is a correlation. This research is very important for the future of medicine and for others to be aware of the risks playing into brain cancer.

Morency, Steven

Faculty Sponsor: Dr. Vinayak Mathur

“The Investigation of Ocular Pathologies”

Proliferative vitreoretinopathy (PVR) is a disease that develops as a complication of rhegmatogenous retinal detachment. This project investigates novel treatments to cure various eye diseases with a focus on proliferative vitreoretinopathy and bacterial conjunctivitis. Scientists have identified various methods to treat these diseases to achieve promising results. One study takes a pharmaceutical approach with the use of blebbistatin. Blebbistatin has been identified as a muscle myosin II inhibitor which would be deemed to be very useful in treating PVR which can lead to blindness if left untreated or ineffective. Blebbistatin is administered into a collagen gel assay with ARPE-19 cells with transcription growth factor-beta and proves itself to prevent the production of myofibroblasts and slow PVR production. Another treatment focuses on a holistic approach. Black tea extract is a well-known beverage consumed around the world which has various benefits. The study focused on the antibacterial benefits of black tea scientists wanted to review its safety and efficacy when administered to treat bacterial conjunctivitis caused by methicillin-resistant aureus (MRSA) & Pseudomonas aeruginosa bacteria. Rabbit models were treated with leading antibiotics such as Gatifloxacin as well as the black tea extract. Within 5 days, the performance of black tea extract was similar to Gatifloxacin in reducing the clinical severity and healing the eyes from bacterial conjunctivitis. In both eye diseases, timely therapeutic interventions can mitigate vision loss, and enhance patient outcomes.

Rey López, Nicolás

Faculty Sponsor: Dr. Joseph Smith

“Integrating Methyl Formate Dehydrogenation and Green Hydrogenation for Sustainable Energy and CO2 Mitigation”

Integrating Methyl Formate Dehydrogenation and Green Hydrogenation for Sustainable Energy and CO2 Mitigation

This study investigates the potential integration of methyl formate (MF) dehydrogenation for hydrogen storage and energy generation with the hydrogenation route via green H₂ for CO₂

mitigation. The research aims to understand the efficiency and mechanisms of both processes and their synergistic effects in contributing to sustainable energy applications. How can integrating methyl formate (MF) dehydrogenation and the hydrogenation route via green H₂ contribute to sustainable energy applications, particularly in terms of hydrogen storage, energy generation, and CO₂ mitigation?

The research combines experimental investigations and comprehensive reviews. Experimental methods include kinetic isotope effect (KIE) measurements, density functional theory (DFT) calculations, NMR studies, and time-resolved analysis to explore the mechanism of MF dehydrogenation. Comprehensive reviews analyze recent advancements in CO₂ mitigation technologies, focusing on the role of hydrogenation via green H₂. The study demonstrates the reactivity and efficiency of MF dehydrogenation for hydrogen storage and energy generation, showcasing its potential to generate hydrogen while producing limited CO₂ emissions. Additionally, the review of CO₂ mitigation technologies indicates that the hydrogenation route via green H₂ holds promise in reducing carbon emissions in the energy sector, facilitating the transition to a more sustainable energy system.

The integration of MF dehydrogenation and the hydrogenation route via green H₂ presents a promising approach for sustainable energy applications. By leveraging MF as a hydrogen carrier and green H₂ for CO₂ mitigation, industries can significantly reduce their carbon footprint while advancing toward carbon neutrality. This study underscores the importance of exploring synergistic solutions and continuing research efforts to address the challenges of climate change effectively.

Rosario, Saige, Samantha Frederick, and Andrew Lunardi

Faculty Sponsor: Dr. Sheryl Fuller-Espie

“Determination of Bacterial Numbers”

Scientists often use different methods for determination of bacterial numbers in clinical settings and research laboratories. In this experiment, two separate methods were conducted to determine the quantitative number of bacterial cells in a culture. This was achieved through the standard plate count method, in which serial dilutions were added to a Petri dish alongside plate count agar for the purpose of counting with the naked eye. In addition, the turbidimetry method, which required the use of a spectrophotometer to determine the absorbency of each serial dilution sample at 600nm, was used for comparison. The bacterium used in this experiment was *Escherichia coli*. The *E. coli* was selected for the experiment due to the fast reproduction rate in the short time span, making it a good candidate for determining the bacterial counting. The fast growth rate of *E. coli* is seen through counting 660 cells on pour plate 10⁻⁶, which was deemed too numerous to count. The other pour plates had errors resulting in clusters of bacterial cells around the edges making it difficult to tally, labelling them as too few to count. Results for the turbidimetry measured the anticipated absorbency of bacterial cells, which was displayed through a ten-fold difference as each sample became more diluted. Overall, errors in the pour plate method failed to yield accurate results. In contrast, turbidimetry yielded accurate results but this measurement accounts for viable cells and dead cells or debris, unlike the standard plate count method which quantifies only viable cells.

Rosario, Saige

Faculty Sponsor: Dr. Vinayak Mathur

“The effects of allopathic medicine versus herbal medicine on women with Polycystic Ovary Syndrome”

Polycystic ovarian syndrome is triggered by the abnormal production of androgens subsequent in the emergence of small fluid-filled sacs in the ovaries of females within the reproductive age. This condition degrades the life quality of women by affecting both their mental health and metabolic physiology. Studies show that with the addition of extra androgens, PCOS is known to come with a plethora of symptoms ranging from irregular menstrual cycles, insulin resistance, obesity and hirsutism to more concerning morbidities like type II diabetes, hypertension and even infertility. Several aspects like improper diets, poor physical activity, hormonal medication and lack of knowledge are the source of prevalence for PCOS. Upon early diagnosis, doctors often implement lifestyle changes for their patients to eradicate some of the more treatable symptoms through healthy dietary patterns and increased physical activity or exercise. In serious cases, more medically based treatment is used to regulate the overwhelming symptoms the condition poses. Studies often use common allopathic treatments like oral contraceptives or synthetic supplements to suppress ovulation, proven to be helpful with hirsutism and reduction of cystic formation on the ovaries. While herbal treatments, commonly derived from plant extracts and powders, help with metabolic improvement and regulation of androgen fluctuations. Both treatments have been shown to improve the quality of life in women by significantly decreasing interfering symptoms and advancing the overall health in women with PCOS.

Staniewski, Abaigeal

Faculty Sponsor: Dr. Joseph Smith

“PFAS Exposure and the Effects on Human Biology”

Per- and polyfluoroalkyl compounds are synthetic, man-made chemicals that are found globally and are characterized by the per-fluorinated carbon chains. The fluorinated carbon chain bonds cause PFAS chemicals to not degrade easily in the environment causing them to have a long half-life. Due to their pervasive use, they have been found to have many negative adverse effects on humans due to PFAS chemicals being able to bioaccumulate in the body tissues' have been linked to having adverse effects on multiple body systems, but one of the biggest concerns for PFAS exposure is their relation to how they affect reproductive organs and pregnancy. A study by Bommarito and her colleagues found that PFAS exposure related to preeclampsia in pregnant women. The researchers found there to be an increased risk of late-onset preeclampsia. Another study done by Ding and his colleagues found that PFAs had adverse and detrimental effects on folliculogenesis, steroidogenesis, and ovarian reserve. There is an intricate relationship between PFAS exposures and the health of the reproductive system. It is important that this is researched and understood in order to better understand how PFAS exposures are affecting humans as a whole, especially those populations that are vulnerable. More research needs to be done on this topic including how it affects the brain and other systems of the body. Future research on PFAS is imperative to protecting the current and future generations from the adverse effects of this harmful chemical.

Sociology/Criminology Department

Coulibaly, Aichata

Faculty Sponsor: Dr. Katie Farina

“Social Isolation and Academic Achievement: Unanticipated Impacts of the COVID-19 Shutdowns of 2020”

In 2020, the COVID-19 global shutdown brought about unprecedented changes to daily life. This paper examines the effects of the pandemic-related shutdowns and social isolation on academic achievement. The hypothesis being tested is that social isolation is correlated with lower academic achievement. The study utilizes data from Cabrini University students to analyze the academic performance of students as related to social isolation during the pandemic. It also considers the impact of social isolation on mental health and well-being, factors that are known to influence academic success. The results of the study will provide valuable insights into the consequences of social isolation on academic achievement and highlight the importance of addressing the emotional well-being of students during times of crisis. Results will be made available at the symposium.

Davis, Hailey

Faculty Sponsor: Dr. Katie Farina

“Parental Alcohol Abuse and Offspring Acquired Traits”

The purpose of this research is to identify correlations between those who have experienced parental alcohol abuse and possible effects on their livelihood. Specific effects researched include co-dependency, indecisiveness, and personal alcohol use. This research is important as it can help those who deal with parental alcohol abuse acknowledge why they have certain traits and how they may address them. This research could also assist therapists and psychiatrists to help clients who have suffered from parental alcohol abuse. A non-probability availability sampling method was used in this study. Data was collected from approximately 100 students from Cabrini University through a self-administered electronic survey through Google Forms. This survey was voluntary, confidential, and anonymous. Results from this study will be available at the Cabrini University Annual Arts, Research, & Scholarship Symposium on April 30, 2024. The data will be presented in poster format and available to the public to view.

Davis, Sheyani

Faculty Sponsor: Dr. Katie Farina

“The Relationship between Parenting Styles and Mental Health”

Mental health has become a major concern in the United States. Transitioning from youth to early adulthood at college involves unique challenges, such as academic stressors, financial responsibilities, and social adjustments, all of which can have a substantial impact on mental health. This study looks at how authoritative, authoritarian, and permissive parenting styles affect the mental health of college students. Authoritative parenting, characterized by warmth and support, encourages healthy emotional growth and autonomy, whereas authoritarian parenting's

rigid control can cause psychological anguish. Permissive parenting, which lacks rigidity, may contribute to increased anxiety and poor self-regulation. Using attachment theory as a theoretical framework, this study seeks to understand the complex dynamics of parent-child relationships and their consequences for mental health outcomes among college students. Results will be made available at the symposium.

Duke, Caroline

Faculty Sponsor: Dr. Katie Farina

“The Relationship Between Rape Myth Acceptance and Media Consumption”

The purpose of this study was to evaluate whether or not there is a relationship between rape myth acceptance and watching the television show, Law and Order: Special Victims Unit. The study was conducted using a non-probability, availability sample of Cabrini University students to examine the relationship between viewing the television show and belief in rape myths. The importance of this study is to evaluate if shows meant to ‘educate’ us about sexual violence, are truly educating us, or if they are contributing to the problem of rape myths. Rape myths are dangerous, especially as they can further endanger a vulnerable group in our society. The results will be available at the symposium.

Gallagher, Caroline

Faculty Sponsor: Dr. Katie Farina

“Coach-Athlete Relationship and its Effect on Mental Health”

The purpose of this study is to examine if student athletes' relationships with their coaches affect their mental health status. The coach-athlete relationship is defined as when coaches' and athletes' emotions, thoughts, and behaviors are mutually and causally interconnected (Jowett & Ntoumanis, 2004). Mental health status is the emotional, psychological, and social well-being that affects how people think, feel, and react (About Mental Health, 2023). Building and maintaining connections and relationships can be difficult for college students who are navigating new life demands. Students often seek opportunities to meet and connect with others in order to have people by their side when they need them. Using a non-probability, availability sampling approach, an electronic survey was distributed to Cabrini University athletes in the spring semester of 2024. The survey asks about the student athletes' relationship with their coach and their mental health. The researcher hypothesized that student-athletes who have a positive relationship with their coach tend to have better mental health. The results of the survey will be available at the symposium.

Ganster, Griffin

Faculty Sponsor: Dr. Katie Farina

“Student Athlete and Non Athlete”

This project focuses on comparing the mental health of student athletes and non-student athletes. Student athletes face different challenges than their same age non-athlete peers such as, long hours practicing and training, trips to athletic events, isolation from loved ones, and pressure to

excel (Pinkerton et al., 1989). While such challenges are impactful, the amount of support from being on a team is helpful for student athletes. Still, many athletes are recommended to seek mental health, whether through the team or outside of the team. On top of the strenuous physicality of sport, it is not surprising that many student athletes are diagnosed with mental health disorders. Today, the aspect of positiveness towards mental health is crucial. Overall, the mental health battle student athletes face is rigorous and tricky. With much of the country now informed about mental health, soon these athletes should be able to get the help they need and deserve. Using a non-probability sampling approach, a survey was distributed at Cabrini University to examine whether there's a correlation between being a student athlete and increased mental health difficulties. Results will be available at the symposium.

Gouliaberis, Fotini

Faculty Sponsor: Dr. Katie Farina

“Exploring the Impact of Depression and Anxiety on Academic Performance: A GPA Perspective”

This study explores how depression and anxiety impact students' academic performance and grade point average (GPA). Currently in the United States, more than one in ten young people experience depression wherein their ability to function is severely affecting school, work, home, and social lives (Mental Health America, 2023). As depression among undergraduate students rises, the availability of counseling services decreases. Many students with depression or anxiety avoid seeking help on campus because they underestimate the seriousness of their condition or feel they don't need professional support (Newport Institute, 2023). Consequently, there's a significant stigma surrounding depression, preventing many from seeking help or discussing their experiences openly. The effects of depression and its impact on college students hasn't been documented enough (Hysenbegasi et al., 2005). Compared to other topics, less research has been done addressing the effects of depression on university students and their ability to perform the life activities related to work, but even more so on its effects on academic achievement. To investigate the connection between depression, anxiety, and GPA, a survey was distributed among the Cabrini University student population using availability sampling. Survey results will be available at the Symposium.

Hassall, Caroline

Faculty Sponsor: Dr. Katie Farina

“The Role of Gender and Past Relationships in College Student's Perceptions of Stalking and Cyberstalking”

Cyberstalking and stalking have emerged as critical social and political issues over the past decade. Both forms of stalking are emotionally damaging and they tend to affect the younger individuals. College students under 25 years of age experience stalking and cyberstalking most in the United States. With society's consistent use of social media and the Internet, stalking has become more subtle and socially acceptable, leading to skewed perceptions. However, the manner in which stalking and cyberstalking are recognized by society as a whole, dictates if victims will classify their experience as stalking. Research shows that there is a significant difference between men's and women's views on cyberstalking and stalking. Historically, there has been a lack of

research regarding stalking, however, in the past decade, with more stalking laws being passed, there has been a significant increase in research. The relationship that victims have with their stalker often dictates whether the victim perceives situations as stalking. This study aims to see if there is a correlation between gender, prior relationships and perceptions of cyberstalking and stalking. The study uses quantitative research methods and electronically surveyed approximately 100 Cabrini University undergraduate students in the Spring 2024 semester. Results will be available at the symposium.

Owens-Carvalho, Mone't

Faculty Sponsor: Dr. Katie Farina

“Human Trafficking Perceptions in Social Science Majors & Higher Education”

Human trafficking is a human rights violation that has global impacts. It is considered form of slavery that targets women, men, and children. Higher education institutions create safety through policy development and spread awareness on an issue. The purpose of this study is to analyze the perceptions of human trafficking in higher education between social science majors and non-social science majors to critique who has a better perception or more bias towards the problem of human trafficking. For this study, Cabrini University students participated in a survey to assess whether non-social science majors or social sciences have a greater perception on the problem of human trafficking. Results will be available at the symposium.

Pena, Branon Elvira, Hailey Davis, and Shane Schaffer

Faculty Sponsor: Dr. Katie Farina

“Exploring the Impact of Basic Needs and Insecurities on College Students Academic Performance (GPA)”

This study explores how basic needs and insecurities, like not having enough food and financial stability, link to college students' academic performance. As college becomes more important for moving up in society, it's vital to determine what factors affect how well students do in school. One big issue to focus on on is food insecurity, where students don't have enough nutritious food to eat. This can interfere with their ability to concentrate and remember things, making it harder to do well in classes. Plus, financial insecurities like not having enough money adds more stress, especially worrying about paying for things like tuition and housing. Using quantitative data from Cabrini University students, this study evaluates the relationships between food and financial insecurity and academic achievement. Results will be available at the symposium.

Raysor, Ashanti-Dominique

Faculty Sponsor: Dr. Katie Farina

“Media Effects on Perceptions of Rape and Sexual Assault”

Sexual assault and violence are topics that have grown more important recently. In concurrence with this, college students are more susceptible to sexual assault within the first six weeks of attending college. Between 17-20% of first year college students experience unwanted sexual contact which may be referred to as the 'red zone' (Carey et al., 2018; Kaltman et al., 2005). The

power of rape myths is that they appeal to a sense of a just world by explaining a frightening crime as a controllable event that only happens to women who brought it upon themselves (Grubb & Turner., 2012). Additionally, McCombs et al. (1972,1997) argued that mass media has multiple influences on society and the way in which individuals develop beliefs. This study seeks to understand the relationship between media, gender, and rape myth acceptance. Cabrini University students were surveyed using an availability sampling method and quantitative analyses were conducted. The results will be available at the symposium.

Schaffer, Shane

Faculty Sponsor: Dr. Katie Farina

“Examining the Impact of Food Insecurity on a College Student’s Academic Performance and Mental Health”

Food insecurity is a problem that can have detrimental effects on an individual’s physical and mental health. Food insecurity affects anywhere from 34%-59% of college students (Miller et al., 2019). Many people know of the toll food insecurity can take on an individual’s physical health, but it is very important to also study the effects it can have on mental health and academic performance. Research shows that students who struggle with food insecurity are more likely to have poor grades and have a reduced likelihood of graduating within the expected timeframe (Zigmont et al., 2020). This study builds on previous studies that have examined food insecurity on college campuses by not only examining how it affects academic performance, but also how it affects mental health. A survey was distributed to a nonprobability, availability sample of students at Cabrini University to examine two hypotheses. This survey assesses the participant’s level of food security, academic performance, and mental health. It is hypothesized that students who report being food insecure will also report poor academic performance. Additionally, it is hypothesized that these students will report poor mental health compared to food secure students. The results of this analysis will be available at the symposium.

Tobelmann, Abigail

Faculty Sponsor: Dr. Katie Farina

“The Effect of Sport-Related Concussions on Mental Health”

Recently, researchers have been focusing on the correlation between sport-related concussions and athletes’ mental health. College athletes, like other students, are at risk of experiencing anxiety and depression due to the expectations of academics, work- and family-related obligations. Adding the complexity of being an athlete who has previously suffered concussions can make it extremely difficult to excel. The most common symptoms of a concussion include headaches, difficulty concentrating, sensitivity to noise and light, feeling confused, and experiencing fatigue (Healthdirect, 2023). This study, conducted at Cabrini University during the Spring 2024 semester using an availability sampling method, seeks to understand the effects of concussions on student-athletes and their mental health. Results will be made available at the symposium.

Uruchima, Justin

Faculty Sponsor: Dr. Katie Farina

“Gender and race and support for the death penalty”

The purpose of this research is to examine the relationship between gender and race and support for the death penalty. This is important because it is going to show who supports the death penalty by gender and race. It is important to research the death penalty as many inmates are affected by mental illness due to their solitary confinement on death row. Research has shown that Whites are 20% more likely to support the death penalty than Blacks. Most of Americans support the death penalty because they believe in a eye for an eye. They support revenge. The method that is used for this research is to administer out surveys electronically to college students. The dependent variable is support for the death penalty and the independent variable is be gender and race. Results will be presented at the symposium.

Vara-Alvirde, Clare

Faculty Sponsor: Dr. Katie Farina

“Perceptions on Violent Mass Media and its Impact on Children”

Media platforms have utilized violent content as their prime source of entertainment often creating a false sense of how frequent and exciting violence is opposed to reality (Dmitrieva, 2017). With the desensitization of violent mass media, some believe that it will lead to the dehumanization of future generations, depriving them of their goodness and eventually leading them to commit heinous acts (Limbong, 2019). The purpose of this study is to analyze the role violent mass media plays in society and the different perspectives people hold of its consequences. Using a nonprobability sampling method, an electronic survey has been distributed to collect data from Cabrini University students in the Spring semester of 2024. The survey focuses on questions regarding a person’s perception of violent media and the effect violent media has on children. It aims to uncover a possible correlation between a student’s thought process of violent media content and whether they associate it with negative consequences in children. In the study, it is hypothesized that college students who perceive violent media as negative are more likely to believe it will negatively impact children. Results will be available at the symposium.

Williams, Jordan

Faculty Sponsor: Dr. Katie Farina

“The Impact of Stress on College Dropout Intentions”

The transition to college is the first time a lot of new young adults are on their own, many are becoming independent and have new responsibilities. However, this shift can also bring about heightened stress levels, potentially leading to thoughts of dropping out of college. Around 40% of undergraduate students leave universities and colleges every year (Education Data Initiative [EDI], 2021). This paper will examine different stress factors that may be affect thoughts on dropping out of college. The purpose of this study is to measure if the amount of stress that a student has will lead to thoughts of dropping out of college. Cabrini students were surveyed using availability sampling methods. The survey was distributed to students from their professors using a link. Results will be available at the symposium.

Young, Abigail

Faculty Sponsor: Dr. Katie A. Farina

“Examining the Influence of Demographic Factors on College Students’ Perceptions of Human Trafficking”

This study examines the influence of demographic factors, such as age, gender, and race, and their possible effect on college students' perceptions about human trafficking. Human trafficking is when people, mainly women and children, are forced into things like sex work or labor. Human trafficking is a complicated issue that involves not just individual victims but also larger economic and social factors. This research will use a non-probability availability sampling method to collect data for this study. Data will be collected from approximately 100 participants at Cabrini University to study possible correlations between one's demographic and perceptions on human trafficking. The results will be available at the Symposium.

The School of Business, Education, and Professional Studies

Communication Department

Kowalik, Teagan

Faculty Sponsor: Dr. John Cordes

“Social Media and its Impact on Development”

In today's digital age, Social Media are unavoidable. For Generation Z, this has been true our entire lives. We're the first generation to grow up with complete access to the digital world, so there's not much known about the long-term impacts of Social Media use. Some studies suggest that the internet's addictive nature has led people to have "internet addictions," which can have similar detrimental effects as any other addiction, especially on young people. However, this study looks deeper into the effects of young people's social media use, not just internet usage, on their future social abilities. The research question is: Has frequent and prolonged access to social media throughout their childhoods negatively impacted Generation Z's ability to make meaningful connections with others in-person? By learning from our generation, we can see what to expect for future generations and whether or not Social Media might harm their upbringing. My hypothesis is that Social Media use has made it more difficult for Generation Z to make in- person connections than earlier generations. To test this hypothesis, two focus groups will be conducted each with 10-11 Generation Z individuals. Participants will first fill out a survey providing information about their social media usage for context. Then, they will participate in an audio-recorded discussion for about 45 minutes about their social habits. The focus groups are scheduled for early April. The final data and their analysis will be presented at the Arts, Research, and Scholarship Symposium on April 30th.

Shultz, Emily

Faculty Sponsor: Dr. John Cordes

"The Correlation Between Childhood Music and Self-Identity in Adults Aged 30 and Over"

Music is a universal language everyone can understand; it has existed seemingly forever. It's fair to say music is practically interwoven into every culture and its history, regardless of location. Music has been shown to play a pivotal role in memory formation; so much so that many dementia patients retain musical memories in the final stage (Nair, et. al, 2013). My research study sets out to find meaning in our lengthy connection to music. Particularly, if there's a correlation between childhood music and self-identity. And if it exists, why? The research study will be conducted through a Google Forms questionnaire and will utilize a snowball convenience sample to gather the responses from adults over 30. The questionnaire is composed of 14 questions. The study will be fielded in April. Findings will be presented at the 18th Annual Arts, Research & Scholarship Symposium on Tuesday, April 30th, 2024.

Villanueva Contreras, Naydelyn

Faculty Sponsor: Dr. John Cordes

"Did COVID-19 affect college students?"

Research has indicated that COVID-19 had a big impact in many humans' lives and for many of them this event changed them from the person they used to be (Nam, 2023). Even though the pandemic happened almost four years ago, my wonder is COVID-19 still impacting students' lives? Using an online survey of twelve questions formatted in Google Forms and sent to a convenience sample of Cabrini students, my research asked students how their lives are now four years since the pandemic with a specific focus on their mental health. My hypothesis is that COVID-19 has still impacted lots of college students' mental health by isolating them for a long time and creating new habits within their education. The study will be in the field from the end of March through mid-April, 2024. The final data and analysis will be presented at the Arts, Research and Scholarship Symposium on April 30th.

Undergraduate Oral Presentations

Session #1 1:00 - 2:00 pm

1.1 Founder's Hall 207

Moderator: Dr. Gifty Akomea Key

Abigail Flanagan

Faculty Sponsor: Dr. Gifty Akomea Key

"The Battle on and off The Field: A look into the Mental Health of Collegiate Athletes"

Playing a sport in college can be the highlight of a student's experience as they are given the opportunity to play the sport they love. Participating in sports comes with a sense of pride, unity, and determination, yet at some moments, student athletes are faced with overwhelming pressure. These feelings can then translate into intense emotions of sadness, anxiety, and depression. The National Collegiate Athletic Association, commonly known as the NCAA, is the association that

allows students to thrive in academics while also playing the sports they desire. Within the NCAA, there are 3 divisions, Division I, II, and III. The routine and day-to-day life of student athletes who compete at these levels can attribute to high levels of stress. Division III Eastern University dual sport student athlete, Marcianna Tavani, shares her compelling journey of working through her mental health struggles, and learning how to find herself again. Madeline Barlow, representative of The Hidden Opponent organization also gives her personal testimony, and the effect she has been able to make on student athletes' mental health through her role of Director of Programming within The Hidden Opponent organization. A study done in May of 2022 by the NCAA revealed a mental health crisis among the student athlete population. In addition, the third-leading cause of death for student athletes aged 15-24 years old is suicide. We must be aware of this mental health crisis, and advocate for students who may experience their battle on and off the field.

Na'im Roberts

Faculty Sponsor: Dr. Gifty Akomea Key

"Mye Heart & Sole"

The Mye Heart & Sole documentary is about my personal story of how my father got sick when I was eleven years old with cancer called Multiple Myeloma, also known as Kahler's Disease. My father was diagnosed with stage 3 Multiple Myeloma. Multiple Myeloma is a cancer that forms in a type of white blood cell that builds up in the bone marrow and forms tumors in many bones in the body. Stage three Multiple Myeloma is getting worse quickly with a life expectancy of twenty-nine months, which is almost three years. The various symptoms associated with Multiple myeloma such as pain, weight loss, and fatigue. The different courses of treatments for Multiple Myeloma such as chemotherapy and immunotherapy. In the documentary, you will get to hear my personal testimony, and a video/ audio-recorded interview. The results will be available at the symposium.

Yeredith Cruz

Faculty Sponsor: Dr. Gifty Akomea Key

"#Unfiltered: The impacts of social media on body image, and self-esteem"

In our digital age, social media platforms are all around us. But what are the consequences of this constant online presence, particularly for young adults? This documentary examines the complex relationship between social media, body image, and its effect in the way we perceived ourselves revealing startling insights into the detrimental effects of digital comparison culture. Through compelling data and real-life stories, we uncover the alarming prevalence of body dissatisfaction, driven by unrealistic beauty standards perpetuated by social media. We shine a light on the struggles faced by individuals navigating distorted online portrayals of beauty and the detrimental impact on their self-esteem and mental health.

In collaboration with experts, we explore the psychological factors at play and the importance of promoting positive mental health in the digital age. As the documentary concludes, we offer practical advice and suggestions for fostering a healthier online environment and promoting body positivity. Through education, awareness, and compassionate support, we aim to empower young adults to navigate social media with confidence and resilience, fostering a culture of self-acceptance and well-being. Learning how to appreciate others' beauty without the need to question our own.

1.2 Founder's Hall 208

Moderator: Dr. Sheryl Fuller-Espie

Saige Rosario and Avery Byrnes

Faculty Sponsor: Dr. Sheryl Fuller-Espie

"Use of flow cytometry and SYTO 13 to measure enhanced endospore formation in Bacillus subtilis following exposure to heat, UV, and pH changes during vegetative growth"

During nutrient deprivation, some gram-positive bacteria have the ability to form endospores to ensure their survival. Two well studied genera including Bacillus and Clostridium produce endospores under starvation conditions which make the bacteria highly resistant to certain environmental stressors such as heat, UV radiation, detergents, and desiccation. This study used aseptic culturing and flow cytometry procedures to determine if Bacillus subtilis grown at 35°C in tryptic soy agar or broth exposed to heat (48°C), UV light (302 nm), or acidic conditions (pH 5) would stimulate more rapid progression of spore formation when compared to untreated controls. The nucleic acid binding dye SYTO 13 was used for flow cytometric analysis. There were no significant differences when observing heat or UV treatments, but using a low pH, achieved using a citrate phosphate buffer, did result in statistically significant increases in spore formation as determined through flow cytometry and the student t test. Samples produced in triplicates after 3 days of growth demonstrated 6.3% spore formation at pH 7, whilst showing 17.1% spore formation at pH 5. In addition, there were clear differences in the size of colony forming units (cfu) documented when growing bacteria in tryptic soy agar Petri dishes at pH 5 versus pH 7, as cfu were notably smaller on the more acidic plates in comparison to the neutral pH plates. These preliminary results, however, were not reproducible on two subsequent attempts. Further experiments are required to refine the assay set-up to ensure inter-assay reliability.

Abaigeal Staniewski

Faculty Sponsor: Dr. Sheryl Fuller-Espie

"Cardiovascular Death Risks in Firefighters"

One of the most prominent causes of deaths in the fire service has been found to be cardiac arrest, as well as overexertion/ stress. It has been found that cardiovascular disease (CVD) risks are much higher in volunteer firefighters than the public. There have been many studies conducted on factors that contribute to this deadly risk, and how to prevent it. In a study done by Al-Zaiti et al., it was found that of 112 firefighters, more than half had high risk ECG risk factors present, and one third had abnormalities with their stress test results. These types of results lead to increased risk for CVAs when on- and off-duty. Another study done by Hunter et al., showed how fire suppression activities, such as the exposure to extreme heat while physically exerting oneself, have an association with altered cardiac functions and can cause myocardial injury in firefighters. Both studies directly show how firefighters' heart health is important, and how critical it is for these firefighters to stay physically in shape. The risk that firefighters take every day is astronomical, but their physical health is often overlooked. These types of deaths are not always reported nationally but are just as detrimental to the firefighting community.

Julie Janetta

Faculty Sponsor: Dr. Joseph Smith

"3D Printing Chemistry"

Using 3-D printer and software to explore generation of models that are of chemical interest. Such models may include small molecules exhibiting symmetry elements such as C2 axes perpendicular to a principal axis. Other models may include generation of different sized spheres to represent order of substituents when determining stereochemical configuration of a chiral center.

1.3 Founder's Hall 211 Persichetti

Moderator: Dr. Amy Lee

Emily Lichius, Colin Tomzcak, Carina Shandy, Sara Hanley, Tracy McLaine-Scott, Gekeya Pinder, Aaron Rantanen, Sofia Fastuca, Ruben Bonilla, Elise Sperry, Janay Washington, and Mekhi Postell
Faculty Sponsor: Dr. Amy Lee Persichetti

"Woodcrest Magazine Final Edition"

Cabrini University's Woodcrest Literary Magazine aims to showcase a collection of alumni works from 2012-2021, including poetry, non-fiction, fiction, visual arts, and other pieces. Throughout the 2023-24 academic school year, the Woodcrest editors have reviewed each previous edition and compiled a "Best of" collection of the magazine. This "Best of" edition serves to celebrate the legacy of Cabrini's Writing and Narrative Arts Program and the accomplishments of previous students. The editors worked to design the online layout for the magazine which can be viewed at woodcrestmagazine.com at the end of the semester.

Session #2 2:15 - 3:15 pm

2.1 Founder's Hall 207

Moderator: Dr. Gifty Akomea Key

Nikita Kellman

Faculty Sponsor: Dr. Gifty Akomea Key

"The Result of Trauma (PNES)"

This capstone documentary sheds light on Psychogenic Non-epileptic seizures (PNES), a condition that is often misunderstood and misdiagnosed. Through the personal story of a young woman named Endiyah Coleman-Jackson, I aim to educate and inspire others about this complex neurological disorder. This documentary highlights Endiyah's journey in the struggle of being diagnosed with this condition, and the struggles of being misdiagnosed or understood as a black woman seeking health care in America. The documentary explains the difference between epileptic seizures and PNES, the underlying causes of PNES, and the challenges associated with diagnosing and treating it. It emphasizes the importance of a comprehensive evaluation by a team of healthcare professionals to identify the root cause and develop an effective treatment plan. By addressing the underlying psychological factors and providing appropriate therapy, patients with PNES can learn to manage their symptoms and improve their quality of life. This documentary will feature statistics that will support this notion.

Shekinah Hannibal

Faculty Sponsor: Dr. Gifty Akomea Key

“love hurts”

Domestic violence remains a pervasive issue with far-reaching consequences, affecting victims physically, mentally, and emotionally. According to the National Institute of Corrections, females aged 18 to 34 are particularly vulnerable to intimate partner violence, highlighting the urgent need for awareness and action.

In the documentary, we shed light on the harrowing experiences of victims like Lady S, who was married off to her abuser at the impressionable age of 22 due to familial pressures. Through her courageous testimony, she provides a poignant glimpse into the cycle of abuse she endured and the toll it took on her well-being. Lady S' narrative serves as a powerful reminder of the complexities surrounding domestic violence, especially within religious or cultural contexts.

Moreover, the documentary offers invaluable insights into coping mechanisms and resilience in the face of trauma. Lady S shares her journey of healing and offers heartfelt advice to young girls navigating similar challenges. Her words resonate with empathy and strength, urging viewers to take action and support those in need.

As the documentary draws to a close, it leaves a lasting impact, emphasizing the importance of breaking the silence surrounding domestic violence. Through education, awareness, and collective efforts, we can empower survivors, challenge societal norms, and strive towards a future free from violence and abuse.

Teren Lover-Williams

Faculty Sponsor: Dr. Gifty Akomea Key

“The effects of Childhood Trauma”

This documentary will talk about childhood trauma. It would contain the effects of childhood trauma. It will highlight the signs of different ages of children from preschool to high school. The documentary will have a video explaining in detail what childhood trauma is and its effects. This documentary will include the different types of childhood trauma. Also, the five reactions to childhood trauma are uncontrollable anger, anxiety, depression, withdrawal, and the inability to express emotions. The long-term effects of childhood trauma will also be included. Why childhood trauma could affect adulthood. What could happen if childhood trauma goes untreated? Also, to help someone affected by childhood trauma, the documentary will include an interview with one clinician from the Children's Crisis Treatment Center who will talk about the effects of childhood trauma and what she does to help children suffering. Finally, the last topic that will be in the documentary is the statistics of childhood trauma. The leading cause of childhood trauma and why childhood trauma is so damaging to the person's health.

2.2 Founder's Hall 208

Moderator: Dr. Sheryl Fuller-Espie

Elizabeth Klimek

Faculty Sponsor: Dr. Joseph Smith

“Exploration of the High Performance Liquid Chromatography (HPLC) Instrument and Ketone Analyses”

A small group of ketones will be studied utilizing a newly acquired High Pressure Liquid Chromatograph (HPLC). Experimental parameters will be evaluated so as to develop an operational

reference guide. An organic I lab experiment will also be created where lab students would determine the identity and relative concentration of an unknown relative to standards. An organic II lab experiment will also be created where lab students would determine the relative concentrations of a mixture of two known ketones.

Nicolás Rey López

Faculty Sponsor: Dr. Joseph Smith

"Comparative Analysis and Quantification via High Pressure Liquid Chromatography and Standard Addition Method"

A small group of ketones will be studied utilizing a newly acquired High Pressure Liquid Chromatograph (HPLC). Detection of the ketones will be made using a UV-visible detector and then compared to detection using a refractive index detector. An organic II lab experiment will be created where lab students would determine the absolute concentration of a known ketone using the standard addition method.

2.3 Founder's Hall 211

Moderator: Professor Marie Ranselle

Brittany Aiken

Faculty Sponsor: Dr. Gifty Akomea Key

"Dreaming To Be Heard: A Black Mother's Perspective"

Over 80% of black maternal deaths are preventable, yet 41.7% of all black mothers die via pregnancy-related complications (CDC, NIH, 2021). These rates apply to all education and income levels. In comparison, white women die at a rate of 13.4% (NIH, 2021). Why are these death rates so high? Why are there so many black mothers meeting their early graves, instead of their newborns? Too many mothers have pleaded to be heard by medical professionals, during a time as vulnerable and gruesome as labor and delivery. However, the very medical professionals that were trained to help them, have implicit biases and institutional racism crowding their better judgment. These preconceived notions have caused too many pregnant black women to meet their early demise. So, to gain a personal perspective on what black mothers face in America, a woman by the name of Alanna, has agreed to be interviewed. She will be detailing her tragic testimony of her labor and delivery experience, and the poor maternal care she received. Following her testimony, an experienced midwife will articulate the statistics on the heightened death sentences that black mothers face in childbearing. Moreover, she will be giving insight into what truly happens when a pregnant black woman steps into a hospital. This documentary aims to shed light on the tragic reality of poor maternal health care, and heightened mortality for black mothers across the nation.

Mayebay Kamara

Faculty Sponsor: Dr. Gifty Akomea Key

"How I See Me"

How I See Me is a documentary investigating body dysmorphic disorder (BDD), a mental health condition that affects about 6.6 million Americans (Veale et al., 2016). This condition causes individuals to obsess over parts of their body they view as flawed (Rossell, 2023). Sufferers of BDD frequently compare their appearance with other people, avoid social interactions, and obsessively examine their appearance (Rossell, 2023). The film showcases personal stories and experiences from

a range of young adults (18-22) dealing with BDD and issues relating to BDD. The documentary also showcases the constant feeling of isolation, shame, and anxiety BDD victims go through daily. As well as, raise awareness towards the issue.

Precious Balogun

Faculty Sponsor: Dr. Gifty Akomea Key

"Killadelphia: The city of Brotherly Love turned Opioid Hot Spot"

In the heart of Philadelphia lies a pressing crisis: the opioid epidemic. Statistics reveal a sad reality, with the city recording some of the highest overdose rates in the nation. Data from recent years paints a bleak picture, showcasing the devastating impact of opioid addiction on communities, families, and individuals. This work embarks on a journey through the heart of the Philadelphia opioid epidemic, uncovering the interconnected web of factors fueling its spread. From the overprescription of painkillers to the increase of illicit drugs on the streets, the narrative sheds light on the multifaceted nature of the crisis. Through moving interviews with healthcare professionals, addiction specialists, and individuals affected by addiction, the human toll of the epidemic comes into sharp focus. Each story is a testament to the resilience of the human spirit, even in the face of seemingly impossible odds. In conclusion, the opioid epidemic in Philadelphia is a complex and devastating issue that requires a multifaceted approach to address. By shedding light on the interconnected factors fueling its spread and sharing the stories of those affected, we can work towards finding solutions and supporting those impacted by this crisis. It is important to continue the conversation and take action to combat this pressing issue.

Session #3 3:30 - 4:30 pm

3.1 Founder's Hall 207

Moderator: Dr. Gifty Akomea Key

Jasmine Martinez:

Faculty Sponsor: Dr. Gifty Akomea Key

"Alcohol, Nicotine & Nail Polish - A Documentary"

Substance abuse and drug addiction are things many people struggle with, in particular my grandparents. My grandfather struggled with alcohol addiction and my grandmother struggled with nicotine addiction. This documentary dives into the statistics behind substance abuse and the development of issues that arise with people who struggle with addiction and their family members who are impacted. It dives further with a first person perspective from 2 sides through a series of developed interview questions. Tamara Francis will be interviewed from 2 points of view - as a clinician who works with recovering addicts and from a personal point of view as the daughter to the 2 people of focus. The documentary will also go over the personal story that connects to their substance use struggles and how it has affected the lives of family members, including my own.

Samantha Frederick

Faculty Sponsor: Dr. Gifty Akomea Key

"Breaking Barriers and Stigmas: HIV Awareness, We All Just Want to Be Loved"

This documentary will share information about human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS). It will discuss how HIV can be transmitted and emphasize the importance of proper treatment management to help reduce the spread of the virus (CDC, 2022).

Once a person has HIV, they will have it for the rest of their life (CDC, 2022). Knowing this information is important to be able to support people, friends, patients, and family members who have HIV. It is estimated that there are 21 million people living with HIV in this country as of 2021 (HIV.gov, 2023). Specifically in Philadelphia there are 18,250 people living with HIV (AIDSVu, n.d). This is a prevalent health condition, and it is important to know how to best support someone with HIV/AIDS. A hard and heart-breaking reality for so many people with HIV is the stigma and discrimination they receive from others as a result of the virus. This can affect the mental health and well-being of people who have HIV (CDC, 2021). These discriminatory acts could include job loss, employment restriction, travel restrictions, physical abuse, denied health services, and mandatory testing (UNAIDS, 2021). The documentary will also include personal stories of people who have been impacted or are connected to people who live with HIV, in addition to sharing information on how to break the stigma and how we can best support people living with HIV to live a healthy life.

3.2 Founder's Hall 211

Moderator: Professor Marie Ranselle

Brianna Misseri

Faculty Sponsor: Dr. Gifty Akomea Key

"Mental Health in College Students: An Ongoing Crisis"

Amidst the academic pressures and social challenges of college life, mental health crises among students are reaching alarming levels. This documentary sheds light on this pressing issue, revealing staggering statistics that show a significant rise in anxiety, depression, suicide rates, and other mental health challenges faced by college students in recent years. Through intimate interviews with college students struggling with mental health issues and insights from a licensed professional counselor, the film explores the complex factors contributing to this crisis. It also showcases the mental health services available on the Cabrini University campus and discusses the crucial services that should be provided on campuses nationwide. The documentary also explores the impact of the COVID-19 pandemic, highlighting the additional stressors and barriers faced during this challenging time. As the documentary draws to a close, viewers are left with a sense of urgency and a call to action. They are also given key findings and recommendations for enhancing mental health services on college campuses nationwide. "Mental Health in College Students: An Ongoing Crisis" is not just a documentary; it's a catalyst for change, advocating for a brighter, more mentally healthy future for college students everywhere.

Cianni Smith

Faculty Sponsor: Dr. Gifty Akomea Key

"The Dying Reproduction of Black America"

The Dying Reproduction of Black America is a documentary that covers the significantly high rates on the prevalent issue of African American women's maternal mortality rate. In the United States,

African American women are facing institutional barriers of society, or namely health care disparities. According to the Centers for Disease Control and Prevention, African American women are three times more likely to face mortality due to pregnancy related complications than White women (CDC, 2023). This is widely attributed to systematic racism within the healthcare system and several factors that contribute to this disparity such as the broken relationship between the African American community and healthcare system. By addressing the issue on black maternal mortality, it requires a multifaceted approach that acknowledges and confronts the historical and ongoing systematic racism within the healthcare system. The Dying Reproduction of the Black America is to bring awareness on achieving health equity and ensuring that all women feel safe and respected in the hands of maternal care.