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OUR MISSION. *Omnium: The Undergraduate Research Journal at North Carolina Wesleyan University* is a collaboration between the Writing Program and the Writing Center at NCWU, providing our undergraduate students with the opportunity to explore the major genres of academic writing, join in scholarly conversations, share their ideas, perform original research, and see their work published in a professional venue. *Omnium* also serves as a teaching resource for NCWU faculty—and faculty at other institutions—as the essays and research articles published here reflect the skill and knowledge of real students at various stages of their academic careers, from first-year composition essays to projects created in senior seminars and honors theses. The materials lend themselves well to in-class discussion, analysis, and emulation, and we hope that students will be energized when they realize that there is no single arcane secret to writing well. All it takes is practice, motivation, and direction.

Welcome to the fourth issue of *Omnium*, a joint effort of the Writing Program and the Writing Center at NCWU, that collects written work by promising undergraduate scholars. As we emerge from more than two years of harrowing pandemic-related restrictions, we notice that our students, perhaps in an effort to rethink issues of universal values, empathy, and quality of life, have collectively turned to issues of animal welfare and protection in the past academic year, a prominent trend reflected in the 2022 issue of which more than a third is dedicated to animal life, explored from various disciplines' perspectives.

We invite our readers to enjoy and learn from the fifteen new essays collected here and also encourage teachers in any discipline to use them as models in their own courses. Please use attribution when you do so.

Our thanks go to Drs. Dimitri Blondel, Jason Buel, Daniel Elias, Jarrod Kelly, Jackie Lewis, Rachel Roy, and Shane Thompson for reviewing the papers in their respective disciplines and for doing so speedily and conscientiously. Our colleagues aided us in selecting the most outstanding essays in each of the traditional five categories, following the structure of our Schools: First-Year Composition, Humanities, Social Sciences & Education, Business & Computer Information Sciences, and Natural Sciences & Mathematics.

The *Omnium* Editors,

Doreen Thierauf
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Assistant Professors of English,
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FIRST YEAR COMPOSITION

VENDELA DOLSENIUS

ABOLISH ZOOS!

CRUELTY, SPECTACLE, AND ANIMAL RIGHTS

INTRODUCTION

How would you feel if you were captured for other people to watch your every move? If every aspect of your everyday life were manipulated and controlled, would you be able to feel happy? The topics of animal testing, domestic animal abuse, and the treatment of animals in captivity are all important to discuss to spread awareness about the extent of animal cruelty existing in the world today. However, this project will specifically focus on animals in captivity in zoos. According to the World Association of Zoos and Aquariums, there are an estimated of 10,000 zoos around the world, attracting 700 million visitors each year (WAZA). Note that these numbers do not include animal parks, circuses, or private collections where animals are also in captivity. An estimated 1 million large animals are held in zoos worldwide (Isakov). Many of the captive animals that are in zoos

have evolved to require large territories in the wild that cannot even be compared to the areas they are offered in zoos. Personally, I believe that zoos are an infraction on animal rights and that it is time for us to make a change.

Almost everyone has visited a zoo at least once in their lifetime, but most people never really put a second thought to the animals' experience. Animals who are meant to be in the wild are kept in captivity for their whole lives. During this hard time, in 2020 and 2021, the COVID-19 pandemic has shown many of us how hard it can be to get your normal everyday life stolen from you. Many of us have been forced to quarantine for a long time; we have experienced feeling limited and depressed. But what if I tell you that this is the way we have forced animals to live for hundreds of years? Hopefully, we can learn from this experience and realize that no creature deserves a life in captivity. Abolishing

zoos is not something that can happen in a day, and many different factors must be taken into account. However, we need to keep in mind that which matters the most, which is the lives of innocent animals. Every day that passes while animals are kept in zoos is one day too many.

With regards to animals' captivity, there are a lot of both scholarly debates and popular discussions on social media situated in the field of environmental science and activism, more specifically zoology. For example, Jenny Gray, who is the Chief Executive Officer of Zoos Victoria, discusses the ethics of keeping wild animals in zoos in her book *Zoo Ethics*. She



Photo by Boldy Chromos.

brings up the challenges of compassionate conservation and why zoos should be considered unethical. Like Gray, I believe that zoos are an infraction on animal rights; therefore, all zoos should be abolished. There have to be better ways to educate people and to save endangered animals, and that is exactly what I will investigate in this project. Zoos label themselves as "education for conservation" rather than as entertainment, but I wonder if that really is the case. To answer this question, I will explore the history of zoos, and look into current debates surrounding animal rights and animal welfare. I will also dig deeper into the discussion about the ethics of zoos to find different perspectives to interpret. I have to analyze the main purpose of why zoos exist and what it is that makes them ethically wrong.

HISTORY OF ZOOS

The history of zoos goes back all the way to year 1752, when the world's first zoo was founded (McGarry). The zoo is called Tiergarten Schönbrunn and it is located in Vienna. From the very beginning it was a royal menagerie seen as a symbol of imperial Austrian extravagance (McGarry). In fact, most of the oldest zoos were seen as status symbols, standing for royal wealth, and rich people showed their power by having private animal collections. Leaders exchanged animals as a sign of power and influence, and at this time animals were often sent as significant gifts (Gray 12). Zoos were also seen as important since they confirmed status in the city (Gray 13). Monkeys, antelopes, and colorful birds were part of Schönbrunn's first collection. The first elephant arrived in 1770, along with bears, big cats, and kangaroos. It was not until the year 1779 that the animals being captured were shown to the public. Of course people were very fascinated and curious to see exotic animals from around the world, and the concept of the zoo quickly became popular. However, at this time zoologists did not have enough knowledge of how to take care of the exotic animals since they were transported from the other side of the globe. As a result, the animals lived very stressful and short lives since the zoologists could not manage their needs (McGarry).

Today, the four main roles of zoos are conservation, research, education, and recreation. Furthermore, zoologists have way more knowledge about animals and their needs. The development of zoos and animal welfare shows how our relationships with animals have

changed over time (Gray 14). However, the way that animals in zoos are treated is far from sufficient when it comes to the requirements of the animals. According to Gray, back then, zoos reflected the social issue of that time (Gray 15). I believe that zoos still reflect the social issue in our society.

ANIMAL RIGHTS

According to the Human League, "Animal rights advocates believe that non-human animals should be free to live as they wish, without being used, exploited, or otherwise interfered with by humans" ("Animal Rights"). Because, just as humans have human rights, animals have animal rights. Animal rights activists and scholars claim that even non-human animals are morally relevant and that their fundamental interests should enjoy the same legal status as human interests. This means that animals' basic interests, such as not suffering, needs to be respected and considered. The Animal Welfare Act (AWA) is the primary federal animal protection law in the U.S. ("Laws that Protect Animals"). It mainly protects animals kept in zoos and animals used in laboratories. Additionally, entertainment law focuses mainly on captive wild animals in zoos. The law includes a few legal protections, but it is clear that stronger protections are necessary since keeping wild animals captive in zoos constitutes abuse as an entertainment ("Laws that Protect Animals"). According to Andrew Linzey, who is the founding director of the Oxford Centre for Animal Ethics, laws regarding animals are not designed to really protect the animals. The laws are designed to protect humans in their relationships with animals (Linzey 230). Animal welfare laws have existed for more than two hundred years but they have only been setting the minimum standard of care (Linzey 230). For example, the animal welfare act includes that zoos must provide sufficient space to allow each animal to make normal postural and social adjustments with adequate freedom of movement. This proves that the laws need to develop in order to not just give the minimum standard ("Laws that Protect Animals").

One question that might appear while discussing animal rights is whether animals are equal to humans or not. The answer to that is that every living being on earth has an inherent value based on sentience that renders a being worthy of moral consideration (Stoop). Both animals and humans have self-awareness, the ability to make conscious decisions, and

personal preferences that guide their actions. This means that animals should be considered equal to humans.

Animal rights are important because they represent a set of beliefs that go against seeing animals as nothing more than mindless machines. Seeing animals as non-sentient and unfeeling beings is inaccurate, but this is what once justified humans to use animals for their desire. These kinds of beliefs do not belong in our modern world; today we know better. Gradually, humans have accepted and understood that animals do in fact have emotions and that they are able to feel pain and suffer harm. This means that animals should be viewed as individuals with their own dignity, value, and rights (Linzey 221). Many zoo enclosures that were accepted only fifty years ago are today completely unacceptable (Gray 15). Changing perspective and challenging traditional views are two major factors to make a difference. Philosophers and ethicists have challenged the dominant view of animals, and that is one of the main reasons to why we look at animals differently than we did hundreds of years ago (Linzey 221). One philosopher who made a huge impact on the way people viewed animals is Charles Darwin ("Animals Think"). In his book *The Expression of Emotions in Man and Animals*, Darwin examined joy, love and grief in birds, domestic animals, and primates. Donald Griffin, however, is considered to be the founder of the modern field involving the study of animal consciousness. In his book *The Question of Animal Awareness*, he argued that animals could indeed think and that their ability to do this could be subjected to proper scientific scrutiny ("Animals Think"). This shows that it really is possible to change the way humans see and treat animals. A world in which animals are completely free from human exploitation seems far off right now, but we have to start somewhere. It will definitely be a big step to give animals in captivity their freedom back.

ANIMAL CRUELTY

Keeping wild animals in zoos is a major concern for scholars studying animal cruelty. The three main needs of an animal are comfort, choice, and control. Zoo life deprives animals of their freedom and poses several threats to their health and wellbeing. Animals have the need to make their own decisions about when, what, or how they want to live. For example, some animals have the need to hunt, which cannot be fulfilled in captivity. They live in cages and

enclosures that cannot in any way compare to the jungles, savannas, and forests that are their natural homes and habitats. Animals that are meant to fly over large areas are forced to exist in confined spaces. Predators are kept near animals that would be prey animals for them in the wild, which causes stress for both species ("Zoos: The Life").

Both the physical and mental health of animals are affected negatively as a consequence of being held captive. Keeping wild animals caged can cause infections, bone fractures, and starvation. In addition, limited spaces and insufficient stimulation can lead to stereotypical behaviors such as circling, pacing, bar-biting, vomiting, neck-twisting, and self-mutilation ("Zoos and Aquaria"). Stereotypical behavior describes animals' behavior which is repetitive and invariant and that has no function at all (Lamont). When kept in confined spaces, animals tend to get very frustrated and disturbed, which can result in animals harming each other. It is also very common that animals in zoos suffer from depression and anxiety. One example that can cause depression and anxiety for animals in zoos is that many animals are taken from their families and sent to other zoos. They are forced to leave what might be their only safety and forced to experience a new unknown habitat. And, once again, the animal has to adjust to a habitat that is unnatural and, therefore, it is a change that causes the animal to experience stress and anxiety ("Zoos: The Life").

Another thing that is highly concerning is the way that some zoos deal with problems when it comes to limited spaces. According to Animal Equality, it is common that animals are killed when their group size exceeds the space allotted to them ("Zoos: The Life"). This means that zookeepers think that they have the right to end the life of innocent animals just because they do not have enough room for them in the zoo. Some animals are also killed when they no longer attract enough people or benefit the zoo in other ways. Zoos seek animals that are most appealing to the public and that are mostly baby animals, taken away from their mothers way too early ("Zoos: The Life"). A tragic example of a case where an innocent animal was shot and killed just because of the reason that it would not benefit the zoo is the case of the giraffe Marius at the Copenhagen Zoo in 2014. Marius was a healthy 18-month-old giraffe who was genetically unsuitable for future captive breeding, as his genes were over-represented in

the captive population (Morell). This cannot be justified in any way and I believe that it is totally unacceptable and cold-blooded.

Humans are also the ones who cause stress for zoo animals. Animals are subjected to camera flashes, and hundreds of people spend each day in front of their cages watching them. If you have ever been to a zoo, I think that you might have realized that many people, mostly children, knock on the glasses of the cages to get the animals' attention. Animals are also exposed to loud noises of people screaming which can stress the animals extremely ("Zoos: The Life"). I believe that the least people can do when deciding to visit a zoo is to show respect toward animals. I understand that children might not understand that kind of respect at such a young age, but the parents do have responsibility for the way their children act. Also, there is a very dangerous side of zoos when it comes to humans being in close contact with animals. There have been several cases where humans have entered the enclosures of animals. One case I think most of us are familiar with is the case of Harambe, a gorilla who was shot and killed after a three-year-old boy fell into his enclosure at the Cincinnati Zoo in 2016 (Brown). This is an incident that received a lot of attention on social media and it should have been an eye-opener for all of us. I do not believe that it was wrong to kill the seventeen-year-old gorilla to save the three-year-old boy, but this incident should not have been allowed to occur in the first place. Harambe was an innocent gorilla kept in a zoo where later something that he could control caused his death. And it is not just the life of the animals that is in danger in zoos; it is also the life of humans. As proven, zoos cannot offer one-hundred-percent safe environments, and more accidents will most likely occur in the future if we do not decide to make a change.

ZOOS AS AN IMPORTANT FORM OF EDUCATION

Even though zoos can be seen as an infraction on animal rights, zoos offer opportunities to educate visitors about wildlife and habitat conservation. It is proven that knowledge of the animals that exist around the world helps children develop a greater level of sensitivity for animals (Bachani). They become more responsible towards nature and develop empathy for the animals and the world around them. However, in my opinion, animal welfare is more important and should be prioritized over human education since there are other ways for us to fulfill that kind of education. I think that children should learn about animal rights instead of developing empathy for the animals so they become more responsible for nature. As

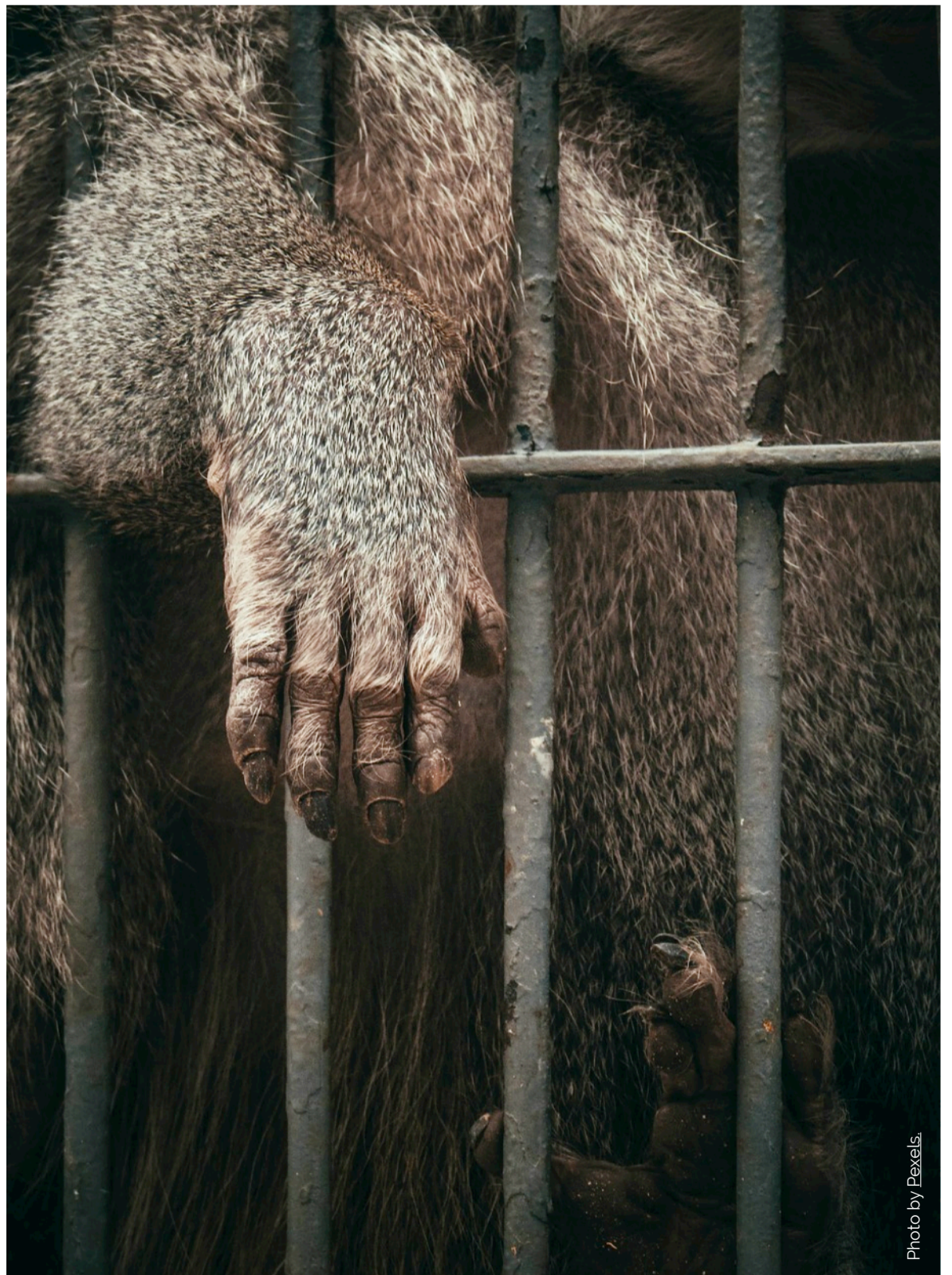


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a child, you do not understand what is wrong with using animals for entertainment if no one ever discusses it with you. When I was a child, I loved going to zoos, aquaria, and circuses and it was not until I was older that I realized that these places are wrong. I do not blame my parents because I believe that this view of zoos is also something that has changed over time. The topic of animal rights and animal cruelty in zoos became popular on social media only a couple of years ago, and I believe that it was not until then that a lot of people began to question it. For many, zoos are such a normal thing that they have grown up with them and therefore they have never been seen as something to actually question. But, just like many other things, there will come a time when a change is needed.

Zoos are also vital to the conservation of many species because they are keeping endangered species safe from extinction across the world. However, according to the organization Born Free, only 15 percent of the thousands of species held in zoos are considered threatened ("Zoos and Aquaria"). The argument that zoos exist to protect endangered species is therefore not sustainable. There are better ways of keeping endangered animals safe from extinction and they should not be connected to any kind of entertainment.

According to Animal Equality, the alleged educational role of zoos needs to be challenged if we want to live in a just and equitable society that respects animals. Zoos can teach us the exact opposite of empathy and sensitivity, and I believe that this is something that humans realize only when they get older. Zoos show that humans have the right to enslave animals and they suggest that animals have no other purpose other than entertaining us. Therefore, zoos do not teach us to respect animals as individuals, and this is something that a child might not understand ("Zoos: The Life").

SOLUTIONS FOR KEEPING ALL ANIMALS SAFE

One example of creating a better life for captive animals is to prioritize keeping animals safe in their natural habitats if possible. People who really care about protecting animals and

endangered species should donate to organizations that focus on keeping animals safe in the wild. It is important to keep their natural environment safe because otherwise there is nowhere left for the animals to go. This is where I believe that more people will become involved since it includes ongoing problems with climate change and human interference in nature. Rainforests are being destroyed, glaciers are melting, and savannas are endangered. These are the homes of millions of animals and, in order to keep the animals safe, we must save their homes. The ever-growing human population and its consumption of resources is the biggest cause of deforestation. When it comes to climate change and its effect on our environment, it is important that we understand that in order to be able to save the animals, we might also have to change our own lifestyle. I believe that people becoming environmentally conscious and that decreasing their ecological footprint would result in a huge positive change. Humans also need to keep being reminded that we are not the only species living on earth and that, therefore, we should not be the only species benefitting from the resources on earth.

Animals should not be exposed to stress caused by humans and, if they are kept captive, for safety reasons, they should not be used for entertainment. There are already many examples of organizations that keep wild animals safe without exposing them to humans, but the problem is that these kinds of organizations do not have enough attention.



Stop Poaching has an event to help save wildlife where it hosts activities with different conservationists and celebrities. This can be seen as a form of entertainment, but the event has a different purpose than zoos have. The purpose is to keep the animals safe rather than the selfishly using animals as an entertainment for people.

Abolishing zoos is not something that can happen in a day, but every single one of us has the choice to make. The action that is needed is as easy as simply not visiting zoos. If people do not support animals as an entertainment, animals will not be used like that anymore. And, as mentioned before, we can go even further to make a change by focusing on keeping animals safe in their natural habitats. The action that is needed is for people to have a sustainable lifestyle and to stop being selfish.

CONCLUSION

There are other ways to educate humans and to save endangered animals than keeping animals in zoos, and animals should not be used as an entertainment for humans. Zoos as an important form of education might in fact teach us crucial lessons about human power. Rather than children learning empathic and sensitive behavior, zoos show how humans treat other species unequally. The habit of holding animals in captivity started because humans wanted to show off their power and wealth. Today, animals are used to entertain humans and that is one example of how humans mistreat their so-called power they have over other species. It is clear that captive animals suffer both physically and mentally. Some animals suffer from depression and anxiety which can also result in physical pain. This is an unbearable situation, as mentioned before, and, just as humans have human rights, animals have animal rights and inherent value. Therefore, it is important that we all understand that every living being, human or non-human, should be treated in the way they deserve and they should be able to follow their own will. And if it is not possible to keep some animals safe for environmental reasons, they should still not be held in captivity or be exhibited. Being in captivity is already very stressful for animals, and interaction with humans only worsens the stress. Animals in captivity should not suffer, and therefore all zoos should be abolished. Again, how would you feel if you were captured for other people to watch your every move? If every aspect of your everyday life were manipulated and controlled,

would you be able to feel happy? Our focus should be on keeping the animals safe in their natural habitats where they can live like they are supposed to. ❖

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ANDREA RIZZO

NOTHING FREE ABOUT WILLY: THE DETRIMENTAL EFFECT OF CAPTIVITY ON ORCAS

Captivity is the condition of being confined and retained from one's natural habitat, resulting in isolation and imprisonment. Along with many other species, nowadays, 59 orcas are held in captivity by humans with the excuse of providing entertainment or "education" to humans (Daly). They were either torn away from their natural ocean homes and families, or born into a marine-animal prison they cannot escape (PETA). Each of these individuals is currently suffering as they are being deprived of their freedom and are unable to live in their natural environment. Captivity affects orcas to the point of making them aggressive, not only towards other animals or humans, but also towards themselves. These behaviors, including attacking humans, hurting each other, or hitting themselves against the glass, are not seen in nature which helps us understand that orcas'

quality of life is highly impaired (Anderson 21). Nevertheless, aquaria and zoos still exist because there are people who consume this kind of entertainment, and because some companies like SeaWorld, Loro Parque Zoo, Moskvarium, among many others, make enormous profits from animal abuse. It is important to teach everybody about this issue in order to make them reconsider their choice to go to places that offer shows with wild animals. Orca captivity should be stopped and banned; there should be projects to relocate orcas who currently live in captivity to sanctuaries; and no further orcas should be captured for entertainment or "education" purposes.

In this project, I will be using popular and scholarly sources to describe how important orcas are to us, to analyze how keeping them



captive affects their quality of life and influences their behavior, and to explain why captivity continues to happen. Moreover, I will offer a critique of promotions of places like SeaWorld that defend animal captivity, arguing why what they say and do is wrong. Finally, I will propose ideas on how orca captivity could be safely phased out.

Orcinus Orca, most commonly known as orcas, are incredibly intelligent animals with a great capacity for empathy (Anderson 26). They are mistakenly called “killer whales” as well, but according to taxonomy rules, they are not whales; in fact, they belong to the dolphin family. Although we may not have noticed, orcas share many similarities with humans; they have personality traits similar to ours, such as affection and cheerfulness. They even have a part of their brains that humans do not have that processes emotions, giving them highly emotional and social lives (*Blackfish* 25:54). In nature, they live in pods, closely-knit family groups, and communicate with each other in highly complex ways (Anderson 27). They bond deeply and in complex ways with each other; everything about them is social. Each pod lives like a community and has its own “culture”; they have different vocalizations that might be compared with human languages (*Blackfish* 24:26). Scientists know that when one of the family members is captured, the remaining pod would cry and try to communicate with the lost member for years (*Ocean Souls* 28:10). Just imagine how heart-breaking that is. In addition, the process of orca capturing is extremely aggressive: aircraft, spotters, speedboats, and even bombs with acetylene torches are used. The worst part is that the pods attacked know that their young ones are going to be taken away from them and use different strategies to escape, but sadly, those attempts usually fail. At the end of the hunt, the human orca hunters not only take several orcas with them, but many orcas die because they get caught in the nets that are used (*Blackfish* 10:04).

Orcas should not go through these traumatic experiences. They do not belong in tiny tanks; they belong in the ocean where they are able to swim freely and live their lives. In nature, orcas can be found in all oceans. They are most abundant in colder waters, like those off the coasts of Norway, Antarctica, and Alaska, but they can also be found in tropical and subtropical waters. Orcas normally spend the majority of their lives offshore where they

have hundreds of miles of water to swim, but they can also be seen in coastal nearshore waters (“Species Directory: Killer Whale”). Additionally, they play a huge role in the structure and function of the marine ecosystem. Since orcas are top predators, they maintain the health of the coastal ecosystem. Without them, the ocean ecosystem would most probably suffer a big imbalance, affecting life on earth and, in consequence, affecting humans. In a way, life on earth as we know is possible because of them. We need orcas in the ocean, not swimming and jumping in a pool.

While in captivity, orcas live under terribly poor conditions which leads them to develop behaviors not seen in the wild. Orcas are kept in small tanks where they are not able to swim as much as they need. Sometimes, conditions are so atrocious that the animals are kept for long periods of time in tanks that are 20 feet across, 30 feet deep, and completely dark (*Blackfish* 16:50). In SeaWorld, even parking lots are bigger than the tanks where the orcas are kept. This, of



Photo by Efrains Tochter.

course, has terrible consequences not only for the orcas' health but also for their interactions with each other. For example, when orcas are kept in tiny tanks, they will start hurting each other, provoking serious injuries and even death. Management of social conflicts in controlled environments under human care is almost impossible, yet social conflict between individuals is inevitable in highly social species like orcas (Sánchez-Hernández 325). However, the difference between captivity and orcas' natural environment is that when in the wild there is tension between two individuals, there are hundreds of square miles of water to exit the situation and keep a distance, while in captivity animals are squeezed in very close proximity and do not have a chance to get away. According to retired SeaWorld trainers, "whale-on-whale aggression is just part of the daily life in aquaria" (*Blackfish* 42:50). Nevertheless, this company will advertise that orcas who live there behave like a family and that SeaWorld specializes in the care and display of them. It is not that orcas are not able to care for each other or live in a community because, as stated before, they are highly social animals. The problem is that in captivity, they are an artificial assemblage. Animals from different parts of the world, from different parks, with different genes, and who "speak" different languages are forced together. In consequence, the result of putting orcas together with other individuals who have not grown up with them and are not part of their group culture is, sadly, hyper-aggression, violence, and sometimes murderous behavior (*Blackfish* 42:15). Orcas definitely do not interact well with each other in captivity.

Relationships between orcas in captivity and humans are not the best either. While trainers will passionately put a lot of effort in creating a strong bond with them and try to ensure their wellbeing, trainers are usually very young and inexperienced when they are hired, do not have degrees in animal science, and do not know anything about orcas' natural behavior. They are neither properly informed about how orcas are kept since the companies they work for keep crucial information from them. Even retired trainers question what they were doing when working for oceanaria, specifically what they were doing to the captive animals (*Blackfish* 35:40). Researchers observed that many orcas became much more aggressive and their quality of life declined after they underwent entertainment training (Anderson 21). A lot of times, orcas would be trained using

punishment techniques. One of the most famous cases is Tilikum, a male orca who lived at SeaWorld for several years and who sadly was involved in several mortal attacks on trainers. One of his first trainers would ask him and a highly trained orca to perform the same tricks, and if Tilikum did not do them correctly, both animals were punished by being deprived of food. This led to a big frustration to the trained orca who would then rake Tilikum with his teeth (*Blackfish* 15:36). This is just one example of the terrible atrocities Tilikum lived through for his whole life: he was separated from his family, moved to different parks, viciously attacked by female orcas who lived with him, kept in complete isolation for many years, and so on. Once, he even spent three whole hours in the same position without moving at all (*Blackfish* 1:16:44). He was just one of the many individuals whose captivity drove him crazy. He had a very bad life, was emotionally destroyed, and highly traumatized. The results of this were the deaths of at least six humans who were attacked by him; one of them was Dawn Brancheau, one of the most experienced trainers at SeaWorld, who sadly became a victim of a victim of the captive orca industry (*Blackfish*). Tilikum was a victim, not a killer.

What needs to be understood is that orcas are not naturally aggressive, but that captivity makes them behave aggressively. The most important fact that supports this statement is that to this day there is no record of any orca harming humans in the wild. While in captivity, orcas do not kill because they are savage and crazy; they kill because they are frustrated and have no outlet for their frustration. Just imagine if you are kept in a bathtub for at least twenty-five years of your life, wouldn't you become a little irritated? A little psychotic? Captivity is not morally acceptable; it is definitely not fair to deprive these highly intelligent and sensitive animals from living a normal life. In addition, with these types of situations where attacks are involved, people get the wrong impression of orcas because they can only see their aggressiveness and start being superstitious. People start fearing these majestic animals and think they are only vicious killers with sharp teeth. Orcas are very powerful animals, but they are not cold-blooded killers; they are not a threat to humans. Humans, in fact, are a threat to orcas.

One of the biggest questions is why, if captivity is so damaging for orcas, it keeps

happening. The answer is that aquaria like SeaWorld neglect the animals they have in captivity for economic reasons, and not even their own trainers realize this, much less the public that consumes it. SeaWorld is only interested in the money that this business generates for them and not the animals. For instance, orcas themselves are worth millions of dollars, particularly the sperm of male orcas is worth a lot of money (*Blackfish* 57:35). That is why, for example, SeaWorld kept Tilikum for such a long time, although he caused severe problems and showed many times he was not meant to be in captivity. SeaWorld exclusively bought Tilikum for breeding purposes. What is worse is that their breeding programs are anything but a benign process; they involve administration of drugs to speed up female orca breeding cycles and extensive artificial impregnation of orcas. These drugs then caused these animals to have serious problems with pneumonia and skin disease that cause them to die at a very young age (Palmer). But SeaWorld does not talk about their captive failures. Besides, aquaria are usually not ready nor trained to receive orcas, but they accept them because they do not want to lose revenue (*Blackfish* 1:00:30).

Amusement parks like SeaWorld are in fact just the mask that hides a black market of animals in which very powerful countries like Russia, China, and the United States are involved and in which a small number of rich people who participate in it benefit economically. What is even worse is that, despite public concern, federal regulations that deal with the housing of marine mammals are often not well-enforced so

not even the law is there to protect them (Tierney).

However, what encourages orca captivity is the high number of people who continue paying a lot of money to consume this type of entertainment. Many claim that they do it for educational purposes, but oceanaria confinement is not education. People cannot really learn about these animals when these orcas are trapped. Orca captivity not only is completely unethical and cruel, but it is also counterproductive because many of the things taught are incorrect. For instance, because their orcas die at 25 or 30 years of age, SeaWorld not only claims that all orcas die at this time but that they even live longer in aquaria because they have all the veterinary care (*Blackfish* 40:50). In reality, the lifespan of orcas are similar to humans'; females can live a little longer than 100 years while males can live almost 60 years. Another example involves fin collapse. Most if not all male orcas living in captivity have their dorsal fins collapse. SeaWorld claims that 25% of orcas have a fin that turns over as they get older; however, in reality, this only happens to 1% of orcas that live in the wild. It was demonstrated that it is produced when orcas undergo high levels of stress (@intertidalkendy). Lastly, what is being said by the trainers while performing in the shows is not true either. Trainers would claim that "Everything trained is an extension of the orca's natural behavior" or that "Orcas are not doing the tricks because they have to, but because they really want to do it." Today, trainers who said those things are mortified and embarrassed by it because they recognize that they told lies (*Blackfish* 34:40). Everyone should



keep in mind that SeaWorld has to keep its captive orcas hungry by depriving them of food in order to get them to do tricks on command (Palmer). Aquaria's education involves facts being twisted, turned and denied in one way or another. People should be learning real facts about these amazing animals and not be scammed by aquaria.

To help stop captivity, alternatives should be considered so that people can learn about these amazing animals without having to go to an aquarium or zoo that keeps them captive. With the largely developed technology we now have at our disposal, 7D technologies can be a very strategic way for people to interact with orcas without captivity being involved. This way, people who do not have the opportunity to travel somewhere to see orcas in the wild would have the chance to live very vivid experiences that can make learning about orcas both exciting and fun, besides that no cruelty will be involved. "Virtual reality" has a tremendous potential to start phasing out captivity (Williams 82). In addition, there should be projects to relocate orcas who currently live in captivity to dedicated orca sanctuaries, and no more orcas should be captured for entertainment or "education" purposes. Scientific experts believe that all captive orcas would do much better in seaside sanctuaries, as they would have the opportunity to live in an ocean environment in real untreated seawater and in a much bigger and deeper space that can never be built on land. They should also be retired so that they would not have to do tricks all day everyday for food (Palmer). They would have a way more healthy and dignified life since sanctuaries would still allow for medical care and feeding, but provide a richer and better environment than the bare concrete tanks oceanaria currently provides.

To conclude, oceanaria confinement is completely unethical; we can no longer continue to treat these remarkable animals as we have done. Confinement not only impairs orcas' quality of life, but also influences their behavior negatively by making them behave aggressively. A new era of appreciation and understanding for these creatures must begin because orcas are very important for us, and we should treat them correctly. We need to spread awareness on this issue and help people understand that captivity is slavery and needs to be stopped. To do so, oceanaria shows need to be banned, animals should not be forced to perform in these circus environments, and we

have to stop visiting these parks. If people do not consume this type of "entertainment," then there is no business in it. Moreover, people are becoming misinformed when going to these shows as they are made to believe untruths. We need to understand that it should not be normalized to keep these intelligent, highly evolved animals in concrete pools where they are deprived of all the environmental stimulation they need to have. The findings of this paper are very important to start recognizing these types of things and learn the reality of orca captivity. However, not everything is negative: in a recent survey on the public opinion regarding captive cetaceans, more than half of the people surveyed claimed to be against this kind of entertainment, contradicting previous studies (Wasserman). So there is hope; although a lot of work still needs to be done, the shift in public sentiment is very encouraging. ♦

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THE REPRESENTATION OF THE ITALIAN MAFIA IN MOVIES

In the last decade, the leading roles of mafia men and handsome mobsters in romantic movies have been increasing in popularity because of the positive response from younger audiences (Tarulli). The approval of this content is leading new producers and directors to create more movies and TV series picturing mafiosi as sexual partners who seem acceptable to be in a relationship with. These productions treat the mafia theme as if it is something that belongs to the past and not concerning people at this very moment, while the reality is that mafia violence still exists and is an occurring event nowadays in

Italy and all over the world. This phenomenon not only damages the anti-mafia movements worldwide but also disrespects the thousands of victims who have suffered and died from it, invalidating and glorifying the brutality of these organizations. In order to understand what the mafia is capable of, we should take a step back and analyze what exactly it is. For the purpose of this paper, I will be focusing primarily on the Italian mafia, which is the one closest to me since I have lived in Italy my whole life.

The mafia is a criminal organization that uses violence in order to gain power and money, and it can be found everywhere; the Italian mafia is one of the most efficient crime organization because their presence has corrupted the Italian government, which allows them to be incredibly hard to fight and get rid of (Dominoni). Italy has adopted a democratic republic system in which the parliament is the decision-making source, and among members of the parliament, multiple individuals are affiliated with Italian mafias and help them legalize their illegitimate activities (Champeyrache). The affairs that are under the control of the mafia hurt Italian small businesses all over the country. The most famous method of extortion is the *Pizzo*, which is a price that local stores and businesses need to pay to the mafia in order to keep their job; when the *Pizzo* is not paid, the mafia makes use of violence, which is their preferred method, but we will discuss it in more detail later (Champeyrache).

An important factor that we need to keep in mind when we watch films that romanticize mobsters is that the role of women in the mafia is not exactly how it is pictured in these movies. In the context of the mafia, the stereotype of the women as submissive, weak, and unreliable prevents them from official entry into the organization; therefore, most of the time they do not take part in the processes or they occupy lower



Photo by Pavel Danilyuk.

positions in it. Women were denied an autonomous identity, being known and recognized only as "the wife," "the sister," and "the daughter" of the mafia boss. All these subordinate positions are linked to men who are part of these organizations. Women, even though they are not involved, are fundamental to the mafia in order to educate their children to, one day, take an active role in it; Leonardo Messina, an ex-mafioso said "The women have never been, nor will ever be affiliated, but they have always had a fundamental role. [...] The women have never sat around the table for a meeting but they have always been there at the same time. Many meetings took place in my home, my mother's, or my sister's. They hear everything but cannot say anything. Women are carriers of secrets" (Puvia). Not only they are not involved, but multiple times women are victims of the brutality of the mafia, used in order to blackmail their partners who are in business with them (Puvia). There has only been one Italian mafia in which women had a major role in controlling and managing the organizations; it is the *Sacra Corona Unita*. This organization was born in the prison system in Puglia (a region in southern Italy), meaning that women were needed to have an active role to administer the operations on the outside (Renga and Cooper). A movie called *Galantuomini* (Mosca, 2008) tells the story of Lucia Rizzo, a woman who became a mafia boss; Fabrizio Mosca, the director, represents her dramatic story on the big screen, telling us how men tried continuously to challenge her position of power and how she was repeatedly punished through rape (Renga and Cooper). This representation is incredibly important to express how, even when women are in control, they will never be respected or given importance in the context of criminal organizations.

After understanding the real motives of the mafia and the role that women play in it, we can now proceed and analyze the most famous films that are portraying this phenomenon. The latest, and in my opinion, worst representation of the Italian mafia is from the movie *365 Days* (Mandes and Bialowas, 2020), in which a handsome Italian mobster named Massimo dreams about a girl, and five years later, after he sees her during her vacation in Italy, he decides to kidnap her and presents her an ultimatum: She has 365 days to fall in love with him. During this year he tries to seduce her, and after multiple instances of non-consensual sexual activity (he forces her to watch him having sex with another woman, for

example), she falls in love with him (Cheek). This movie not only disregarded the correct representation of the mafia, but it turned out to be a pornographic production with a poor storyline that I personally found neither appealing nor entertaining. Throughout the movie, we are presented with numerous romantic and sex scenes which completely take the attention off the cruelty of the mafia's behaviors, leading the audience to side with Massimo who is nothing but a rapist and the leader of an organized criminal activity.

Unfortunately, there are more movies that tend to make the audience sympathize with the criminals. One of these is *The Godfather* (Coppola, 1972). It tells the story of Vito Corleone, an Italian American mobster who emigrates to the U.S. from Sicily, and is the leader of one of the most powerful criminal organizations in New York. After he has been attacked by a rival mafia, his son Michael takes control of the organization and becomes the boss of the Corleone family (Bauer). This movie became really popular, and it is one of the main reasons why the mafia theme started being successful in movies. It also allowed the audience to favor and support the Mafiosi because as main characters they were portrayed as flawed people guided by human emotions, and not as criminals who were committing evil acts.

What made these movies so famous? My guess is that the directors made a smart choice by choosing handsome men to play the criminals' part and relying on the hyper-sexualization of these characters to gain the sympathy of their audiences. It is no surprise that a nice face and a nice body will drive people to watch even the most poorly written productions, but this factor definitely plays an important role in the deception of criminal and evil characters who are all seen in a positive light because of their looks (Johnston). Even though the physical attractiveness is the primal cause of the popularity of these movies, directors know well that a female audience tends to be captivated by dominant male roles that depict boldness and arrogance as their main personality traits (Johnston). This is mainly caused by the social expectations of masculinity which allow the glorification of men who are portrayed as confident and charismatic; most of the time, these aspects overshadow the true evil origin of the characters (Johnston).

Meanwhile, Italian television transmits films and TV series that show the reality of the mafias. Most of them are set in Naples, which is known

to be under the control of Camorra, one of the mafias that are more commonly represented on screen by *polizieschi*, that is, narratives that focus on the fight between the mafia and the local police who struggle to maintain order in their city. Some of the most well-known movies and series are *Napoli violenta* (Lenzi, 1976), *Napoli si ribella* (Tarantini, 1977), and *La legge della Camorra* (Fidani, 1973); each of these show very tragic storylines, and even though *Napoli si ribella* ends with the death of the mafia boss, it shows how the Camorra still terrifies the city and the threat is not contained (Renga and Cooper). All of these movies were produced during the 1970s as a consequence of the terrible economic struggle that Italy was facing and that allowed criminal organizations to obtain more power and unleash a series of violent activities. *Polizieschi* started picturing authorities and their will to contrast the phenomenon; they were known to fight crime with unconventional methods, challenging laws accused of not being effective or, worse, of protecting criminals more than respectable people (Cotugno). If the main characters weren't policemen, the protagonists were ordinary people who were victims of the mafia violence and could not rely on authorities to protect them, so they took drastic measures

to obtain their private justice (Cotugno). Most of the time these productions took inspiration from newspapers and quite literally stole their titles to name their works. As mentioned before, the majority of them were set in Naples, but they did not fail to represent all the other Italian cities that were affected by the mafia (Cotugno).

In Calabria, a southern region of Italy, the mafia that is tormenting Reggio Calabria, the region's capital, is called 'Ndrangheta, and it is known to be the most powerful mafia in the country. This mafia is recognized to be the richest, most violent, and underestimated of all mafias, and it is also the most hidden and least studied criminal organization in Italy (Renga and Cooper). Their methods of killing their victims are brutal, and they make sure that their targets will disappear in order to keep a low profile (Renga and Cooper). There are several mini-series and television dramas that represent this organization, such as *Era mio fratello* (Bonivento, 2007), which in English translates to "he was my brother"; the show tells the story of two brothers who lost their parents at a young age because of a fight between clans. The mini-series focuses on the siblings who chose different lifestyles and stand on opposite sides of the law. One of the two brothers ends up avenging



Photo by Pavel Danilyuk.



Photo by Pavel Danilyuk

numerous murders with the help of the local authorities and defeats the local gang, including his brother who is shot in front of him. The series ends on an unrealistic note, with the surviving boy who, with his new family, celebrates the triumph against the 'Ndrangheta (Renga and Cooper). But even if non-realistic, this ending gives hope to the Italian audience that one day the mafia will be eradicated from their lives.

Hope alone, even if necessary, is not helpful to fight the mafia. In Italy, after a series of terrorist attacks and non-stop violence by criminal organizations that took place in the 1970s, the Italian government decided to use schooling as a tool to combat the mafia. That is how *Education to Legality* was born. The introduction of new subjects in Italian schools allowed students to be exposed to the reality that their country is facing and gave them the opportunity to gain knowledge and take a stand to put an end to this phenomenon. The number one enemies of the law are the mafias and the widespread corruption they cause, and they acquire power through the ignorance of the population which creates tolerance towards them. It is now the schools' responsibility to attempt to reverse this process (Ragone). In schools all over the world it is common to be

taught history as a way to prevent the past's mistakes to happen again. Italian schools are now aiming to do the same in order to stop mafia criminality.

In my high school, back in Italy, I have been taught about the tragic stories of the two most famous mafia victims: Giovanni Falcone and Paolo Borsellino. They were very well-known Italian prosecuting magistrates who had been incredibly helpful in the battle against the mafia, but their successes came at a price. In 1992, Falcone, his wife, and his bodyguards were killed by a car bomb in Sicily. A couple of months later, his colleague Borsellino was murdered using the same method. Their deaths led the Italian government to open many trials that helped convict more than 400 members of the Sicilian mafia *Cosa Nostra*, including the major mafia boss Totò Riina, responsible for the assassination of the two magistrates (Moody). Salvatore (Totò) Riina, called "the beast" by his enemies, was on the run for twenty-three years, suspected of 150 murders, and sentenced to spend the rest of his life in prison (Moody). One of his most known victims was a 13-year-old child, Giuseppe di Matteo, who was kidnapped in order to blackmail his father Santino di Matteo. Di Matteo was kept prisoner for almost two

years, and was eventually strangled and dissolved in acid (Globalist). Cosa Nostra was also known for tying their victims' hands and legs behind their backs and connecting them to their throats, which would lead them to suffocate to death when they tried to free themselves (Pisanu). This was just one example of the thousands of brutalities that the mafia is capable of. Their objective was to get rid of people who were interfering in their businesses by maintaining a low profile. Members of the organization were forced to murder innocent people in order to live and follow their rule of conduct: "an honorable man cannot avoid killing if he wants to stay alive" (Pisanu).

This is what the mafia does: it fills the streets with terror and spreads innocent blood. Many have tried and are still trying to fight it, putting their lives at risk, causing the majority of the Italian population to submit to these horrors and cover their eyes, allowing them to keep the power that they now hold. The continuous glorification and romanticization of the mafia is highly damaging to those movements that are fighting every day in order to free everyone from these evil organizations. I know well that, unfortunately, there will never be an eradication of this type of content, that is exactly why I urge you, readers, to look at these movies as you would enjoy a fantasy film and not as a representation of reality, and ideally consider getting educated about the topic and understanding the problems that come with it. Education plays an important role in helping to recognize the difference between fiction and reality that will prevent the inappropriate veneration of these criminals, and consequently respect the families of those who suffered and died because of them. Romanticizing their behaviors is not only mocking people like Giuseppe di Matteo or Paolo Borsellino, but is also disregarding the people who are risking their lives to protect others, hoping that one day, their sacrifices will not be in vain. I like to think that there is always a way out, although it is not easy; after all, like Giovanni Falcone once said: the mafia is created by humans and like all human creations it has a beginning and will also have an end. ❖

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HUMANITIES

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NOT FOR ENTERTAINMENT: THE IMPORTANCE OF THE ANIMAL RIGHTS MOVEMENT FOR BIG CATS

ABSTRACT

The Animal Rights Movement is an essential movement when defending the rights of animals in captivity from inhumane practices. The concern of protecting big cats has grown recently due to Netflix's limited docuseries *Tiger King: Murder, Mayhem, and Madness*'s rise in popularity. Throughout the series, the show depicts many instances of abuse, exploitation, and inhumane practices with regard to the big cats. In episode 4, a newborn cub is dragged away from its mother and denied nourishment from its mother (Chauklin & Goode, 2020b). Many groups like HSUS, WWF, and PETA were involved in the fight for the rights of big cats before the airing of the docuseries, exposing many key players of the show and their harmful practices. In late 2019, H.R. 1380, the Big Cat Public Safety Act, was introduced before congress but did not get far. This act was set to revise requirements governing the trade of big cats and restrictions on the possession of big cats (Quigley, 2019). Since the airing of the show, animal rights activists groups have pushed to get the bill signed in order to stop the abuse of the big cats in inhumane roadside zoos.

INTRODUCTION

The Animal Rights Movement is vital when speaking out for the voiceless. This movement is especially important for protecting big cats. Big cats within the U.S. have been subject to abuse through the unethical practices of private ownership, for example at roadside zoos and circuses. Even though the animal rights movement has been around for three centuries, public concern for the safety of big cats has grown only within the last few years due to the rise of the popular Netflix Series, *Tiger King: Murder, Mayhem, and Madness*. Many animal rights organizations were involved in stopping key members of the show before the show's airing. In response to the show,

many journalists and activists have unearthed facts on big cats in captivity that the show failed to share with the audience to promote the wellbeing of the big cats involved in the series. Therefore, the tale of *Tiger King* and their negative feedback amplifies the importance of the animal rights movement for big cats.

HISTORY OF THE MOVEMENT

Evidence of concern for the wellbeing of animals began during the times of great thinkers and statesmen, such as Plato, Abraham Lincoln, and Albert Schweitzer. The first ever



Photo by Pixabay.

"movement," however, dates back to the 1800s in Victorian England. During this time period, new ideas were emerging within science and other academic disciplines. According to Kevin Kjonnas (2016), bills were enacted to fight cruel behavior towards animals. These bills were put into place in England and some U.S. states during the late 18th and early 19th century. Small movements and organizations arose to protect the wellbeing of animals during this time but soon new issues would emerge and call for more modern solutions.

The official animal rights movement kicked off during the 1970s. This movement was kindled by a philosopher by the name of Peter Singer, the author of the book *Animal Liberation*, a key document for the movement. According to the *Britannica* article entitled, "The Modern Animals Rights Movement," Singer's book argues that the interests of humans and the interests of animals should be given equal consideration (Wise, 2016). He argued that animals had comparable moral value compared to people. One question he presented asked that if we can feel pain, animals are able to feel the same pain (Wise, 2016). This question was mainly focused on the dairy industry and labs using animals for research. However, these two

areas of interest would not be the only places challenged by animal rights activists.

The rights of big cats were not much considered at the beginning of the animal rights movement. Their rights were only considered when "the center of action shifted to protection of wild animals and birds," which included big cat preservation (Walls, 2016). In late 2019, an act was introduced to congress to protect the big cats. This is known as H.R. 1380, Big Cat Public Safety Act. This act was first introduced by Rep. Mike Quigley. This act provides "revised requirements governing the trade of big cats and restrictions on the possession and exhibition of big cats" (Quigley, 2019). Many organizations have pushed for passing this law because of how vital it is to the safety of the big cats. According to Keli Bender, since there are no federal laws prohibiting the ownership of big cats, depending on state and municipal law, it could be perfectly legal for anyone to own a big cat as a pet (Bender, 2020). This not only includes private owners, but also unethical roadside zoos. Since the beginning of 2020, the concern of the safety of big cats in captivity has grown as a popular topic of conversation on social media. This is due to popularity of the Netflix series, *Tiger King: Murder, Mayhem, and*





Madness during the early stages of the COVID-19 pandemic.

DISCUSSION

Tiger King's main source of popularity stems from how packed it was with drama between two rivals. The show mainly covered topics of crime and conspiracies among the roadside zoo owners; however, the show received criticism by many journalists and those working with animal rights organizations due to evidence of animal abuse committed by those in charge of the roadside zoos and those who were involved with the show's production.

How Does Tiger King Represent the Importance of Animal Rights for Big Cats in Captivity?

The documentary follows the life of Joe Exotic and other key players in the limited series, so it technically does not follow the standard recipe of an activist documentary that hones in on animal rights for big cats. It undermines the importance of the animal rights movement for the big cats since the main focus is on the zoo owners, using the tigers as extra leverage to make the show more interesting. In an article entitled "Netflix's *Tiger King* Aftershow Undermines the Series' Credibility" on *Polygon*, Noel Murray writes that the producers "clearly chose to emphasize their characters' colorful eccentricity" rather than focusing on animal abuse (Murray, 2020). This shows that the plot

was the main vocal point than the actual tigers, meaning the tigers were only there to give the show extra flair. This is evidence on how the movement is needed to stop the exploitation of animals.

However, as Murray pointed out in his article, the show also depicted various counts of animal cruelty. In episode one, "Not Your Average-Joe," the first example of animal cruelty occurs within the first 5 minutes of the episode. The filmmaker, Eric Goode, was investigating a reptile dealer in South Florida when a snake buyer wanted to show Eric something in the back of his van: a snow leopard. Goode (Chaiklin & Goode, 2020a) recalled that the leopard was in the back of the van in 100-degree weather and he questioned the safety of the cat, asking if it needed refrigeration because of where they are native to. By nature, cats like snow leopards are indigenous to colder climates of Central Asia (Jayasinghe, 2020). By questioning the safety of the animal, it is clear that people who buy exotic animals do not care for the wellbeing of the animals if they are subjecting them to climates that they would not be accustomed to in the wild. Goode would then question why people would keep big cats in this country, which starts the story of the *Tiger King*.

Overbreeding for profit is present within the show to produce cubs for cub petting. In episode 4, "Playing with Fire," a mother tiger is filmed giving birth around the end of the

episode. After the cub is born, one of the zookeepers takes a hooked pole and pulls the newborn tiger cub, careless of the newborn's wellbeing, to the fence. Then Joe Exotic takes it away from its mother (Chauklin & Goode, 2020b). This is detrimental to both the mother and the cub. For cubs, this can affect development due to being taken away from their mother too early, unable to get the nutrients they need hours after they are born (Carolina Tiger Rescue, 2019). Not only does the removal of the cub distress the mother, but it drives her back into heat to be bred again. The reason Exotic began breeding is because he needed the money to keep his zoo or Carole Baskin was going to take it (Chauklin & Goode, 2020b). This shows how the animal rights movement is important because the movement can stop over breeding and the abuse of tigers for profit.

Not only is overbreeding harmful to small cubs, but the act of cub petting is even more harmful. Cub petting is the act of taking young cubs from their mothers to entertain guests. Carole Baskin of Big Cat Rescue reports that the immune systems of cubs used for cub petting are drastically lower than normal due to poor formula and due to often being woken up for photo ops (Baskin, 2018). Not only is their health affected, but the life that a cub may live after they become too big for cub petting is poor. Rodi Rosensweig (2020) reported that Doc Antle would send cubs who were too big for cub petting to his other substandard facilities or to warehouses within his own place in Myrtle Beach, SC, and that many of these tigers are housed in cramped, reconfigured horse stalls with cement floors. If the tigers are not kept this way, they are likely euthanized due to them not being desired. With the help of the animal rights movement, the lives of tigers can be protected from abuses like those to which Doc Antle has subjected them as well as from the risk of euthanasia.

How have the Humane Society of North America, WWF, and PETA Shaped Discourse around Tiger King?

The HSUS, WWF, and PETA, though different in their views and how they fight for the conservation and protection of animals, all agree on one thing: tigers are not meant for entertainment. These three groups have investigated and exposed past activities of the big three: Joe Exotic, Carole Baskin, and "Doc" Antle.

The Humane Society of North America. In the light of *Tiger King's* airing, the HSUS had presented many counts of animal abuse and exploitation Joe Exotic and "Doc" Antle were involved in. Evidence of breeding and selling tigers to abusive handlers have been presented by the HSUS. In 2012, Joe Exotic sold two tigers to Ryan Easily of ShowMe Tigers and, even though the HSUS exposed the abuse of eight tigers in his care, "Doc" Antle sent three more tigers to Easily in 2018 and 2019 (Rosensweig, 2020). HSUS has done work to make sure that these roadside zoos are exposed to put an end to the abuse of tigers, but none prevailed. Kitty Block, CEO of HSUS, commented that in response to the cycle of overbreeding, cub petting, and overpopulation of unwanted tigers was "not conservation. No animal deserves that life" (Rosensweig, 2020). This is why groups such as the HSUS are vital to the animal rights movement because they are trying to fight and protect the big cats from places that claim they conserve the species when they do the opposite.

World Wildlife Fund. The WWF specializes in wildlife conservation, including the big cats that are subjected to this kind of abuse. In response to the airing of *Tiger King*, the organization published an article covering what the docuseries failed to cover. The article, "5 Things Tiger King Doesn't Explain About Captive Tigers," written by Leigh Henry, explains that captive tigers are a problem in the United States because there are 5,000 tigers in captivity while approximately 3,900 tigers live in the wild (Henry, 2020). This shows that these roadside zoos are overbreeding the cats for personal gain and do not to help repopulate and conserve tigers that are in the world. Supporters of WWF called out to the government to enact new laws to help protect these tigers. This action, in turn, created new rules under the Animal Welfare Act to limit when cubs are handled. Even though this act is in effect, this does not stop the actions that people like Joe Exotic and "Doc" Antle are continuing to do.

People for the Ethical Treatment of Animals. PETA has been very active when it comes to the narrative of *Tiger King*. After the airing of the series, PETA came out with an article in response to *Tiger King* and Joe Exotic saying that they and their supporters "campaign for years to help the animals abused by Joe Exotic" (Prater, 2020). Many Twitter posts have been shared in response to many of the players



involved in the series. One depicted Tim Stark holding a bear cub screaming and peeing on herself in fear, the following description accompanying it: "Animals aren't the property of humans, they are their own individuals and should be treated as such" (PETA, 2020). However, the only positive light they bring to *Tiger King* is their support for Carole Baskin. Carole Baskin is portrayed as a hippie tiger lover in Tampa, Florida, who runs a tiger sanctuary. An article by Lauren Anderson entitled "'Tiger King': PETA Lawyer Defends Carole Baskin and Big Cat Rescue" describes how PETA stands with Carole Baskin due to her "running a reputable operation" at Big Cat Rescue (Anderson, 2020). PETA may also be on Baskin's side due to her constant battle with Exotic, trying to take control of his zoo. This is even stated in the episode, "Playing with Fire" in the series because, if Joe Exotic did not breed his tigers to turn money, Baskin would take his zoo (Chauklin & Goode, 2020b). Although Carole was misrepresented in the docuseries, PETA continues to stand with the

Florida native and her big cat sanctuary, an example of how zoos should treat their animals.

Common Ground among the Organizations All of these groups have one thing in common: supporting the Big Cat Public Safety Act. All three of the organizations have made efforts in boosting the passage of this law. The WWF's website hosts a form that allows people to send a blurb to their congresspeople on why the act should be passed (WWF, 2020). Members of the HSUS have become involved and explained why the passing of the bill is important. Kitty Block and Sara Amundson write that this bill "would ban the possession of big cat species like tigers and lions by unqualified people and end their harmful practices" (Block and Amundson, 2020). PETA, like WWF and HSUS, have had many supporters backing up the passing of the act. Filmmaker Gabriela Cowperthwaite, best known for directing the 2013 documentary on SeaWorld, *Blackfin*, believes that documentaries can be a powerful force for change through

action or entertaining, stating that *Tiger King* and its audience can do that (Mahadevan, 2020). This is because of how prominent the topic of *Tiger King* has become in conversation. By discussing the show and bringing awareness to how the tigers are abused, action can be launched by signing the bill to pass the act. Many big actors, including Joaquin Phoenix, one of PETA's ambassadors, and Ian Somerhalder, have already signed petitions to pass the federal bill (Mahadevan, 2020).

CONCLUSION

The importance of the animal rights movement is amplified by *Tiger King* and the negative feedback it has garnered from animal rights organizations. The animal rights movement began to protect animals treated inhumanely in research labs and commercial dairy and meat farms. This soon turned to the protection of wildlife and birds, including big cats. The production of *Tiger King* would only shed light on big cat abuses, using a crime plot as entertainment to expose how tigers were treated in the series. Many of the animal rights organizations involved before the show aired took it as the opportunity to promote an act that was introduced to congress in late 2019 that has not yet advanced very far. This act would protect big cats in private owned roadside zoos and those held as pets. *Tiger King*, a hot topic for conversation, pushed the abuse of big cats onto the agenda to pass a very vital federal bill to protect poorly treated felines. The fight to protect big cats continues, the voiceless beings of planet Earth. ❖

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REBECCA MITCHELL

THE IMPACT OF POOR DOG BREEDING PRACTICES ON ANIMAL HEALTH AND WELLBEING

Dogs have been bred for many years to become known as “man’s best friend.” It is believed that dogs originated from three to five lines of wolves that were domesticated to fulfill work tasks thousands of years ago (Bellumori et al., 2013, p. 1549). After a while, breeders began to breed for physical and personality characteristics as well. Not only can dogs be kept as companion animals, but they can also be used as service animals, police and military dogs, therapy animals, as well as show and competition dogs. Breeders face conflicting goals, as they are challenged with the task of breeding dogs that are able to fulfill tasks for

their owners, perform well in shows and competitions, conform to their breed’s standard, as well as foster happiness among their owners while being happy themselves (Jeppsson, 2013, p. 418). Dogs are in high demand so, like industries during the Industrial Revolution, the breeding business must foster the production of dogs that can sell in a rather hastened manner. Due to this production demand, there are many poor breeding practices, as breeders are more concerned with production than the animals’ wellbeing. Poor dog breeding practices and uninformed consumers purchasing dogs bring about ethical concerns in relation to animal health and wellbeing.

There are a variety of dog breeds, yet there are many purebred dogs that share a common ancestry dating back thousands of years. The preservation of purebreds has led to a variety of issues for the dogs, as breeding purebreds together potentially increases the chance for recessive disorders to be more present in genotypes compared to mixed breeds. In fact, dogs have the second highest rate of hereditary diseases, second to humans (Bellumori et al., 2013, p. 1549). Yet, the demand for purebreds, who have a higher prevalence of genetic disorders compared to mixed breeds, remains high. Selection pressure has also led to newer mutations compared to ancestral ones, and these hereditary diseases and disorders have been passed on through many generations. For example, bulldogs have a high prevalence of breathing difficulties, heart disease, and an inability to give birth naturally; there are numerous eye issues in Shih Tzus; allergies and bacterial infections are common in Shar-peis; and hip and elbow dysplasia have a high prevalence in large dog breeds. Many of these issues are,



Photo by Martin Dufossel



unfortunately, due to breeding for abnormal appearances (Bovenkerk & Nijland 2017).

There are three main breeding practices: the popular sire effect, close breeding, and line breeding. The popular sire effect is when breeders use a particular male dog (sire) to produce multiple litters due to their favorable phenotypic characteristics (Leroy & Baumung, 2010, p. 66). Close breeding is the practice of breeding animals that are close relatives in order to fix a desirable phenotypic trait that originates from a particular dog (Leroy & Baumung, 2010, p. 67). Line breeding, not to be confused with close breeding, is when male and female dogs who share a common ancestor are bred together in order to either fix a specific trait or to maintain that trait throughout future generations (Leroy & Baumung, 2010, p. 66).

Out of the three main dog breeding practices, the popular sire effect is the practice that results in the most widespread genetic disorders because the genetic mutations that arise in that popular sire are almost guaranteed to be passed down to his offspring (Leroy & Baumung, 2010, p. 72). The breeding practices of line breeding and close breeding seem to result in less occurrence of inherited genetic disorders, because there is a larger gene pool to choose from (Leroy & Baumung, 2010, p. 73). Avoiding the spread of inherited disorders should be

prioritized among breeders in order to meet ethical standards. One way to do this is to avoid using one dog (male or female) to produce the majority of offspring. This reduction of the popular sire practice can be done by limiting the amount of litters each dog is allowed to produce (Leroy & Baumung, 2010, p. 73). Breeders should also test the dogs that they plan to breed multiple litters with for genetic disorders (Leroy & Baumung, 2010, p. 73). With this information, breeders can make informed decisions about whether or not a dog should be bred.

Richard Haynes describes a moral principle of animal breeding in relation to the animal rights view. According to Haynes, "it is morally permissible to breed on companion animals for the reason that one values the social bonding with them, as long as one has the knowledge and resources necessary to provide the offspring with rich and flourishing lives" (Jeppsson, 2013, p. 418). The concept of a 'rich and flourishing' life for animals is the ideal of increased wellbeing. Just as we, humans, have a moral responsibility to maintain the safety and wellbeing of other humans, we also have a moral responsibility to maintain the safety and wellbeing of animals, especially the animals that we own (Hens, 2008, p. 4). According to agent-centered deontological theories, we have moral obligations to our pets that other people do not have, such as making sure they get fed and taken to the vet for vaccinations and check-ups. This moral obligation can be applied to breeders as well since the dogs are bred and raised under the breeder's care for the first few months of their life. A sense of trust is established between a pet and its owner, and it would be morally wrong to break that trust. People can break that trust by neglecting to care for their pet's mental and physical wellbeing as well as having their pet euthanized without moral cause, as many breeders do if the dogs they bred do not sell (Hens, 2008, p. 11).

It may be a common assumption that dog consumers do not want a dog who suffers. However, some consumers may purchase a dog with a disorder because they undermine, or do not realize, the severity of it (Jeppsson, 2013, p. 419). For example, bulldogs commonly have respiratory issues due to the breed's smashed-in face as well as their small trachea. However, bulldogs are a popular breed, and owners may feel that their aesthetic outweighs the disadvantages of their breathing difficulties. After all, if owners do not take their dogs for runs, they may only have to deal with their dog snoring.

rather than their dog constantly panting for air. The high demand for purebred dogs with genetic disorders, like the bulldog, is a form of positive reinforcement and pressure for dog breeders to continually breed dogs known to have inherited disorders, no matter the impact on the dog's wellbeing.

Both consequentialist and nonconsequentialist views come into play with regard to ethical arguments in the dog breeding business. Utilitarians believe that most dogs are born without any major genetic defects, so it is not necessary for breeders to change their practices to prevent a few dogs from having a genetic defect. However, consequentialists do believe that there is one unethical issue in dog breeding practices: some popular dog breeds known to have genetic disorders, such as bulldogs, are continually bred. Because of this issue, consequentialists believe that breeding healthier dogs could help them "lead better lives, and thus decrease suffering and increase happiness in the world" (Palmer, 2012, p. 164).

Nonconsequentialists state that many breeders treat their dogs as a means to an end - a product that leads to profit. They also believe that breeding an animal with unavoidable health problems is *prima facie* wrong (Palmer, 2012, p. 157). The exceptions to the *prima facie* duty of breeding healthy dogs would include instances of both consumer and dog satisfaction. For example, dog breeders will breed dogs that have a strong possibility of developing a disease within two to four years, to market them for parents with kids who want a dog yet know that this desire will go away (Palmer, 2012, p. 160). By doing so, consumers will be able to give their dog a good life for the few years that they are alive, leading to happiness for both the consumer and the dog. However, many nonconsequentialists do not agree with this practice. They argue that mixed breed dogs have an average lifespan of twelve years, so to create dogs that live less than twelve years is, in fact, causing them harm (Palmer, 2012, p. 160). The dog is also harmed, because it was created with the intent of developing a lethal disease.

Many small-scale breeders abide by the "dog breeder common sense morality principle" (BCM) (Jeppsson, 2013, p. 419). According to the BCM, "It is morally permitted to choose any breed you want to out of the ones recognized by the kennel clubs; once this choice is made, you ought to try to produce dogs with as high a level of wellbeing as possible" (Jeppsson, 2013, p. 419). Some may argue that the BCM is not morally permissible, however, due to the potential for genetic disorders being selected for when choosing to breed *any* dog. The BCM could also be considered a *pro tanto* or *prima facie* obligation. A breeder may feel that they have a duty or moral obligation to preserve a traditional breed to prevent extinction, no matter the consequence of low physical and mental wellbeing (Jeppsson, 2013, p. 419). A common breeder goal is to maximize the wellbeing of the



Photo by Viktoria Bzdyk

dogs of future generations (Jeppsson, 2013, p. 421), which is in line with the utilitarian view. However, if other breeding goals are more important to them than maximizing wellbeing, then this may be the circumstance that serves as the exception to the *prima facie* or *pro tanto* obligation.

The issue with breeding to maximize wellbeing is the fact that, in doing so, extinction of some dog breeds will occur, which will lead to a decrease in the variety of the gene pool. Eventually, there will be a small gene pool from which dogs can be bred from, thus decreasing genetic diversity. This can lead to more harm than good, because if an unexpected negative mutation occurs, future generations may be negatively impacted. Also, if the gene pool is depleted, inbreeding and homozygosity may



occur, which can cause genetic disorders in future generations (Jeppsson, 2013, p. 426).

A major issue of concern for dog welfare enthusiasts is the concept of puppy mills. Puppy mills are facilities run by commercial breeders with the primary goal of generating an increased profit by selling multiple puppies at low prices "at the expense of the health and wellbeing of the dogs" (Towsey, 2010, p. 161). At puppy mills, dogs are housed outdoors in small cages without proper sanitation and cleaning. They are not vaccinated, nor are they screened for genetic defects. This lack of precautionary actions allows for the spread of numerous unknown genetic diseases and disorders (Towsey, 2010, p. 161).

Dogs bred from commercial breeders are usually sold to retail pet stores, which generally lie about where the dogs come from. They may say that the dog is from a breeder but may not reveal the name of the breeder nor the location (Towsey, 2010, p. 162). This exclusion of truth can fall under the "modified minimal information rule," as the seller is only obligated to give information the buyer needs to avoid injury, not anything else. This practice of retail pet stores is a form of deception, as buyers may believe the dogs come from responsible breeders rather than the commercial breeders who run puppy mills.

Legislation has been passed under the Animal Welfare Act (AWA) in an effort to prevent the unethical treatment of dogs at puppy mills by regulating commercial dog breeding facilities (Towsey, 2010, p. 164). However, because some commercial breeders sell to the general public online, they do not fall under the AWA legislation, which enables them to continue their inhumane dog breeding practices (Towsey, 2010, p. 165). There are some state laws that aim to reduce unethical commercial breeding practices, however, such as the Dog Law in Pennsylvania, amended in 2008. It proposes that commercial breeders must make arrangements for "increasing the cage size to ensure the dogs are reasonably comfortable, providing access to an exercise area, annual veterinary examinations, limiting the stacking of cages, establishing daily cleaning standards, creating reasonable temperature, lighting, and ventilation standards, and requiring fire extinguishers" (Towsey, 2010, p. 166).

Although there is legislation against unethical dog breeding practices, it is important for buyers to inform themselves about the various dog breeding practices and ensure that



Photo by Mariyana Babaiava

they are only purchasing dogs from responsible breeders. This is because many sellers believe in the “minimal information rule,” and only provide information that the consumer asks. A responsible breeder will provide the consumer with a variety of information about both parents, how the dogs were bred, and any health issues the dogs may have. The breeder will also ask the buyer questions to ensure that the dog they want to purchase is suitable for the family dynamic and that the home environment is suitable for the dog. Responsible breeders will provide the consumer with registration certificates if the dog is a purebred as well.

There is debate over whether breeders should aim to maximize the wellbeing of future generations or reduce the amount of disorders and diseases prevalent in offspring (Jeppsson, 2013, p. 421). Whichever argument one may support, the overall goal of most breeders seems to be to produce healthy offspring. However, this is not always the case. Breeders may be unaware of the severity of the prevalence of genetic mutations and disorders among the dogs that they breed, leading to

numerous offspring with genetic defects that develop later on in the dogs' lives. Secondly, breeding is a business, and the goal of a business is to maximize profit. If consumer demands conflict with breeder aims, some breeders will choose to defy ethical principles in order to satisfy their monetary goals, as seen in commercial breeding practices. Legislation has been passed in order to reduce unethical breeding practices, but, ultimately, it is up to the consumer to make informed purchasing decisions. If the demand for dogs from breeders with poor breeding practices is lowered while the demand for dogs bred from responsible breeders is increased, there may be hope for the increased wellbeing of the future generations of “man's best friend.” ❖

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SOCIAL MEDIA AS A METAPHORICAL CLASSROOM

INTRODUCTION

Forty-five percent of Generation Z in the United Kingdom and the United States say they use their smartphone as their first point of contact with news in the morning, and 57 percent say they use social media or messaging apps to do so (Kalogeropoulos, 2019). Generation Z makes up the first group of young adults that have lived their entire lives with internet access and most of their lives with access to social media platforms (Viens, 2019). Given that we have an entire generation that has grown up getting their information and news through social media, it is reasonable to argue that such use is inherently promoting education at some basic level.

Social media has become a seemingly integral part of modern life. In seconds, we can share our opinions, ideas, media, and news with the world. Though research has explored how social media might be used to supplement

traditional classroom environments (Burbules, 2016; Faizi et al, 2013; Raut & Patil, 2016), I will argue that social media can act as its own classroom, operating with millions of instructors who may not be traditional educators, holding their own careers and discussing their own experiences. Though we may not intentionally seek out education on social media in all cases, we are learning within this sphere daily. As younger generations witness historical events and gather information through social media, I wonder if this affects how they view those events and social or political issues.

To examine how this idea fits into communication studies, we will consider knowledge gap theory. This theory is increasingly being applied to "new media" which expands to the internet and cyber communication (Gibson & McAllister, 2015). Considering how information is exchanged using

social media platforms, what types of messages are most often found in these settings, and who this information is available to will help us better understand how or if social media is a viable option for education.

For the purposes of this study, we will be considering social media's role in knowledge gap theory from a first-world perspective. If we chose to examine social media's role in the context of global knowledge gaps, social media's accessibility would contribute to the growth in knowledge gaps overall. Because there are many countries or regions of the world that have limited to no access to the internet, and therefore social media, knowledge gaps between those areas and ones that do have access to the internet will grow as social media is more commonly used to share information. This study asks us to consider social media's contribution to knowledge gap theory in the societies in which it is widely used. By examining how social media affects this 'looped in' portion of the globe, we can make predictions as to how increased social media accessibility would affect knowledge gaps globally.



Photo by Omkar Petyane.

Secondly, we must consider social media's current role in traditional education environments. The literature review that follows outlines how social media has been studied to benefit students in traditional classrooms. These studies demonstrate that not only does social media appear inherently educational as an environment, but it can also be used to supplement education if used as a tool. Combining these two ideas, that social media is inherently educational and that it can be used as an educational tool, allows examining social media as an independent environment for learning experiences.

RQ1: How does social media used alone or in combination with traditional methods contribute to education?

RQ2: Does educational use of social media affect the political knowledge levels of different age groups?

LITERATURE REVIEW

Social media platforms have been studied within educational and political environments for many years. These studies focus on social media as a means for communication to enhance traditional classroom environments, increase knowledge gaps within the general public, and change the way in which we exchange information (Bonfadelli, 2002; Bonfadelli, 2003; Burbules, 2016; Faizi et al., 2013; Raut & Patil, 2016). This existing literature informs my own my research, given that it demonstrates that social media has positive effects on its users. To understand how social media might operate as its own educational environment, we must first examine how it is a tool for education.

Knowledge Gap Theory & Social Media

Now that millions of people have internet access, creating content is not reserved for news writers or radio show hosts. Social media shares news, videos, photos, ideas, and all types of user-generated content. Unlike the material world, social media creates a community that we cannot always see. The communities we are accustomed to in our daily lives, such as the cities we live in or the educational institutions we attend, have been widely studied when it comes to knowledge gap theory, and some of these findings appear to apply to the social media community as well. To understand how different groups of people are educated through social media, we must examine what knowledge gaps exist and what issues from traditional

communities might spill over into social media communities.

Knowledge gap theory states that, as information is distributed through society using mass media, people of higher socioeconomic status will have access to this information at a faster rate. Bonfadelli (2003) states that "knowledge gaps in the old media seem to have arisen mostly as a result of differences in topic-related levels of interest," and that, generally, traditional media created a homogeneous collection of information (297).

Historically speaking, print media was easily accessible, inexpensive, and distributed evenly across different areas. The growth of technology and the creation of social media have changed the way that knowledge is acquired because they have allowed information to be controlled by users as well as journalists. This was not possible in the golden age of traditional media (Bonfadelli, 2003).

Now that technology is involved in information distribution and internet access is required to access a large portion of the world's information, users must know more than just how to read and interpret information. Media literacy is required for daily activities in many workplaces and maintaining social circles. Understanding how to operate a mobile device or computer, how to maintain wireless connectivity, and how social media platforms operate are just a few of the skills required to participate on social media. If people are not living in an area that has access to high-speed internet or do not have the social status that allows them to afford it, then acquiring media literacy is impossible. Even with periodic access to the internet, they would be less likely to benefit from its use if they could not properly navigate the platforms.

Unlike print media, if a user wants to share their opinions within the community they are getting information from, they must be active on the internet and therefore social media (Bonfadelli, 2002). Commenting, tweeting, posting, and sharing is how they are involved in the online community. Though they can just observe, they are not getting the full experience of interactivity if they do not take part in these actions.

Because social media relies on the internet to work, there are millions of people who have access to limited or no information online. There are many countries in which internet connection is not evenly distributed or in which

socioeconomic status does not allow one to have access. In Switzerland, for example, there are knowledge gaps that have been identified between people of different educational levels, ages, sexes, and income levels (Bonfadelli, 2002). This study also found that those who were more highly educated were more likely to use the internet for information and services purposes, while those with lower education levels were more likely to use the internet for entertainment purposes (Bonfadelli, 2002; 2003). This could be due to the fact that highly educated individuals tend to expose themselves to information more often than less educated individuals (Donohue et al., 1975).

Similar results were found in a study in Australia that examined political knowledge gaps online using data from the Australian Election Study. Using that data, this study analyzed election data from 2001 to 2015 and found that highly educated younger people and groups with political interests access more political information online. Because people who are less educated are subject to existing knowledge gaps, the fact that the same groups do not have access to political information increases the existing gap (Gibson & McAllister, 2015).

Implications of Political Knowledge Gaps

The groups that have the most access to political information, who in most cases are young and highly educated white men, post more political video content, blogs, and social media comments than older people, those who are less educated, women, or people of non-white communities (Wei & Lang, 2010). Those who post political comments were more likely to engage in politics in general as well (Wei & Lang, 2010). This seems trivial, but it actually shows that basic civic education might be possible through the use of the internet or social media, though it is not readily accessible or distributed equally to everyone.

Communities rely on information they gather to make decisions about schools, government, and daily functions. They also rely on information to solve problems within the community. Donohue, Tichenor, and Olien (1975) considered how communities saw knowledge being distributed depending upon their size and if it was related to social conflict. The study found that pluralistic communities, or those that were larger and more diverse in make-up, were less likely to see equalization of knowledge distribution around social conflict than small

homogeneous communities (Donohue et al., 1975).

This is important when we consider how social media might be used as an educational tool because traditional classrooms usually consider subjects that relate to academic performance or college preparedness rather than practical studies, like personal finance or the government. Though these subjects might be a part of the existing curriculum, subjects like English, mathematics, and sciences take up a larger portion of learning objectives. If we want citizens to make educated decisions about their lives and the lives of others, then equalized access to online tools will only strengthen that effort. Additionally, this education is more likely to occur in smaller communities that are not as diverse.

This creates a challenge for social media users and content creators who specialize in educational content. College students tend to use their social media accounts to report information, comment on media, and do collaborative work (Smith, 2017). These habits as well as those discussed in regard to political activity and general internet use show that there is an opportunity for social media to be used for education, and researchers have already cited the benefits of this type of social media use.

EDUCATIONAL BENEFITS OF SOCIAL MEDIA

Within traditional classrooms, social media has been studied to understand how social media platforms might enhance communication within the learning environment or affect students positively. Educators and scholars have cited benefits of using social media in the classroom. Some of these include providing enhanced communication between teachers and students, increasing student engagement with classroom discussions and objectives, and increasing collaboration between students (Faizi et al, 2013; Raut & Patil, 2016).

Engagement

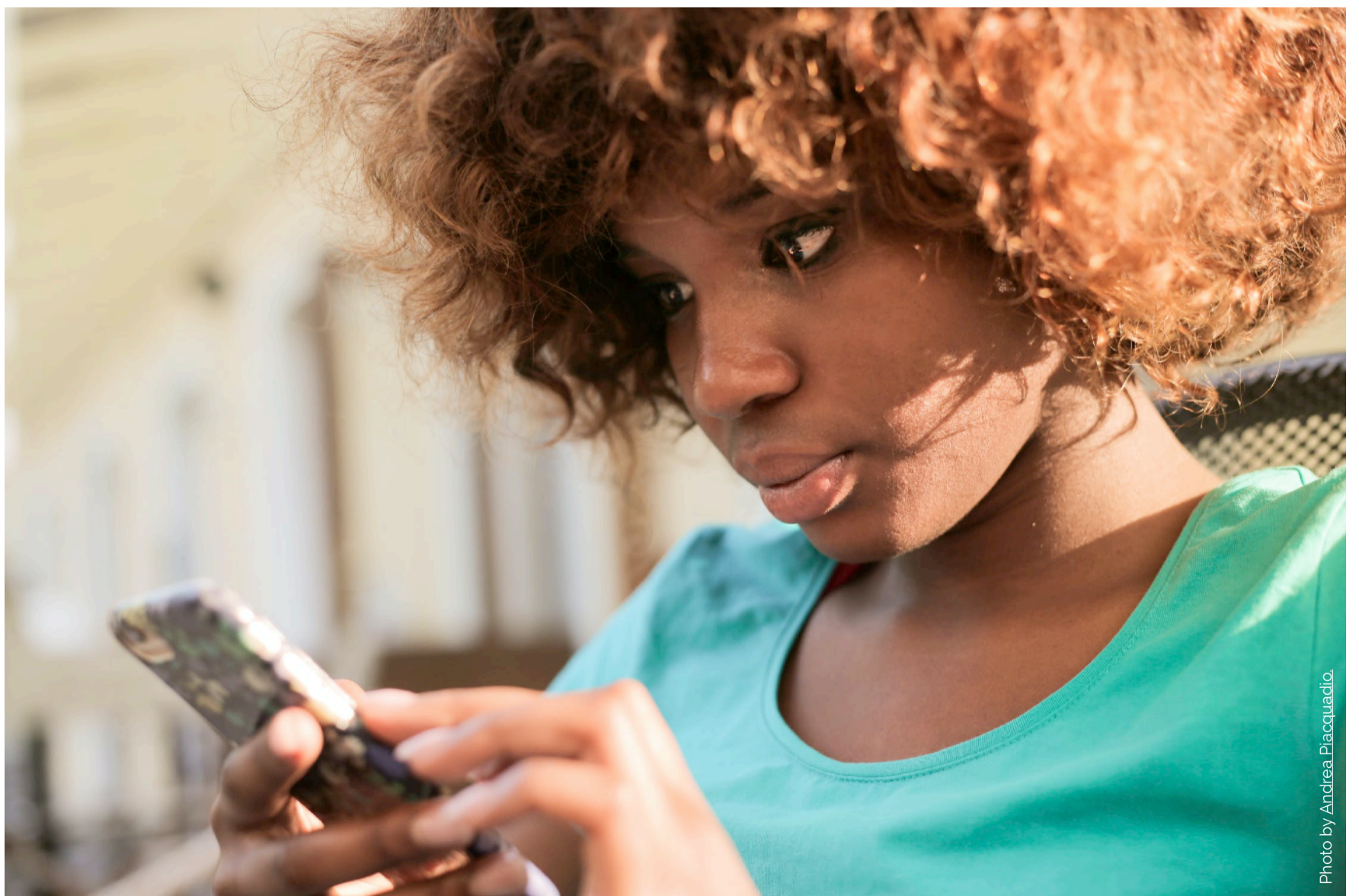
Engaging students of any age in the classroom is a challenge for educators, so creating an environment that pulls students into the coursework is essential. Some of the ways that scholars say the use of social media within traditional or online classroom settings might increase engagement include increasing student comfort, access, and variety (Faizi et al. 2013). Speaking in classroom discussions can be nerve-racking for some students due to the large group that makes up a classroom. Creating

a space for students to discuss their ideas and share their work in a way that is not face-to-face might make students more likely to participate in coursework. This can be done on multiple platforms, which creates opportunities for each student to find what learning environment works for them. Not only is there variety in the methods in which people are sharing information, but a new and increased variety of the information itself. Additionally, students have access to course content, instructors, peers, and internet resources constantly (Burbules, 2016; Faizi et al, 2013).

Additional engagement benefits include increasing student interest in course materials, expansion of the student's network, and the possibility of decreasing isolation in students. Using relevant materials, social media in this case, will help students steer clear of boredom in the classroom or during homework, especially if they are interested in the platform they are using. If students are uninterested in traditional methods because they are not otherwise relevant to their lives, then utilizing social media as an educational tool can increase the relevance of education by changing the way in which it is delivered, according to these authors (Faizi et al, 2013; Raut & Patil, 2016).

Collaboration & Communication

Collaboration is another benefit of social media use in education. By giving students the opportunity to engage in a community that is not limited to those present in the classroom, they are expanding their network and their knowledge. Fellow students and teachers will be a part of the online community that is used for coursework, but students will have constant access to user-generated content that is present online on other accounts. This can assist in bringing additional information or evidence into class discussions, spark creativity, and encourage students to share their ideas (Burbules, 2016; Faizi et al, 2013; Raut & Patil, 2016). Creating a learning environment that keeps students actively involved makes them more likely to learn better, and that is exactly what social media fosters in its collaborative dimension (Faizi et al, 2013). These collaboration and engagement benefits can also increase effective communication in the classroom. Depending upon how educators choose to use social media in their classrooms, there are various ways that communication via social media might be more effective than traditional methods.



METHODS

Survey

I utilized an anonymous survey for this project as well as voluntary, in-depth, semi-structured interviews. The survey consisted of participants over the age of eighteen. Participants provided informed consent to participate in this study. The results from my previous survey, which consisted of twenty-three participants, showed intriguing trends in generational attitudes toward general and specifically educational uses of social media. To explore these questions on a larger scale, the original survey was amended to reflect these specific research questions.

To explore these research questions, I asked respondents to share their gender identity, age, and how they use social media for educational purposes compared to other forms of media such as television, film, or print media. Respondents were also asked if they felt intimidated to use social media for discussion of various topics, especially ones that are political or controversial, and if they had knowledge of political topics.

These results will be examined to see if there appears to be a correlation between social media as an educational tool and increased political knowledge, if one educational environment correlates with more political knowledge, and how different generations' answers differ in these areas. By comparing the answers of different age groups, we can see how people's knowledge levels and social media habits might affect their stance on politics.

The survey consisted of twenty-three questions at maximum and was distributed through Qualtrics over the course of three months, May through July 2021. Of the twenty-three questions, nine were conditional questions designed to provide respondents the opportunity to share their views based on their education level and perceptions.

For the purposes of discussing generational trends, respondents were asked to provide their age. The age groups consisted of Generation Z, ages 18 to 24; Millennials, ages 25 to 40; Generation X, ages 41 to 56; Baby Boomers, ages 57 to 66; the Silent Generation, ages 67 to 75; and the Greatest Generation, ages 76 to 93 (Beresford Research, 2020). Respondents were also asked to provide their gender identity. Participants could write in their own identity or choose between cis male, cis female, non-binary/genderqueer, genderfluid,

transgender male, or transgender female. These were the only demographic questions asked to avoid a lengthy survey. The limitations of this choice are discussed below.

Semi-Structured Interviews

To collect more specific respondent experiences, those who consented to a follow-up interview were contacted. Three subjects agreed to a semi-structured interview over the phone or in-person to discuss their survey responses and expand on their opinions. This pool of interviewees was selected based on age, gender, and contents of their survey. Each interviewee provided different experiences using social media and opinions that allowed me to explore reasoning that each age group might have for their opinions and how this applies to society, which will be included in the discussion section.

Strengths of Survey & Interview Methods

Online Format/Email Correspondence. The biggest advantage of using a survey for this study is the convenience of gathering the sample that allows us to reach the biggest audience (Treadwell & Davis, 2020). The link to the survey was shared through social media, email, and other communications. This online format allowed me to reach large groups of people with little effort, reach multiple age groups and demographics, and collect data automatically through Qualtrics. Some data was automatically organized into charts or visualizations, which is another benefit of using specifically online surveys over paper and pencil formats (Siva Durga Prasad Nayak & Narayan, 2019). This was the most convenient way to reach people during the pandemic and allowed respondents to remain anonymous when participating.

After collecting survey data and compiling a list of people who consented to a follow-up interview, interviewees were selected to gather data with the goal to represent social media user and nonuser perspectives from both genders. Three semi-structured interviews were completed. Though this group was not the ideal group of interviewees initially, they did prove several points that appear to be trending throughout some of the other respondent's survey data. These interviews were conducted over the phone or in person. This was convenient for scheduling purposes and gave flexibility to the interviewee, which encouraged their participation.

Generalizations & Specific Points of Interest.

The results from the survey allowed me to make generalizations about different age groups and genders' stances on social media that would have been more difficult had I only used interviews. This is one of the biggest reasons I chose this method, as isolating people by age groups within interviews would not have given me large enough sample sizes to generalize (Treadwell & Davis, 2020). Survey questions about general knowledge of politics, education experiences, and political opinions also allowed me to gather generalized information that may not be as openly discussed in a setting that would not allow anonymity to participants.

The follow-up interviews allowed me to ask consenting individuals to expand on their survey answers. Choosing participants that showed conflicting opinions or unique stances allowed me to showcase some opinions that may not be widely showcased on social media or in real life. These unique experiences would not be uncovered with only predetermined questions in a survey or interview method, which led me to choose a semi-structured style interview. Though each interviewee was asked many of the same questions, their opinions and points of interest allowed me to dive into nuances that I may have missed if I did not allow myself to make changes as I worked through the interview.

Limitations of Survey & Interview Methods

Geography & Demographics. This survey was distributed through personal social media, North Carolina Wesleyan College contacts, and word of mouth. The majority of the personal contacts targeted through social media and word of mouth hailed from eastern North Carolina, which leans toward conservative politics and values. This area is also located in the Bible Belt, which lends these survey results to skew more toward Christian ideals. Though respondents did not identify specific locations in which they live, the vast majority are presumably from the southeastern United States or have ties to this area. This information was not collected to ensure the length of this survey maintained the engagement of respondents.

The respondents in this study were made up of mostly cis females. This is likely due to the makeup of my personal contacts. Of those that provided their gender identity, cis women overpowered the number of cis men in the study by more than 40.9 percent. The gender identity breakdown of the respondents was 70.1

percent cis female, 29.2 percent cis male, and 0.01 genderfluid. This leads us to consider this study from the perspective of mostly cis women. The race of respondents was not collected, which does not allow us to break down data by both gender identity and race intersections. This would be a beneficial amendment to this study if conducted again, but the questions regarding demographics were limited to encourage survey completion.

Online Format. This survey was distributed using Qualtrics, an online survey platform. This platform allowed me to utilize conditional formatting to tailor questions to individual respondents. This likely made the survey more specific to the experiences and education level of each respondent. The goal of these conditional questions was to keep respondents engaged, ask relevant questions, and provide a minor explanation of intersectionality.

The limitations with using Qualtrics exist due to the fact that a link is used to distribute the survey. To ensure the anonymity of participants, the anonymous link feature was shared through text, email, and social media. Though this was a convenient method to reach people quickly, it likely contributed to the decreased number of older respondents. Because older generations are less likely to use social media and technology in general, it is no surprise that the number of respondents in each generation decreased as the age of respondents increased (Viens, 2019).

Reaching large groups of seniors through social media was not possible. I attempted to share my survey with local senior centers, but the "political" nature of survey content was not accepted as an appropriate activity for these organizations. The use of printed surveys would have been a more accessible method of data collection, though this would still require finding large groups of older generations to participate.

A verbal survey conducted in this situation would not have provided anonymity to respondents, which I wanted to ensure in hopes of receiving more honest responses. As a student with no access to extensive research funding or assistance, providing enough incentive to participate and in-person options that provide sufficient anonymity was not possible.

Alternatives and Possible Improvements. If this survey were conducted again, utilizing research assistants to distribute the survey would help maintain anonymity for participants who took

their survey on paper. Combining this option with incentives would hopefully encourage older generations to participate that may not have felt confident in using the online software.

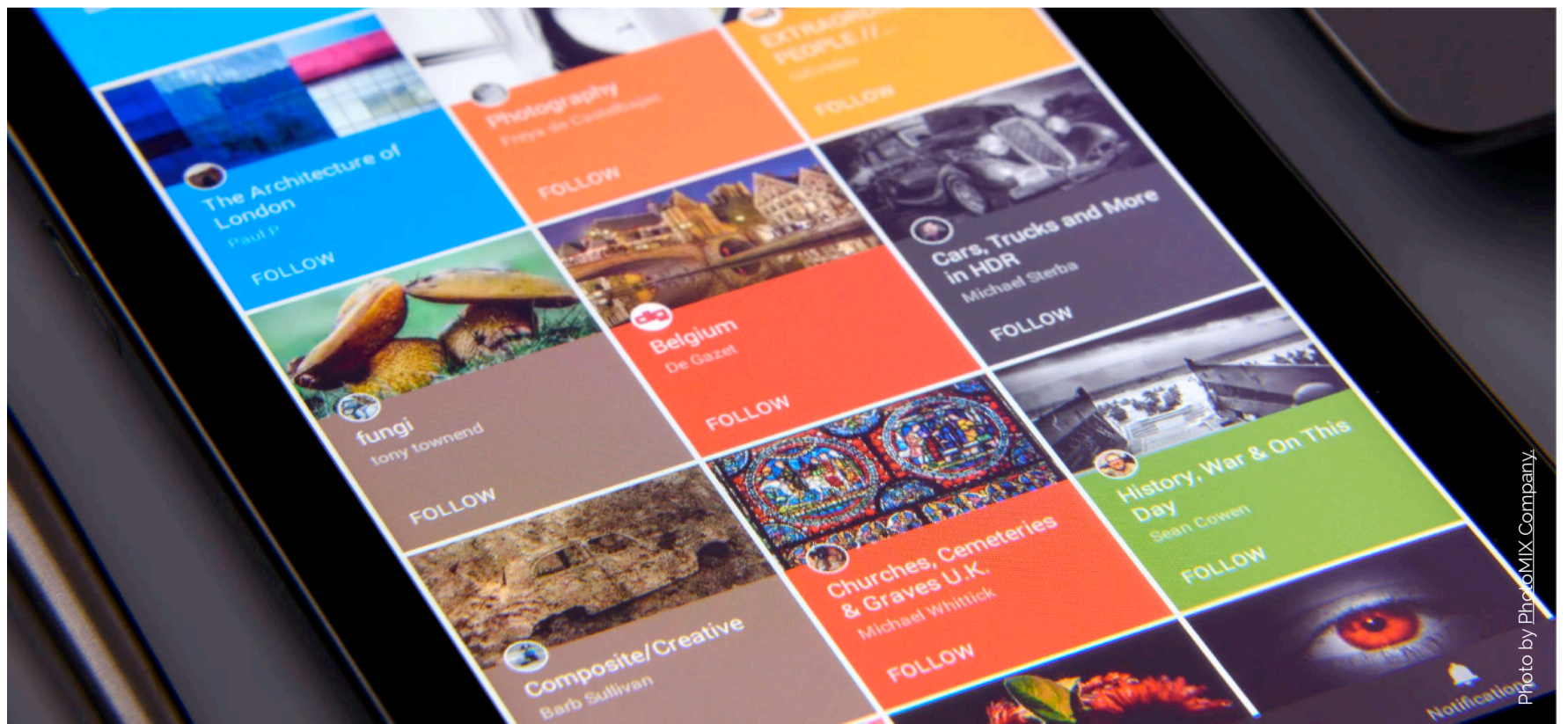
Semi-structured interviews were a great follow-up method but did present some challenges. Interviews proved to be difficult to set up, as many people who consented initially did not respond to follow-up emails. The results of these interviews are also generally harder to analyze, which is why I chose to keep interviews to a small number (Blee & Taylor, 2002). I would like to have conducted a few more interviews, but this was time-consuming so I limited those interactions to ensure the quality of the material.



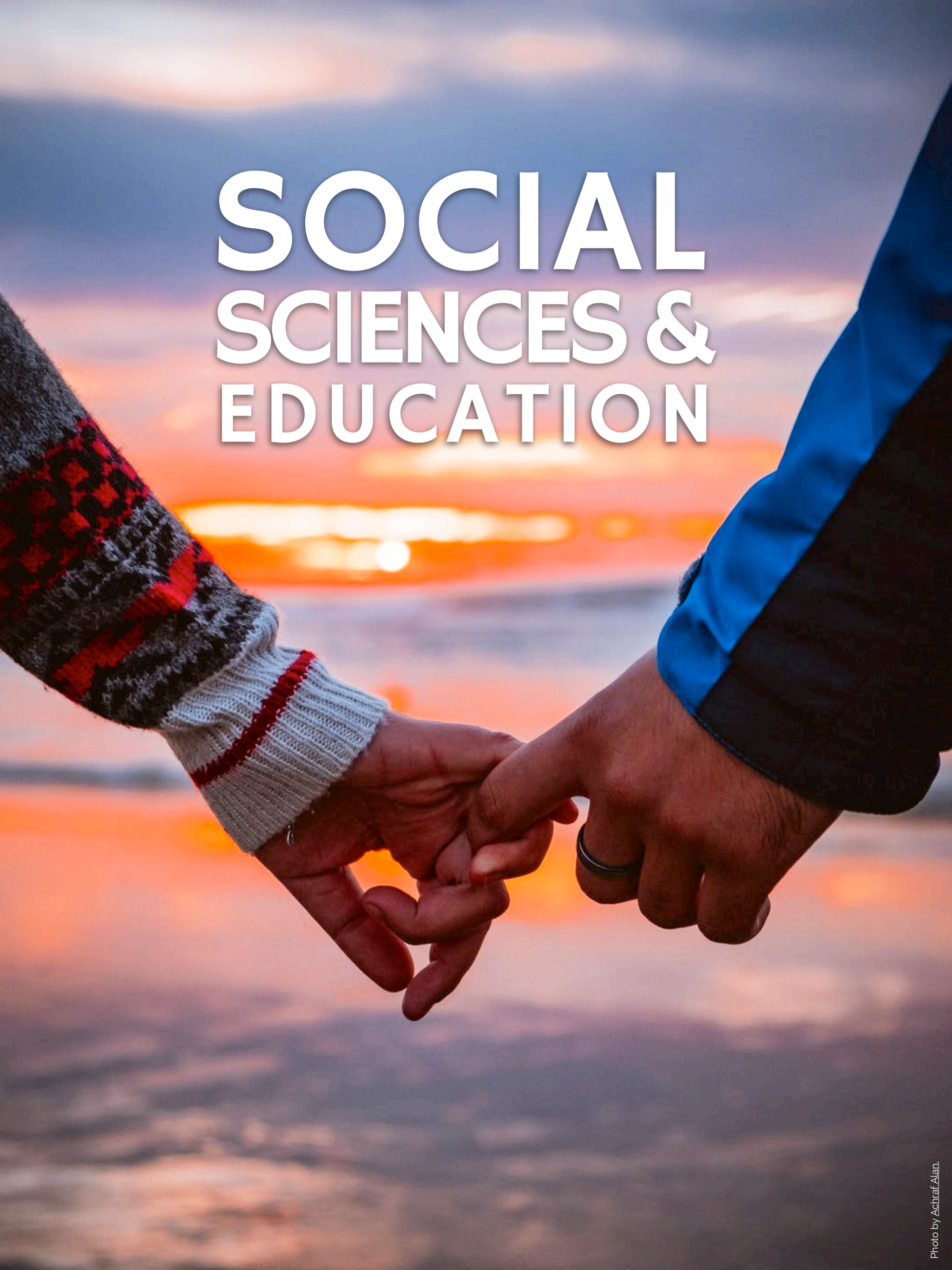
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SOCIAL SCIENCES & EDUCATION



THE EFFECTS OF PET OWNERSHIP ON THE MENTAL HEALTH OF NORTH CAROLINA WESLEYAN COLLEGE STUDENTS

ABSTRACT

College students are facing a mental health crisis in which they encounter numerous stressors, including demands from school, work, and social relationships. This research essay examines the effects that pets may have on the mental health of college students. Previous research has focused on the benefits of therapy animals and pet interactions on people of the general population, including some college students. However, not much research has been conducted to determine the effect of pet ownership on the mental health of college students. We conducted a survey that assessed the self-reported current psychological discomfort experienced by North Carolina Wesleyan College students, along with their self-reported predicted psychological discomfort if allowed to reside with a pet on campus. For students who owned a pet, our survey also evaluated their attachment to their pet, based on an attachment to pet scale. Our findings indicate that students predict that they would experience less psychological discomfort if allowed to reside with their pet on campus. In response to open-ended questions about the potential benefits of pets on campus and the mental health benefits of pets in general, most students provided responses relating to exercise promotion and the reduction of stress, loneliness, depression, and anxiety. We also discovered a moderate correlation between attachment to pet and self-reported current psychological discomfort for students who do not live with their pet on campus. Directions for future research and a proposal for amending the pet policy at North Carolina Wesleyan College are discussed.

Keywords: mental health, pets, college students

INTRODUCTION: THE BENEFITS OF PETS FOR HUMAN MENTAL HEALTH AND WELLBEING

Students pursuing higher education are facing a mental health crisis. Depression and anxiety levels are seeing a dramatic increase, as the likelihood of students facing anxiety and depression was found to be more than six times higher than the general population (Evans et al., 2018). Students have faced significant

psychological impairments due to the COVID-19 pandemic, with negative effects on both emotional and behavioral functioning (Copeland et al., 2020).

The American Psychological Association (n.d.) defines "stress" as the body's physiological or psychological response to stressors, which are difficult or demanding events or conditions. College is stressful for many students. Not only do students have a time-consuming academic workload, but they may also be under relationship (friendship, family, intimate) or work stress.

With the decline in wellbeing comes a rise in suicidal ideation, as students are struggling to cope with their life stressors as well as balance school and work. In a study conducted by Mortier et al. (2018) that assessed the prevalence of suicidal thoughts and behaviors among 634,662 college students worldwide, it was found that one in six students had experienced suicidal ideation, with 20% of them reporting at least one attempt. These statistics show that mental health is an ongoing concern among college students that must be continually managed.

Schools aim to provide students with access to multiple resources that support their mental health and wellbeing. Yet, counseling centers cannot be solely responsible for providing assistance to students, due to the high student-to-counselor ratios on college campuses, especially at liberal arts colleges. North Carolina Wesleyan College (NCWC), a liberal arts college in Rocky Mount, NC, has a student population of over 1,800 (North Carolina Wesleyan College [NCWC], 2021a) with only one counselor in the fall semester of 2020. Due to the number of students that each counselor is responsible for, it is essential that college campuses find alternative methods for enhancing student mental health. It is important for students to have a coping method that allows them to reduce stressful feelings, so exhaustion is either prevented or limited. Students must be able to find a healthy coping mechanism to handle the stresses of everyday life.

One method to aid in the enhancement of student mental health is the implementation of pet-friendly residence halls, in which all students can bring a pet to campus with them. Many people consider their pets as family members that love them unconditionally. What if every student were allowed to bring their pet on campus for psychological support? Are animals capable of providing adequate support? These questions will be discussed for an assessment of the effects of animals on human mental health in order to advocate for allowing pets on college campuses.

ANIMALS CAN PLAY A VARIETY OF ROLES IN HUMAN-ANIMAL INTERACTIONS

Human-animal interactions have been found to have psychological, emotional, and physiological benefits, many of which will be discussed in this section. Dogs have been bred for many years to become known as "man's best friend" (King et al., 2012; McConnell et al., 2011). In more recent generations, dogs, along with other animals, have been acclimated to home environments for the purpose of providing both psychological and physical comfort to their owners and other people who they come into contact with. The human-animal bond is one that has been shown to increase mood (Colombo et al., 2005) and decrease stress (Odendaal, 2000; Yarborough et al., 2018). Animals can play numerous roles, such as a therapy-animal, a service animal, an emotional support animal, or a companion animal. Companion animals and emotional support animals foster mental health stability and enhance wellbeing (Yarborough et al., 2018). Therapy and service animals are specially trained to aid in psychological and physical healing processes (Stewart et al., 2014; Yarborough et al., 2018).

Can Animal-Assisted Therapy and Animal-Assisted Activities Impact the Wellbeing of College Students?

A few studies have been conducted to assess the impact that Animal-Assisted Therapy and Animal-Assisted Activities have on the wellbeing of college students (Jarolmen & Patel, 2018; Stewart et al., 2014). Animal-Assisted Therapy is a treatment that involves interacting with trained therapy animals to help manifest and promote recovery (Jarolmen & Patel, 2018). Animal-Assisted Activities do not consist of treatment plans. Instead, they involve informal interactions that allow people to play with and care for

animals to promote stress relief (Jarolmen & Patel, 2018).

Stewart et al. (2014) assessed the effects of an Animal-Assisted Therapy outreach program on 55 undergraduate students at a small liberal arts college in the Southeastern United States. A volunteer brought her therapy dog for students to interact with for as long as they desired. Students completed a survey prior to and after interaction with the therapy dog. It was found that student participants experienced a reduction in both anxiety and loneliness levels during and after completion of the outreach program (Stewart et al., 2014).

In an Animal-Assisted Activities study, performed by Jarolmen and Patel (2018), blood pressure levels, as an indication of anxiety, were examined in 86 college students who were either exposed to therapy dogs or who sat behind a privacy screen with no therapy dog interaction during finals week at Kean University. Blood pressure was measured before and after 15 minutes of participant-dog interaction or sitting behind a privacy screen. The results showed a significant decrease in the blood pressure levels of the experimental group, indicating that student exposure to therapy dogs led to a decrease in anxiety levels during the week of final examinations (Jarolmen & Patel, 2018).

The studies conducted by Stewart et al. (2014) and Jarolmen and Patel (2018) showed that Animal-Assisted Therapy and Animal-Assisted Activities had a positive impact on the students that participated. Students in both studies experienced reduction in anxiety after animal interaction, which were evaluated by self-report (Stewart et al., 2014) and physiological (Jarolmen & Patel, 2018) measures. The students who participated in the Animal-Assisted Therapy outreach program also reported reduced feelings of loneliness as a result of the program (Stewart et al., 2014). The outcomes of these studies can be used as a foundation for allowing pets to reside on campus.

Endocrinological and Neurological Benefits of Interactions with Animals

The endocrine system is responsible for communication and regulating the body's biological processes. Hormones are released into the bloodstream by the endocrine system when the body reacts to a stressor or when it needs to relax. In a study conducted by Odendaal (2000), neurochemical levels were

assessed in 18 participants before and after interacting with dogs or quietly reading a book. Specifically, b-endorphin, oxytocin, prolactin, phenylacetic acid, dopamine, and cortisol were measured. After interaction with dogs, b-endorphin, oxytocin, prolactin, phenylacetic acid, and dopamine levels increased, while cortisol levels decreased. When compared with the participants who quietly read a book, those who interacted with dogs had significantly higher oxytocin, prolactin, and b-endorphin levels. These results indicate that stress was reduced, and relaxation was induced as a result of dog interactions (Odendaal, 2000).

The results of this study show that interactions with animals, whether one's own or another's, are associated with significant changes in the internal processes involved in stress and relaxation responses (Odendaal, 2000). Studies such as this are a good source of quantitative data to support the qualitative data given by self-reported feelings toward animal interactions. Physiological measures as a support for the advocacy for pets on college campuses are beneficial, as they provide evidence of positive human body responses to animal interactions.

ANIMAL CONTACT CAN REDUCE STATE-ANXIETY

State-anxiety is a self-reported feeling that is commonly associated with stressors. The effect of animals on reducing state-anxiety is a growing topic of study, as researchers aim to find effective ways to promote calmness (Shiloh et al., 2003). Shiloh et al. (2003) conducted a study in which 58 participants were administered the Companion Animal Semantic Differential and the State-Trait Anxiety Inventory (STAI) and then shown a live tarantula spider. The participants were randomly assigned to one of five groups in which they were asked to hold and pet a rabbit, a turtle, a toy rabbit, a toy turtle, or to simply watch the spider (control). It was found that those who petted a live animal reported a decrease in state-anxiety, but a decrease in state-anxiety was not found among those who petted a toy animal. The fact that state-anxiety was only reduced after petting a live animal indicates that the sole action of petting something may not be entirely responsible for state-anxiety reduction. Instead, reductions in state-anxiety may be most attributed to interaction with a live animal (Shiloh et al., 2003).

The Impact of Animal Interactions on Mood and Quality of Life

Interactions with animals can lead to an improvement of mood. In a study conducted by Colombo et al. (2005), 144 elderly residents from seven nursing homes were randomly assigned to one of three conditions for three months: given a plant to care for, given a canary to care for, or given nothing at all. Participants were given the same self-report assessments before the three-month period and after the three-month period (without the removal of the canary or plant). The results of the study showed that those who received the pet canary reported greater quality of life and a better mood than those who received a plant or nothing at all (Colombo et al., 2005). The fact that this study was conducted over a three-month period showed that the pets had a long-term positive effect on their owners' mental health, which can be useful in relation to the mental health of students residing with pets during the academic year.

Animals Can Serve to Facilitate Social Interactions

Pets play a role in the social-catalyst effect, which is the idea that pets serve as a catalyst for social interactions (Beetz et al., 2012). The social-catalyst effect seen among pet owners may be due to the notion that people with pets present are perceived as friendlier and, thus, more approachable than those who do not have pets present. A study was published by Wells (2004) in which an experimenter participated in six conditions as she walked down a common street: with a Labrador Retriever puppy, an adult Labrador Retriever, an adult Rottweiler, a plant, a teddy bear, and nothing at all. It was found that the experimenter received more interactions from others when she walked with a dog compared to a plant, teddy bear, or nothing at all (Wells, 2004).

The fact that the experimenter was approached more while walking with a dog compared to something else shows that dogs play a significant role in the social-catalyst effect, which may be beneficial to students on campus. According to the social-catalyst effect, if students walk with their pet on campus, they may be approached more, which could lead to the formation of new friendships.

The Foundation of Friendship Formation

Friendship formation and social support can be essential parts of college life, as networking is valuable for study groups and social activity.

There is not much research on how pets can facilitate friendship formation for college students. However, one study that focused on pets facilitating friendship formation among people in the general population was conducted by Wood et al. (2015) in which participants from four cities – Perth, Australia; San Diego, California; Portland, Oregon; Nashville, Tennessee - were asked to complete a telephone survey for the researchers to obtain self-report data. Participants were asked questions about their interactions with people in their neighborhood that they met because of their pet. Questions about the depth of the friendships with the people that they met through their pet were also asked to determine if pets played a significant role in acquiring meaningful friendships (Wood et al., 2015).

The results of this study indicate that pets play a role in facilitating new interactions with people, friendship formation, and social support. The study consisted of participants from four different cities, which shows that people living in different areas have similar interactions with people because of their pet's presence (Wood et al., 2015). Therefore, it may be possible that having a pet on campus may lead to the formation of new friendships as well as social support from other students.

THE PRESENT STUDY

Our study aimed to assess the effect of pet ownership on the mental health of college students. Specifically, we focused on a pet's impact on the stress, loneliness, depression, and anxiety levels of North Carolina Wesleyan College students. Participants were asked to complete a survey that consisted of questions addressing their current psychological discomfort, henceforth used as a measure of mental health, as well as their predicted psychological discomfort if allowed to have a pet reside with them on campus.

We hypothesized that there would be a decrease in scores from current to predicted psychological discomfort during an average week for all variables measured (stress, loneliness, anxiety, and depression). A decrease in scores suggests that students predict that they would experience a lower level of stress, loneliness, depression, and anxiety during an average week when allowed to reside with their pet on campus. Our hypotheses for psychological discomfort were based on the research by Jarolmen and Patel (2018) and Stewart et al. (2014) in which college students

experienced decreases in anxiety and loneliness as a result of animal interactions. The research by Odendaal (2000) and Colombo et al. (2015) in which results showed participants having an improved mood and a reduction in stress after animal interactions influenced our hypotheses as well.

We were also interested in the role attachment to pets plays in students' current levels of psychological discomfort. Albert and Bulcroft (1988) used a nine-item scale to assess owners' feelings towards their pets, which gave a total pet attachment score. We used this scale to assess how attached pet-owner participants were to their pet. This score was used to examine a potential relationship between attachment to pets and average current psychological discomfort scores. We hypothesized that for student pet-owners who do not live with their pet while attending school, attachment to one's pet is positively correlated with current psychological discomfort. Also, we hypothesized that for student pet-owners who live with their pet while attending school, attachment to one's pet is negatively correlated with current psychological discomfort. Our hypotheses for attachment were based on the research by Albert and Bulcroft (1988) in which it was found that participants who were never-married and/or who did not have children in the home were more attached to their pet than those who were married and who did not have children present in the home.

METHODS

Participants

The initial participant sample included 104 North Carolina Wesleyan College students. The results from three participants were excluded, due to the submission of an incomplete survey, so the final sample included 101 participants. All participants were informed that they must be 18 years or older before giving consent. Of these participants, 90 reported their age, and 11 did not. The 90 participants who reported their age were between the ages of 18 and 24, with the mean age being approximately 20 (SD = 1.49). Of the 101 participants, 45 were male and 56 were female. The race of the participants included White/Non-Hispanic (37.62%), African American (32.67%), Latino/Hispanic (19.80%), Mixed (2.97%), African (1.98%), Asian American (0.99%), White/Hispanic (0.99%), Italian (0.99%), and Middle Eastern (0.99%).

The sample consisted of 81.19% residential students ($n = 82$), and 18.81% non-residential

students ($n = 19$). It included 64 participants who owned pets and 37 participants who did not own pets. Of the pet owners, 10 participants lived with their pet while attending school (nine participants were non-residential students, and one participant was a residential student who had an Emotional Support Animal). Of the 54 participants who did not live with their pet while attending school, 51 were residential students, and three were non-residential students.

Procedure

Participants were asked to complete a survey between February 25, 2022 and March 4, 2022 via Qualtrics. The majority of the participants completed the survey at the beginning of their class after the researcher received permission from the professor to conduct it. Participation was voluntary, and potential participants were advised not to participate if they had previously completed the survey. Participants were given a consent form to read and accept or decline prior to beginning the survey. The study was described as a survey on adjustment to college life, and participants were not informed of the exact purpose of the study prior to completion.¹

The survey included items that asked participants to rate their current levels of stress, anxiety, loneliness, and depression as well as their predicted levels of those variables if allowed to bring a pet on campus. Participants were also asked whether they would benefit from having a pet on campus and whether they were pet owners. Participants who were pet owners were asked to complete a nine-item attachment to pet scale (Albert & Bulcroft, 1988), along with additional questions about their pet, including their pet's name, their pet's personality, and whether their pet benefited their mental health.

Measures

Demographics. Gender and race of participants were measured using multiple-choice questions, with an open-ended response choice for answers that were not listed. Residential status was also measured using a multiple-choice question. Participant age was measured using an open-ended response.

Mental Health Status. Current mental health status was measured using a four-item, four-point Likert scale (1 = *Not at all*, 4 = *More than half the days*) in which participants rated how often they felt stressed, lonely, down or

depressed, and anxious during an average week.

Predicted mental health status was measured using a 4-item, 4-point Likert scale (1 = *Not at all*, 4 = *More than half the days*) in which participants were asked to imagine that they were allowed to bring a pet to live with them on campus, and then rate how often they would feel stressed, lonely, down or depressed, and anxious during an average week.

Pets on Campus. Participants were given a multiple-choice question that asked what species of pet they would bring if given the opportunity to bring a pet to live with them on campus. An open-ended response choice was included for participants who would bring a pet species that was not listed. Participants were also given an option that indicated they would not bring a pet to campus.

Benefit of pets on campus was measured with a multiple-choice question, asking whether participants would benefit from having a pet on campus, and an open-ended response question, asking participants to describe why they would or would not benefit.

Pet Ownership. Pet ownership was assessed with a multiple-choice question about whether participants owned a pet. Participants who answered "No" were informed that it was the end of the survey and were given a debriefing statement. Participants who answered "Yes" were given additional questions assessing their pet's location while they attend school, pet attachment, pet description, and whether their pet benefits their mental health.

Location of Pet. Participants were asked a multiple-choice question to determine whether their pet lives with them while they attend school. The only options for participants who did have pets living with them while attending school related to service/emotional support animals or commuters, due to North Carolina Wesleyan College not allowing traditional pets, other than fish, in campus residence halls (NCWC, 2021b).

Pet Attachment. Pet attachment was measured using the nine-item, five-point Likert scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*), adapted by Albert and Bulcroft (1988). Participants were asked to indicate their level of agreement with items, such as "I feel closer to my pet than to many of my friends" and "There are times when my pet is my closest companion."

Pet Description. Participants were asked to identify the number of pets they have and their

species type with a multiple-choice question, allowing multiple answers and open-ended response options for each answer (example question: I have ___ dog[s]). Participants were also given an open-ended response question that asked them to mention the names of their pet(s) and describe the personality of their closest pet.

Benefit of Pets to Mental Health. Participants were asked whether they feel their pet has an effect on their mental health. Those who answered "Yes" were additionally asked to explain how their pet affects their mental health, while participants who answered "No" were asked why they feel their pet does not affect their mental health.

RESULTS

Mental Health Status

Psychological discomfort, a term we used as a measure of mental health, consisted of self-reported current levels of stress, loneliness, depression, and anxiety. The results of our frequency analysis (see **Figs. 1-4**) showed that participants predicted a decrease in stress (56.6%), loneliness (52.6%), depression (40.3%), and anxiety (57.7%) if allowed to reside with a pet on campus. Some participants predicted an increase in stress (1.3%), depression (4.2%), and loneliness (1.3%) if allowed to reside with a pet on campus. There were also participants who predicted that there would be no difference in their levels of stress (42.1%), loneliness (46.2%), depression (55.6%), and anxiety (42.3%) if allowed to reside with a pet on campus. Compared to the percentage of participants who felt that their stress, loneliness, and anxiety levels would not change if allowed to reside with a pet on campus, a greater percentage of participants felt that their stress, loneliness, and anxiety levels would decrease if allowed to have a pet reside with them on campus.

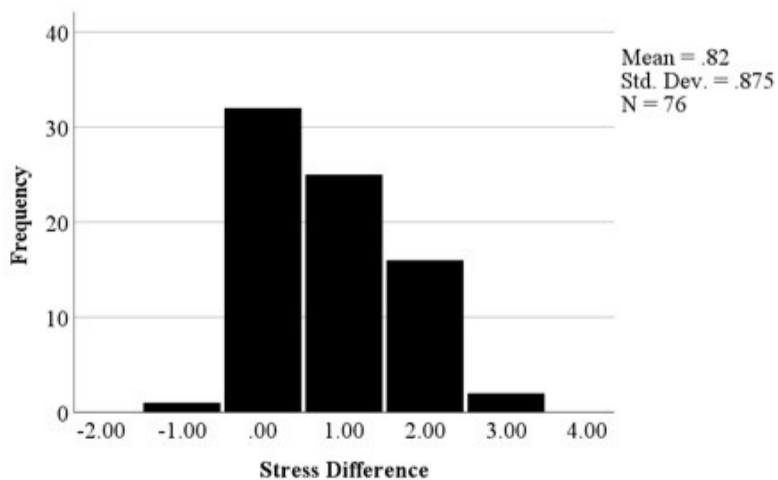


Fig. 1. Differences Between Current and Predicted Stress Levels.

Note: Positive numbers on the x-axis indicate a decrease in scores, thus indicating that participants predicted lower levels of stress if allowed to reside with a pet on campus. Negative numbers on the x-axis indicate an increase in scores, thus indicating that participants predicted higher levels of stress if allowed to reside with a pet on campus. A difference of .00 indicates no change in current versus predicted stress levels.

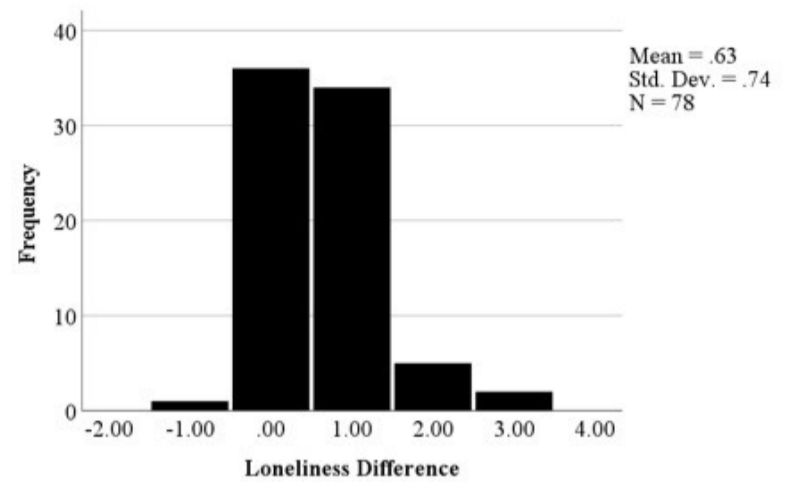


Fig. 2. Differences Between Current and Predicted Loneliness Levels.

Note: Positive numbers on the x-axis indicate a decrease in scores, thus indicating that participants predicted lower levels of loneliness if allowed to reside with a pet on campus. Negative numbers on the x-axis indicate an increase in scores, thus indicating that participants predicted higher levels of loneliness if allowed to reside with a pet on campus. A difference of .00 indicates no change in current versus predicted loneliness levels.

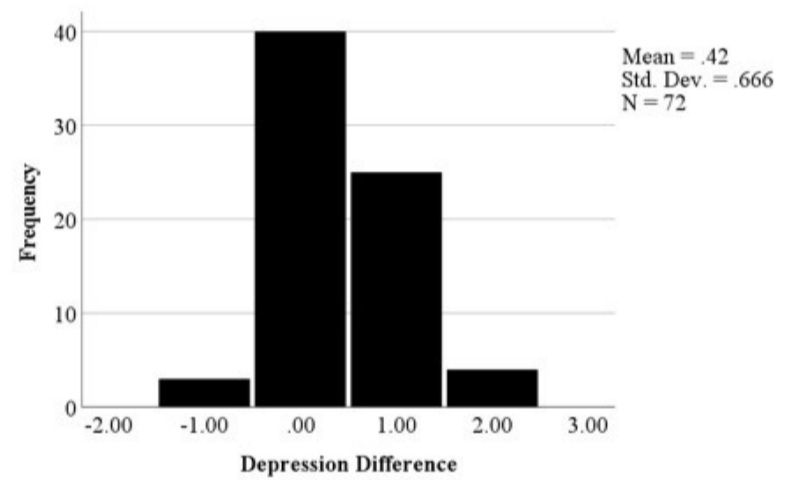


Fig. 3. Differences Between Current and Predicted Depression Levels.

Note: Positive numbers on the x-axis indicate a decrease in scores, thus indicating that participants predicted lower levels of depression if allowed to reside with a pet on campus. Negative numbers on the x-axis indicate an increase in scores, thus indicating that participants predicted higher levels of depression if allowed to reside with a pet on campus. A difference of .00 indicates no change in current versus predicted depression levels.

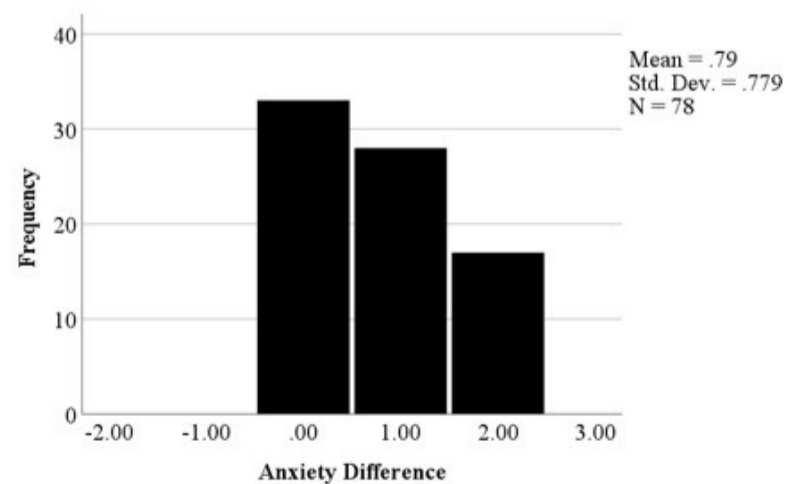


Fig. 4. Differences Between Current and Predicted Anxiety Levels.

Note: Positive numbers on the x-axis indicate a decrease in scores, thus indicating that participants predicted lower levels of anxiety if allowed to reside with a pet on campus. Negative numbers on the x-axis indicate an increase in scores, thus indicating that participants predicted higher levels of anxiety if allowed to reside with a pet on campus. A difference of .00 indicates no change in current versus predicted anxiety levels.

Current and predicted stress, loneliness, depression, and anxiety variables were analyzed using a two-tailed paired samples t-test (e.g., “How often do you feel stressed?” was paired with “How often would you feel stressed?”). Higher scores indicate greater psychological discomfort, and lower scores indicate lower levels of psychological discomfort. We hypothesized a significant decrease in scores from the current to the predicted variable in each pair. As predicted, a significant difference was found for each pair: stress ($M = .816$, $SD = .875$), $t(75) = 8.128$, $p < .001$; loneliness ($M = .628$, $SD = .740$), $t(77) = 7.493$, $p < .001$; depression ($M = .417$, $SD = .666$), $t(71) = 5.308$, $p < .001$; and anxiety ($M = .795$, $SD = .779$), $t(77) = 9.013$, $p < .001$.

Pets on Campus

When participants ($N = 101$) were asked to state the species of pet they would bring to campus, 86 participants stated that they would either bring a dog ($n = 69$), cat ($n = 16$), or a fish ($n = 1$). Participants were asked to choose one pet they would bring to live with them on campus. However, one participant stated that they would bring both a dog and a hamster. In contrast, 14 participants stated that they would not bring a pet to campus (Fig. 5).

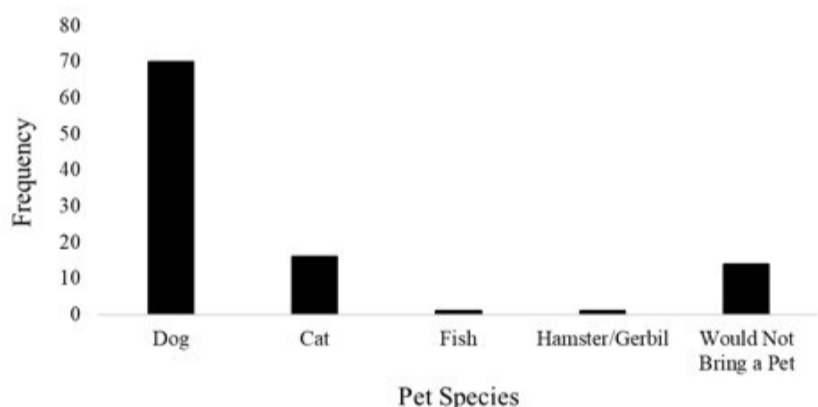


Fig. 5. Type of Pet Species Participants Would Bring as a Pet to Campus.

For the benefit of pets on campus measure, 78.22% of participants ($n = 79$) felt that they would benefit from having a pet on campus, while 21.78% of participants ($n = 22$) felt that they would not benefit from having a pet on campus. Also, 93.75% of pet owners felt that their pet has an effect on their mental health, while 6.25% of pet owners did not feel that their pet has an effect on their mental health.

Pet Ownership

Participants who owned a pet ($n = 64$) specified the number and species of pet(s) they own, and the total number of each pet species was

calculated: dogs ($n = 55$), cats ($n = 24$), horses ($n = 4$), hamsters/gerbils ($n = 6$), fish ($n = 6$), bearded dragons ($n = 1$), and birds ($n = 2$) (Fig. 6).

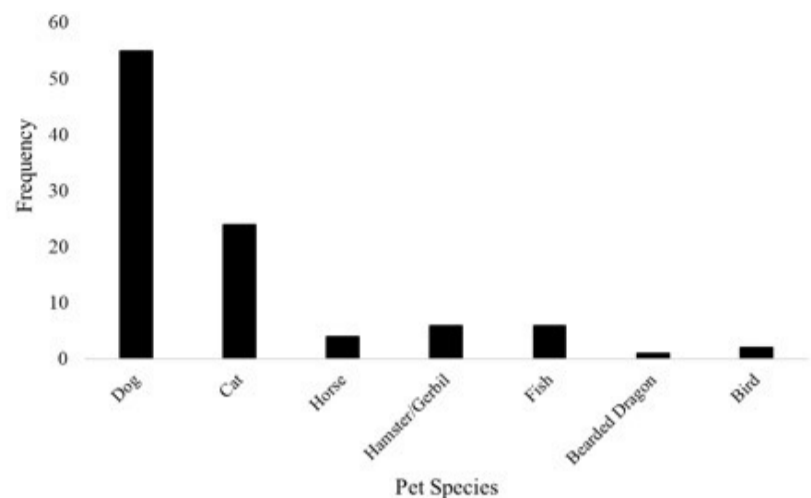


Fig. 6. Species of Pets Owned by Participants.

Pet Attachment

An internal consistency analysis was conducted using four variables: current levels of stress, loneliness, depression, and anxiety. Because Cronbach's alpha was calculated to be greater than .7 for this measure ($\alpha = .741$), these variables were averaged to form a composite current psychological discomfort variable. An internal consistency analysis was also conducted for the nine-item pet attachment scale (Albert & Bulcroft, 1988) that pet-owner participants completed, with Cronbach's alpha calculated as $\alpha = .861$, allowing us to compute a composite attachment to pet score. These composite scores were used to evaluate the correlation between attachment to pet and current psychological discomfort. For participants who reported not living with their pet while attending school ($n = 44$), a significant moderate correlation was found ($r = .431$, $p = .004$). For participants who reported living with their pet while attending school ($n = 9$), a significant correlation was not found ($r = .077$, $p = .844$).

Pet Description

Participants ($n = 64$) gave the names of their pets and described the personality of their closest pet in a variety of ways, ranging from a few words to a few sentences. Some participants described multiple pets, even though we did not inquire. An example of a participant's response containing a short description is:

Clumsy, happy, energetic.

An example of a longer response² given by a participant is:

Lazy for the most part of the day, loves to eat food at any time, follows me around the house and always wants to sit with me, loves to nap, excited to go on walks or go to the park, grumpy when near other dogs, curious when sniffing around outside.

A sample response³ from a participant who described multiple pets is:

Tom is my cat. He is very vocal and likes attention from everyone. He is a lot more aggressive than my other cat, Jelly. She is very docile and loving, especially towards my dog, Tony. Tony is playful and likes to be babied. He gets very jealous with us when we give our cats more attention than he is receiving, which is understandable, because he was our first family pet.

Thematic Analysis of Open-Ended Survey Responses

There were four open-ended questions on the survey, and participants were shown two of the four, depending on their response to the 'yes or no' question preceding them. The following themes describe the benefits and drawbacks that participants mentioned in regard to owning a pet.⁴ If participants indicated that they would benefit from having a pet on campus, they were asked to describe how. If participants indicated that they would not benefit from having a pet on campus, they were asked to describe why. Further, if pet owner participants stated that their pet does affect their mental health, they were asked to describe how. If pet owner participants stated that their pet does not affect their mental health, they were asked to describe why.

Benefits

Theme: Reduces stress, while promoting calmness and relaxation. Many participants mentioned a potential change in their stress level if they were permitted to have a pet on campus. Pet owners also described a difference in their stress level when they are with their pets. Overall, 50 participants described a decrease in stress and/or an increase in calmness because of a pet. One participant stated:

I would benefit from having a pet on campus, because whenever I was stressed at home from either a sport and/or school, I could cuddle up with my dog and seek comfort from it and/or talk through my problems with the dog. Even though it cannot understand, it allows me to vent

without being judged. I also think that dogs are great pets to have on campus, because they can sometimes pick up on certain human emotions like stress...

Theme: Lessens feelings of loneliness and increases social interactions. Many participants stated that they would feel less lonely ($n = 20$) and would interact more with others ($n = 3$) if permitted to have a pet on campus. Some participants stated that their current pet reduces their feelings of loneliness. One participant shared that their emotional support animal was helpful in increasing their social interactions:

I actually did have my emotional support dog on campus with me due to having an emotional disability. Having her on campus with me made me feel like I always had companionship and a reason to get out of my dorm and walk around the campus. She was also a conversation starter, and it allowed me to engage more with other students.

Theme: Relieves symptoms of depression and increases happiness. When asked to describe the potential benefits of having a pet on campus and the benefit of pets to their mental health, 41 participants mentioned that they would feel happier and less down or depressed. One person stated:

Having a pet with me on campus would allow me to have some extra joy in my life. Sometimes I get alone and bored or depressed, and a dog just brings a spark that you need in a time like that. They really are "man's best friend," because they're always there for you whenever you need them.

Another participant described pets as having a unique ability to affect a person's mental health:

Pets are a human's best friend. I think pets bring a different kind of peace and happiness that no one else can give.

Theme: Decreases anxious feelings. There were 22 participants who stated that their anxiety *would be* reduced if allowed to have a pet on campus or that their anxiety *is* reduced due to having a pet. One participant mentioned:

I have anxiety and I feel that having my cats, or just one of them from home, with me would be an extreme boost and distraction from my anxious habits.

Theme: Provides emotional support and comfort. There were 24 responses that involved pets having or fulfilling the potential to provide

emotional support when undergoing difficult circumstances relating to school, family, and other life pressures. In reference to the potential benefits of having a pet on campus, one participant stated:

Emotional support and something to look forward to greeting each day, especially since I've always been close with my family. Being away takes an emotional toll.

Regarding the same benefits, another participant mentioned:

It will help with emotionally supporting you when you have minor downfalls throughout college.

Theme: Promotes exercise. Ten participants mentioned that because certain pets require walking, a benefit of having a pet on campus is the newly established requirement to exercise. One participant mentioned that their pet inadvertently benefits their mental health when requiring them to go outside:

He always wants to play and go outside, so whenever I don't feel like it, I know that I have to, so I do it for him, and it makes me feel better that I'm up and moving.

Theme: Gives a sense of responsibility and something to take care of. Seven participants mentioned that having a pet on campus would give them the opportunity to learn how to be more responsible and to take care of something other than themselves. A common response was similar to that of the participant who wrote the following statement:

Pets make me happier, and having an animal means I won't be laying around all day, and it gives me a sense of responsibility to take care of someone other than myself.

Theme: Provides a distraction from life stressors. Six participants described pets as a healthy distraction from negative thoughts and stressors. Some reported an uplifted mood after interacting with their pet, especially after a long day. One participant stated:

My dog and my two cats always improve my mental health, because no matter how my day went at school or work, I can go home and immediately they are coming to get loved on and attention. This distraction can make me forget the things I am worried or anxious about, which also helps my mental health.

Drawbacks

Theme: Too much of a responsibility. Eight participants felt that having a pet on campus would require too much time and too many resources that they cannot provide as a student. One participant stated:

I feel that a pet is a big responsibility, especially to have on campus. Although there are benefits, ultimately, pets such as dogs are time consuming.

Theme: A source of distraction that hinders focus. Three participants stated that having a pet on campus would be too distracting, as it would hinder their ability to focus on schoolwork. In particular, one participant compared owning a pet to parenting a child:

I believe having a pet on campus would probably be distracting, because caring for a pet is kind of the same as having a child, which is a responsibility on top of having to do schoolwork and attend class.

DISCUSSION

Animals can aid in enhancing the mental health and wellbeing of people from different backgrounds, including college students (Jarolmen & Patel, 2018; Stewart et al., 2014) and those who are in assisted-living facilities (Colombo et al., 2005). Animal-Assisted Therapy and Animal-Assisted Activities can provide an avenue for those who do not have pets (as well as for those who do) to interact with animals and receive positive benefits (Jarolmen & Patel, 2018; Stewart et al., 2014). Benefits may include reduced physiological stress responses (Odendaal, 2000), improved mood (Colombo et al., 2005), and new friendship formation (Wood et al., 2015). Pets and Emotional Support Animals can fulfill this role by being a support during stressful circumstances as well as understanding and meeting their owner's needs (Service Dog Certifications, 2021). They can foster friendship formation by way of facilitating the social-catalyst effect (Wells, 2004), and they can serve as a social support themselves (Wood et al., 2015). Schools should consider these benefits when determining whether they will institute pet policies for residential students.

The Present Study

Our study aimed to assess the effects of pets on the mental health of North Carolina Wesleyan College students. Participants completed a survey that assessed their self-reported current levels of stress, loneliness, depression, and

anxiety as well as their self-reported predicted levels of those variables if they were allowed to bring a pet to reside with them on campus. Overall, approximately 78% of participants felt that they would benefit from having a pet on campus. The results indicated that participants predicted lower levels of stress, loneliness, depression, and anxiety during an average week when asked to imagine if they were allowed to bring a pet on campus. There were, however, some instances in which no difference was found between self-reported current and predicted levels of stress, loneliness, depression, and anxiety. One reason is the fact that three participants reported no feelings of stress, loneliness, depression, and anxiety (by selecting "Not at all") for both the current and predicted psychological discomfort measures. Therefore, it is not mathematically possible for those participants to show a decrease in predicted stress, loneliness, depression, and anxiety levels as a result of residing with a pet on campus. Also, five participants did not answer all four of the questions that assessed current psychological discomfort, and seven participants did not answer all four of the questions that assessed predicted psychological discomfort. Therefore, we were unable to determine a difference between current and predicted psychological discomfort for those participants.

To explain the results of the quantitative questions, in response to open-ended questions, participants stated that a pet would provide emotional support and comfort, increase their frequency of social interactions, and provide a distraction from the pressures of life. Consistent with the studies by Stewart et al. (2014) and Jarolmen and Patel (2018), the quantitative and qualitative data collected in our study suggest that student mental health would improve if pets were allowed to reside on campus. Some of these results may be explained by the release of stress-relieving and mood-enhancing hormones released by the nervous and endocrine systems when interacting with animals (Odendaal, 2000). However, we did not assess physiological measures, so we cannot be certain of the hormonal responses of participants towards pets. Future research should be conducted to assess the physiological effects of pets on college students.

Pet owner participants completed a nine-item scale, adapted by Albert and Bulcroft (1988), assessing their attachment to their pet.

We used the results of the attachment to pet scale to produce an average attachment score that we compared to their average current psychological discomfort score, determined by averaging the scores for the current stress, loneliness, depression, and anxiety variables. The results showed a moderate positive correlation between average current psychological discomfort and average pet attachment scores for participants who did not live with their pet while attending school. This correlation may be due to participants, while away at school, missing the psychological comfort and support their pet gives them.

A significant relationship was not found for students who live with their pet while attending school. This was due to a relatively small sample of participants who live with their pet while attending school. Therefore, we were unable to make conclusions about the correlation between average current psychological discomfort and average pet attachment scores.

Directions for Future Research

Most of the research conducted on human-animal interactions focuses on dogs as the animal of choice. However, there are other popular companion animal species, such as cats, birds, and horses. According to the American Veterinary Medical Association (AVMA), 38.4% (over 48 million) of Americans own dogs, 25.4% (nearly 32 million) own cats, 2.8% (3.5 million) own birds, and 0.7% (over 893,000) own horses as of 2018. Even though millions of Americans have other household pets besides dogs, there is not much research on the benefits of other species to human mental health and wellbeing (American Veterinary Medical Association [AVMA], n.d.). Future research should be conducted in which other companion animal species are the focus, since dogs are not the only species of animals that people prefer to interact with.

One limitation of our study is that participants were asked to complete a Likert scale about their current level of stress, loneliness, depression, and anxiety prior to their completion of open-ended questions referencing the benefits of pets. The sequence of these questions may have inadvertently influenced participant responses, as many participants mentioned stress, loneliness, depression, and anxiety in their responses. Another limitation of our study was that we were unable to assess whether pets on campus actually have an effect on the mental health of

North Carolina Wesleyan College students, due to the fact that NCWC does not allow pets (with the exception of fish and service animals) to reside on campus (NCWC, 2021b).

Due to the unanswered question of the actual effect of pets on the mental health of North Carolina Wesleyan College students, a future study would aim to evaluate this question by way of a within-subjects design in which the same psychological discomfort variables (stress, loneliness, depression, and anxiety) were measured. An experimental group, consisting of residential student pet-owners, would be compared to a control group, consisting of residential students who did not own a pet. At multiple points throughout the semester, participants would be asked a series of questions to evaluate psychological discomfort during an average week, similar to the present study (e.g., "How often do you feel stressed?"). It is commonly assumed that student stress levels, along with other variables of psychological discomfort, rise as the semester progresses. Therefore, we would hypothesize that although there may be an increase in each psychological discomfort variable measured as the semester continues, pet owners will see a smaller increase than those who do not own a pet.

Proposal to Amend the Pet Policy at North Carolina Wesleyan College

It is a school's responsibility to ensure the safety and health of students on campus if it has the means to do so. The results of this study indicate that students believe that pets on campus would be beneficial to their mental health in a variety of ways, including an increase in productivity and physical activity, along with a decrease in stress, loneliness, depression, and anxiety. Using both the quantitative and qualitative results of this study, that describe the predicted and actual benefits of pets to students, North Carolina Wesleyan College should strongly consider the adoption of a policy that would allow residential students to have a pet (other than a fish) reside with them on campus during the academic year.

NCWC allows fish and registered service animals to reside with students on campus (NCWC, 2021b). Although allowing Emotional Support Animals (ESAs) to reside on campus is not explicitly stated in the North Carolina Wesleyan College 2021-2022 Student Handbook, it is required by law (Gibeault, 2021). An ESA is an animal that is authorized by a

licensed mental health professional to provide their owner with emotional comfort due to a disabling medical illness. Such illnesses include, but are not limited to, Attention Deficit Disorder (ADD), learning disorders, Autism, General Anxiety Disorder, Bipolar Disorder, cognitive disorders, depression, and Post Traumatic Stress Disorder (PTSD). ESAs are protected under the Fair Housing Act, so they are permitted to stay in most residential areas without the requirement of a pet fee paid by the owner. ESAs are not required to be registered under the Americans with Disabilities Act, but it is an option for owners to do so (Service Dog Certifications, 2021).

Unlike service animals, ESAs are not required to be professionally trained because they are not required to perform specific tasks. However, ESAs must be well-behaved and non-threatening to the health and safety of others (Service Dog Certifications, 2021). ESAs are not allowed in places where food is sold (Service Dog Certifications, 2021), and they are not allowed on airlines as of January 11, 2021 (Gibeault, 2021).

The only distinction between an ESA and a pet is that an ESA is prescribed by a licensed mental health professional. A person who has a mental illness or emotionally disabling condition could speak with a therapist and receive an ESA letter within one to three business days (ESA Doctors, n.d.), which means that a pet could potentially become an ESA one day after their owner meets with a therapist.

The purpose of this section is not to undermine the severity of mental illness, but to shine light on the subtle difference between a pet and an ESA. This legality could be the one thing separating a student in need of psychological and emotional comfort from an enhanced quality of life. Students may live with undiagnosed mental illnesses because of the lack of resources to obtain a therapist or due to them not wanting to have a "mental illness" label on their record.

North Carolina Wesleyan College should take this subtle distinction between a pet and an ESA into account when making the decision to allow pets on campus. Animals have been shown to benefit both their owners and those around them. The presence of pets on college campuses could lead to enhanced wellbeing for many people on campus, including faculty, staff, and students, as research has shown that one does not need to be an animal lover to benefit from human-animal interactions (Shiloh et al.,

2003). Pets should be allowed in college residence halls not only because of the physiological benefits research has shown they provide (Odendaal, 2000), but also because of the psychological benefits they provide for their owners, demonstrated by previous research (Colombo et al., 2005; Jarolmen & Patel, 2018; Stewart et al., 2014; Wood et al., 2015; Yarborough et al., 2018) and the present study. ❖

NOTES

- 1 With the exception of one professor who mentioned the purpose of the study when introducing the researcher to 14 students.
- 2 Response has been edited for clarity and grammatical correctness.
- 3 Response has been edited for clarity and grammatical correctness.
- 4 Responses have been edited for clarity and grammatical correctness.

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A LOOK INTO THE UNITED STATES PRISON SYSTEM: RECIDIVISM

ABSTRACT

The United States prison system and its overall focus on Retributive Justice leads to devastating effects on prisoners as they are dehumanized and become more prone to deviancy while behind bars. This leads to high rates of recidivism, a problem that has become intertwined with the U.S. prison system. These issues are more apparent due to mass incarceration which has worsened conditions and made them more visible to the courts and the general public. However, there are some potential solutions to this complex issue. Already some states are taking action into lowering recidivism such as Returning Home-Ohio which helps prisoners find housing after prison and the Second Chance Act in North Carolina which cleans the records of some criminal offenders to allow them to find employment more easily. We could also look at Sweden for a potential solution as they were able to significantly lower their recidivism rates

by switching to a Rehabilitative Justice as a model for their prisons.

Keywords: United States Prisons System, Retributive Justice, Rehabilitative Justice, dehumanization, recidivism, deviant, Returning Home-Ohio, Second Chance Act of North Carolina

INTRODUCTION

There are three types of models for criminal justice, including Rehabilitative Justice, Retributive Justice, and Restorative Justice; these models focus on how to handle a criminal act and restore a sense of justice after one has been committed (Clear, Cole, & Reisig, 2015). Rehabilitative Justice is a model employed by correctional institutions that emphasizes the provision of treatment programs designed to reform the offender (Clear, Cole, & Reisig, 2015). Retributive Justice means that punishment is inflicted on a person who has infringed on the

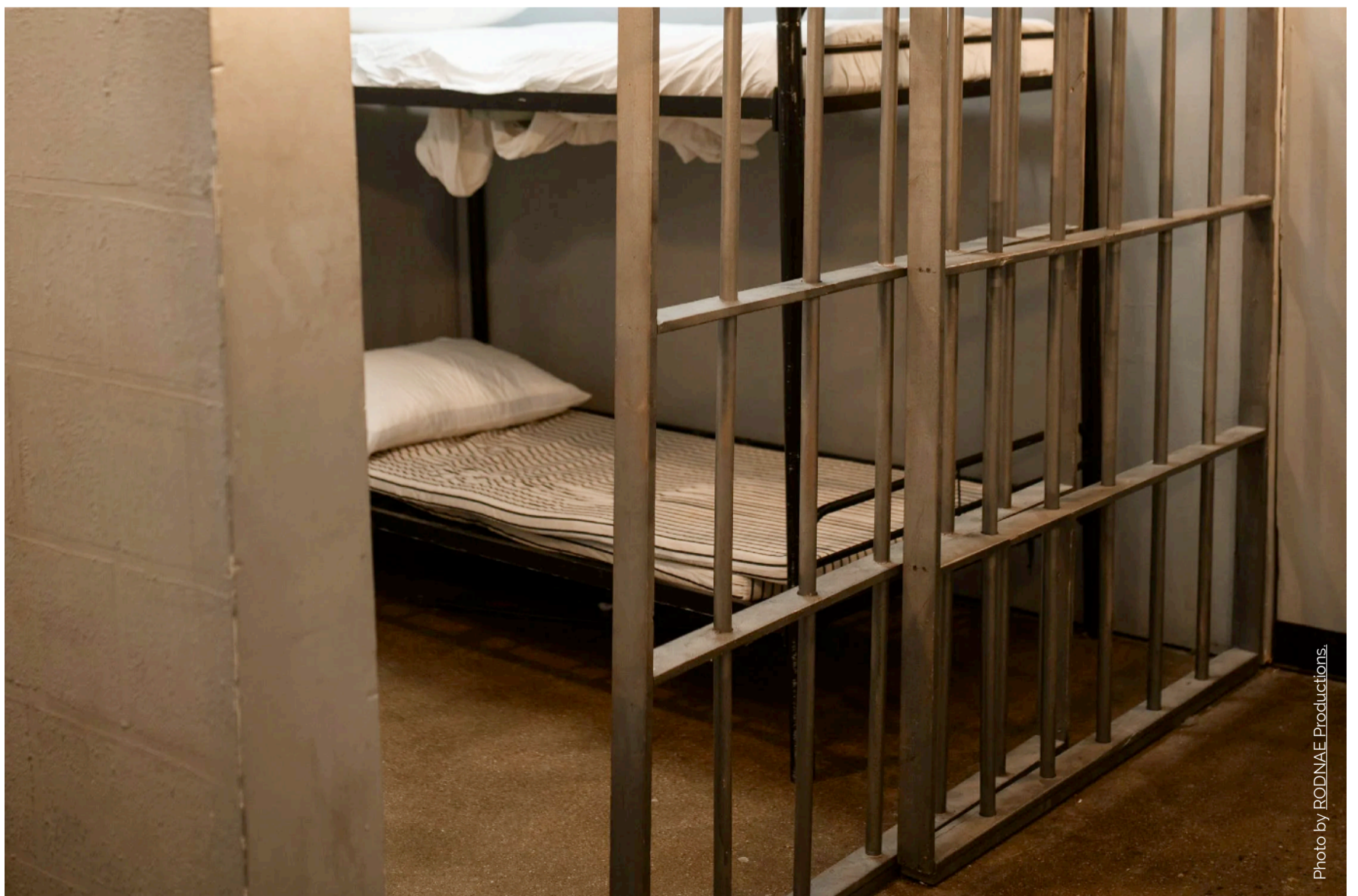


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rights of others and so deserves to be penalized. The severity of the sanction should fit the seriousness of the crime (Clear, Cole, & Reisig, 2015). Restorative Justice occurs when punishment is designed to repair the damage done to the victim and community by an offender's criminal act (Clear, Cole, & Reisig, 2015). The American prison system is based on a Retributive model of justice, as evident in the dehumanizing methods American prisons use on prisoners and its overall focus on punishment over rehabilitation (Bastian, Denson, Haslam, 2013).

The U.S. prison system and its focus on punishment must be called into question, as shown in Cullen's evidence-based approach that examined recidivism rates in U.S. prisons. The data led to the conclusion that Retributive Justice has little to no evidence vouching for its efficiency (Cullen, Jonson, Nagin, 2011). In fact, Cullen's data suggested there may be a criminogenic effect to this form of justice (Cullen, Jonson, Nagin, 2011). This criminogenic effect means that prisons tend to produce more deviancy in people and thus higher crime rates; due to factors such as dehumanization (Vieraitis, Kovandzic, & Marvell, 2007). This effect is strongly supported in other research as well such as in that of Vieraitis, Kovandzic, and Marvell which used a data set from state prison panel data from 46 states from 1974 to 2002, which showed that an increase in the number of prisoners released from prisons is significantly associated with an increase in crime (Vieraitis, Kovandzic, & Marvell, 2007). Since the government controls for changes in prison population levels, we attribute the apparent positive influences on crime that seem to follow prison releases to the criminogenic effects of prison (Vieraitis, Kovandzic, & Marvell, 2007).

Furthermore, this effect is strengthened when we compare recidivism rates in America to those in Sweden (Deady, 2014). Recidivism rates in American prisons far exceed those of other countries which do not focus as strongly on punishing prisoners (Yukhnenko, Sridhar, & Fazel, 2019). Over 60 percent of prisoners in the U.S. reoffend and are sent back to prison within two years of their initial release (Yukhnenko, Sridhar, & Fazel, 2019). Sweden used to have similar recidivism rates to that of the U.S. with around 42% of prisoners going back to prison before Sweden's shift to a rehabilitation model (Jackson, 2020). After this switch to rehabilitation and humanizing prisoners, recidivism rates decreased to 29% (Jackson, 2020). This is

encouraging data in asserting the need for a change in the U.S. prison system, though proponents often say these changes would make prisons too comfortable and fail to discourage criminal acts and behaviors (Jackson, 2020). After reviewing recidivism rates and the criminogenic effect of prisons, policymakers should consider designing and creating new policies that reduce incarceration and try to change this criminogenic effect by switching from Retributive Justice to a Rehabilitation Justice (Vieraitis, Kovandzic, & Marvell, 2007).

LITERATURE REVIEW

The current U.S. prison system and its reliance on Retributive Justice, which is designed to punish criminal offenders as a means of crime deterrence, have been shown to be ineffective when we look at the recidivism rates it produces (Cullen, 2011). Recidivism occurs when a former inmate commits a criminal act that results in a rearrest, reconviction, or return to prison with or without a new sentence during a three-year period following their release (Office of Justice Program, 2020). Recidivism is used as a means to determine the efficiency of the American prison system and oftentimes focuses on the varying types of prisons in America and how effective or ineffective they are at promoting change (Office of Justice Program, 2020).

Types of Prisons in America

In the U.S., 717 out of every 100,000 people are incarcerated in prison, the highest rate of incarceration in any country (ITPI, 2016). This large number of prisoners is one of the reasons we started utilizing private prisons to help manage the sheer volume of prisoners in the U.S. (Austin & Coventry, 2001). It is also why when we talk about the U.S. prison system, many people are confused about the difference between jails and prisons (Brooks, 2019). The truth is these two systems have different purposes and functions. One is temporary and the other longer-term (Brooks, 2019). Jails are a temporary holding facility where suspects are held until trial or sentencing; though for some misdemeanor offenses, when the sentence is one year or less, a convicted person may serve that time in jail (Brooks, 2019). Prisons are long-term holding facilities that house prisoners for a year or more; these people typically have committed more serious crimes like felonies and can be labeled as more deviant compared to their jailed counterparts (Brooks, 2019).

Another difference between the two is that jails are always operated by local governments, such as cities or counties, while prisons are run by the state, federal, and even private institutions (Brooks, 2019).

State prisons are designed to house people who have committed crimes against the state, such as assault, arson, robbery, or homicide (Brooks, 2019). Due to laws and legislations varying from state to state, the rules which govern prisons also vary depending on the state, thus prisons may operate differently which leads to a multiplicity of the rules that prisons, their staff, and their inmates must follow (Brooks, 2019). These varying rules can impact the prisoner's quality of life, the punishments they receive, and available programs (Brooks, 2019). One example could be capital punishments which are outlawed in some states and acceptable in others (Brooks, 2019). Other changes include factors such as how many offenders get placed on probation and parole and the makeup of prison populations (Brooks, 2019). This is different from the more uniform rules that are applied to federal prisons (Brooks, 2019).

Federal Prisons can be broken up into five different types of prisons which are designed to hold varying types of prisoners as determined by the degree of crime they committed, their requirements for special care, their distance to family, and their status as repeat offenders (Brooks, 2019). Generally, speaking these prisoners are charged for federal crimes, including drug trafficking, identity theft, tax fraud, or child pornography (Brooks, 2019). The five different prison types are Minimum Security, Low Security, Medium Security, High Security, and Administrative Prisons (Brooks, 2019).

Minimum Security Prisons are sometimes referred to as Federal Prison Camps because they constitute the lowest-level security prison and are generally more lenient toward inmates (Brooks, 2019). These prisons house non-violent offenders who typically have committed their first offense (Brooks, 2019). They offer little-to-no perimeter fencing and nicer living quarters that are sometimes considered dorm-like (Brooks, 2019). They also offer their inmates work programs and classes for rehabilitation, and inmates may even be allowed to work outside of the prison (Brooks, 2019).

Low-Security Prisons are still, as the name implies, more flexible and lenient than other federal prisons. This type of prison, much like minimum security prisons, has a strong

orientation toward inmate work programs (Brooks, 2019). The main difference between these prisons type is that they have perimeter fencing and a higher staff-to-prisoner ratio than minimum-security prisons (Brooks, 2019).

Medium-Security Prisons, sometimes referred to as Medium-security federal correctional institutions (FCIs), are more likely filled with violent offenders than low-security prisons (Brooks, 2019). This form of prison puts inmates into cell-based housing and rigorous treatment programs. They utilize perimeter fencing that has razor wires and electronic detection systems (Brooks, 2019).

High-Security Prison are also called United States Penitentiaries (USPs) and are the strictest prison system with the highest level of security, with inmates being very closely monitored by cameras and guards (Brooks, 2019). The perimeter has walls and wire fencing with barbed wire atop the fences and watchtowers throughout (Brooks, 2019).

Administrative Prisons are unique in that they are a special class of prisons as they are designed to house inmates with special considerations, such as those who are chronically ill, extremely dangerous, or pose a high-escape risk (Brooks, 2019). This includes the nation's only supermax prison, the Administrative Maximum-Security Penitentiary (ADX); this is an extremely secure prison holding the nation's most dangerous prisoners (Brooks, 2019). In this type of institution, prisoners rarely leave their cells and are under 24-hour supervision (Brooks, 2019).

Private Correctional Institutions, also referred to as private prisons, are utilized when federal and/or state prisons are at maximum occupancy leading local, state, and federal governments to contract with a private, for-profit firm to operate a prison on their behalf (Brooks, 2019). An estimated eleven percent of prisoners are held in this type of prison (Brooks, 2019). This is a controversial model for prisons in recent years as opponents believe private prisons are incentivized to reduce rehabilitative services to prisoners as a way to reduce cost and profit more from their contracts which often pay a set amount per inmate (Brooks, 2019). However, proponents believe private prisons are an affordable option and are useful when properly utilized by the government (Brooks, 2019).

The Private Prisons Debate

It is important to be aware of the varying types of prisons because they may have an impact on the recidivism rates of prisoners and thus show us why we need prison reforms in America (Brooks, 2019). Private prisons have higher recidivism rates than their public counterparts (Kerwin, 2020). Empirical data suggests that prisoners spend on average 90 additional days in prison when they are in private prisons than when held in public prisons; this is an estimated 4.8 percent increase in the average prison stay (Mukherjee, 2020). It is likely this is motivated by the contracts made by private prisons that pay a per diem for each occupied bed, meaning the longer the stay, the more money the prisons make (Mukherjee, 2020). It has been shown that this increase in prison stays can be correlated to an increased number of infractions that inmates commit in private prisons, and this is often used by state parole boards to decide whether to grant early release (Kerwin, 2020). The extra cost the government would have to pay due to this increased prison stay will offset the savings offered by private prisons for the federal government and therefore make the need for them moot (Mukherjee, 2020).

In addition to having to experience longer prison stays, inmates who are sent to private prisons tend to suffer from other factors that make life overall less pleasant (ITPI, 2016). Prisoners in the private prison system typically have a slightly higher chance of recidivism, according to some studies in Minnesota and Oklahoma (ITPI, 2016). The data showed an increase in recidivism and reincarceration rates between 13 to 22 percent in Minnesota and Oklahoma (ITPI, 2016). This can be attributed to a variety of factors, including dehumanization, separation from family and society, and general violence (ITPI, 2016). Some studies have shown private prisons to be more violent than their public counterparts; in fact, the Bureau of Justice Assistance in the mid-1990s published data that suggested that assault rates are 66 percent higher in private prisons, and that prisoner-on-staff violence was also higher by 49 percent (ITPI, 2016). In part, this is caused by private prisons being

understaffed as a means to cut costs. This leads to a greater number of attacks and violent incidents (ITPI, 2016). This increase in violence has been directly linked to an increase in recidivism rates, an effect made more apparent when we look at data that showed that inmates who felt as though prisons were violent, harsh, and threatening had an increased chance of recidivism compared to inmates who found prisons to be less harsh and overall safe (ITPI, 2016). Though this seems staggering, we must consider that problematic prisoners are often sent to private institutes which may be why prisoners have to stay longer in private prisons and why recidivism rates increase as well (McDonald & Patten, 2004).

However, a larger proportion of data seems to show that there is little to no difference in private prisons compared to public



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ones in terms of increased rates of recidivism (Bales, Bedard, Quinn, Ensley, & Holley, 2005). Meta-analyses showed that time spent in prisons, either public or private, increased recidivism rates (Gendreau, Goggin, & Cullen, 1999). If an increased prison stay is linked to higher recidivism rates, that means that private prisons may increase recidivism due to their increased stay duration (Mukherjee, 2020). Hence, we must identify what part of the prison system causes criminals to reoffend upon release (Gendreau, Goggin, & Cullen, 1999).

Mass Incarceration

Mass incarceration refers to how the U.S. started locking up and holding a larger number of convicts in U.S. prisons and jails for more reasons and for longer periods of time than they historically had done (Travis et al., 2014). The reason for this is laid out in mandatory minimums and three-strike laws (Travis et al., 2014). Incarceration increases were caused by policies passed in the 1980s and 1990s, when state and federal legislators passed laws that ensured more deviant behaviors would be deemed criminal and that more people would be imprisoned (Travis et al., 2014). During this time, prison terms for many types of offenses were lengthened (Travis et al., 2014). An example of this can be seen in laws such as the Violent Crime Control and Law Enforcement Act of 1994 which required states that applied for federal grants for constructing prisons to show that the state "(A) has increased the percentage of convicted

violent offenders sentenced to prison; (B) has increased the average prison time which will be served in prison by convicted violent offenders sentenced to prison; (C) has increased the percentage of sentence which will be served in prison by violent offenders sentenced to prison." (Travis et al., 2014). This has led to imprisonment rates being five times higher than their historic norms and thus created a high demand for prisons in the U.S. (Clear & Austin, 2009). The line

of thinking that led to Mass Incarceration was simply that, as crime rates rise, so do imprisonment rates and thus, as criminals are imprisoned, crime rates will decrease. Unfortunately, this effect is only marginal, and crime rates are still virtually the same as they were in the 1970s—prior to this period of mass incarceration (Clear & Austin, 2009).

Proponents of Mass Incarceration cite the proposed concept of Aging Out of Crime, which is the theory that, as people age, they will be more likely to settle down, start a family, and thus become less likely to commit a crime (Massoglia & Uggen, 2011). However, this theory is probably incorrect as

convicts are less likely to reach the traditional markers of adulthood and are less likely to transition into adulthood in a timely manner (Massoglia & Uggen, 2011). We determined this from longitudinal survey data and intensive interviews which showed that arrest and self-reported crime stopped a proper transition to adulthood (Massoglia & Uggen, 2011). Mass Incarceration has brought attention to issues



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within the prison system that exist independently of it though they have become more apparent due to the increased attention the prison system has garnered in recent years (Lynch, 2015). An example of the increase in attention to prisons due to mass incarceration is found in *Brown v. Plata* (Lynch, 2015), a class-action lawsuit filed in April 2001 against the California Prisons system that alleged that California was in violation of the Eighth Amendment of the U.S. Constitution which bars cruel and unusual punishment (Oyez, 2010). When it was brought to trial, the plaintiffs brought up countless systematic failures in the realm of healthcare and prisoner abuse that resulted in countless deaths (Lynch, 2015). This marked a significant win for the fight for prisoners' rights and prison reform as the Plata court decided that such systematic failures in health care are incompatible with human dignity and thus a violation of the Eighth Amendment; this attention could reduce the effect of mass incarceration and thus strain the prisons systems a little less, allowing for dehumanization to be further addressed (Lynch, 2015).

Dehumanization in Prisons

Dehumanization is integrated into the very premise of the American prison system. We can see it happening as early as the planning stage where designers cite questions of how to process and handle sewage and implement basic food needs, but completely ignore rehabilitative services, such as work or educational opportunities, including mental and physical health care (Lynch, 2015). This exemplifies how our prisons are designed to hold bodies and not human beings (Lynch, 2015). Though this dehumanization is seen as early as in planning for prisons, it can also be seen in how prisons operate, like the concrete boxes in which "problematic" inmates are held and the outside cages where they are "stored" prior to going to solitary confinement, sometimes in extremely hot weather for days on end (Lynch, 2015). After some evaluation of the way we treat prisoners, it becomes clear that their treatment is more akin to the way animals are treated (Lynch, 2015). This happens in part due to the six mechanisms that fuel dehumanization (Lynch, 2015).

The six-mechanism used in the prison system that dehumanize people are de-individuation, suppression of agency and autonomy, intergroup dissimilarity,

mechanization and objectification, and moral disengagement (Lynch, 2015). The first three mechanisms are static conditions that are part of institutional life; these include dress limitations/codes and assigning numbers to prisoners which in turn deindividualizes people in the prison system (Lynch, 2015). Lack of agency and autonomy are also built into the prison system as what you can do is limited and structured by the correctional officers and warden (Lynch, 2015). Intergroups are also a part of prisons, and this consists of correctional officers confronting prisoners. The disparity in power makes this antagonism even starker (Lynch, 2015). These intergroups are in conflict which leads the two groups to devalue each other (Lynch, 2015).

The remaining three mechanisms are more functional or motivational in character in that they work to help people cope with the pain and suffering of others (Lynch, 2015). Correction officers are tasked with shackling and caging other humans and therefore tend to objectify inmates and consider them as dangerous and animal-like (Lynch, 2015). Correctional Officers also employ empathy reduction and moral disengagement as tools to maintain a psychological distance from inmates which allows them to succeed in their duties and inflict punishment as needed (Lynch, 2015). Dehumanization often leads to harm and neglect as one group does not respond to the suffering, distress, or endangerment of another group, often the dehumanized group (Lynch, 2015). The other kind of harm that can be produced by dehumanization is more active, whereby members of one group are proactively cruel and/or harmful toward members of another dehumanized group, thereby actively contributing to their suffering, distress, and endangerment (Lynch, 2015). This dehumanization effect is what leads to neglect and active cruelty as shown in the *Parson v. Ryan*, where the Arizona Department of Corrections and their medical partner, Wexford with Corizon, Inc., failed to meet the medical care, dental care, and mental health care obligations which exposed the inmates to "substantial risk of serious harm, including unnecessary pain and suffering, preventable injury, amputation, disfigurement, and death" (*Parsons v. Ryan*). To an extent, this could also be seen in the Stanford Prison Experiment which showed how guards are quickly corrupted by their position of power and start to behave in

often cruel ways that they would not adopt in their everyday lives (Lynch, 2015).

Psychologists have done some interesting studies on dehumanization and determined that animalistic dehumanization is a common effect suffered by prisoners and criminal offenders (Kelso, 2014). Animalistic dehumanization pertains to the words, attitudes, and behaviors that deny a person their unique attributes differentiating humans from animals, including higher-order language skills and morality (Kelso, 2014). When type of dehumanization is applied to criminals and inmates, they are seen as more akin to wild, violent, dangerous predatory animals (Kelso, 2014). The dehumanization effect is detrimental to prisoners because it causes cognitive deconstructive state as well as feelings of extreme sadness and anger (Bastian & Haslam, 2011). Cognitive deconstruction is a mental state characterized by lack of emotion, the absence of a sense of future leading to concentrating on the here and now, as defined by the American Psychological Association (APA.Org). This lack of a sense of a future can lead to a biased outlook on motivation when weighing advantages and disadvantages of an action and thus cause an overestimation of the benefits of an action which, in turn, may lead to an increase in crime (Schiller). The increase in anger and other negative emotions has been linked to an increase in violent behaviors and criminality (Tonnaer, Siep, Zutphen, Arntz, & Cima, 2017). Interestingly, a lack of self-awareness, emotional control, and emotional intelligence has been linked to an increase in impulsivity and crime. This would mean that the dehumanization effect has a detrimental impact on inmates and contributes to recidivism (Sharma, Prakash, Sengar, Chaudhury, & Singh, 2015).

Mental Health and Recidivism

The American criminal justice system is commonly involved in handling people and inmates with mental illnesses (Lamberti, 2017). Though varying intervention strategies are used to reduce recidivism among the mentally ill with strategies such as mental health courts, specialty probation, and conditional release programs, most use legal leverage to promote treatment adherence (Lamberti, 2017). However, these leverage-based interventions are controversial, and opinions are mixed as to their effectiveness, especially as some data suggests that criminal justice authorities interfering in mental health treatments increase recidivism

rates (Lamberti, 2017). The varying data and effectiveness of treatment may vary due to the difficulties that criminal justice professionals and mental health professionals face when working together (Lamberti, 2017). These difficulties arise due to the different goals, values, and methods these two distinct professions use and, at least in some part, because the criminal justice system focuses on Retributive Justice, focusing on punishing offenders, while psychiatry focuses on a disease model (Okimoto, 2008). This effect is worsened when we consider that crime leads to certain psychosocial needs that offenders require to have met to properly transition back into society upon release from prison (Obi, Okoe, Ewoh, & Onwudiwe, 2018). Psychosocial need is a term used to refer to someone's basic needs, such as an inmate's mental, social, cultural, spiritual, and developmental needs that often result from their current conditioning and mistreatment (Frost, Brueggen, & Mangan, 1997). Offenders have to start the healing process and require a chance to work through the experiences that led them to turn to crime, and this chance is not available in prisons (Obi, Okoe, Ewoh, & Onwudiwe, 2018). It is also a good idea to either allow inmates to remain part of the community or to help reintroduce them back into it, sometimes with sanctions in place (Obi, Okoe, Ewoh, & Onwudiwe, 2018). It is important to realize that punishment is not only ineffective: it can be harmful to prisoners and society alike by allowing for continued recidivism and crime (Obi, Okoe, Ewoh, & Onwudiwe, 2018). Recidivism rates were approximated to be around 54 percent for inmates with severe mental illness, but the data also revealed that substance abuse issues had an even higher impact on recidivism than mental health issues (Wilson, Draine, Hadley, Metraux, & Evans, 2011).

Substance Abuse and Recidivism

The need for special attention to inmates with substance abuse issues is evident in their higher recidivism rates of up to six percent over inmates with no issues of either mental health or drug dependencies, with rates of 66 percent (Wilson, Draine, Hadley, Metraux, & Evans, 2011). When we combine issues such as mental health and substance abuse, the rate of recidivism goes up to 68 percent (Wilson, Draine, Hadley, Metraux, & Evans, 2011). Substance abuse is a set of related continuous conditions that are associated with using mind- and behavior-altering substances that lead to negative

behavioral and health outcomes (Office of Disease Prevention and Health Promotion, 2020). Merely locking up a defender is inadequate in treating and addressing drug abuse and addiction, as shown in the recidivism rates of drug offenders (Chandler, Fletcher, & Volkow, 2010). We must also consider that, despite the highly structured and controlled environments, the issue is not even necessarily stopped or properly addressed in the American prison system (Chandler, Fletcher, & Volkow, 2010). However, even when inmates quit abusing drugs in prisons, that success can trick both inmates and the criminal justice professionals into believing that they will not relapse upon release. Sadly, due to environmental stressors in their previous environment, most will start abusing again (Chandler, Fletcher, & Volkow, 2010). The stigma associated with being an ex-convict also does not help former inmates because the stress added by the increased difficulty to find housing and employment can lead to a relapse in drug use (Chandler, Fletcher, & Volkow, 2010). Potential changes include treatment with judicial oversight, prison- and jail-based treatments, and reentry programs, but political stigma and popular views slow down this process from being incorporated into the American prison system (Chandler, Fletcher, & Volkow, 2010).

Conclusion of Literature Review

In conclusion, across both public, and private prisons across the varying prison types,

recidivism rates remain high. However, some data has shown that private prisons have slightly higher recidivism rates than their public counterparts, though this is likely caused by public prisons sending problematic inmates to private prisons. The need for a change from retributive justice to a rehabilitative justice system is evident in the high recidivism rates and empirical data which shows that dehumanization leads to higher rates of criminality due to its adverse effects on mental health. This dehumanization increases an already existing problem within the American prison system which has left severely mentally ill people at an increased chance of recidivism as leverage-based intervention strategies are inefficient. A better system would support treatments such as cognitive behavioral therapy. Additionally, the likelihood of recidivism increases when an inmate is a substance abuser as prisons do not successfully reform drug use. Inmates are likely to fall back into their old substance-abusing habits after leaving prison. With all of this research-backed information, it is apparent that the retributive model of criminal justice is working for reforming criminal offenders and it is time for a new approach to reducing crime through a more rehabilitative prison system.



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PREVENTION AND INTERVENTION STRATEGIES

History of the US Criminal Justice System

The criminal justice system has shifted over time. It started as a punitive system focusing on punishments, including hard labor (Clear, Reisig, & Cole, 2016). The Declaration of Principles was formed in the 1870s which shifted it toward reformation with intermediate sentences, rewarding release, and character improvement used to determine release (Clear, Reisig, & Cole, 2016). The next shift occurred in the 1930s when a medical model was applied which saw crime as caused by psychological or biological deficiencies (Clear, Reisig, & Cole, 2016). The final change occurred when the system started to focus on punishment around the 1970s due to dissatisfaction with the rehabilitative model and

lenient punishments; this carried on until the present day. This is why our system focuses on punishing offenders (Clear, Reisig, & Cole, 2016). It is important to take note of this history because this model has had an impact on the criminal justice system by impacting the programs that prisons prioritize (Taylor, 2017).

In-Prison Rehabilitation Program

In-prison rehabilitation programs can vary among the various prison types; some of these rehabilitation programs include education, substance use rehabilitation services, and mental health support (Taylor, 2017). These types of in-prison rehabilitation services are designed to lower recidivism rates (Taylor, 2017). Research has shown that for these programs to succeed in lowering recidivism, three principles should be met (Taylor, 2017). The first is that these programs should be evidence-based and designed from programs that have proven to be effective (Taylor, 2017). The second is that these programs must be cost-effective (Taylor, 2017). The third is that programs should focus on the inmates with the highest risk and with the greatest need. While these principles can help develop good programs, they must be maintained by conducting regular oversight of the program and improving the use of resources in rehabilitation services (Taylor, 2017). When evaluating efficient use of resources, it can be important to measure the cost of the program and then evaluate how many inmates are using it and how effective it is. Further, it can also be important to have independent research evaluate the cost-effectiveness of the program (Taylor, 2017)

Education Opportunities in Prison

Studies have shown that educational opportunities can play a significant role in reducing recidivism in U.S. prisons (Mohammed & Mohamed, 2015). This is best illustrated in data that shows a reduction in recidivism rates among prisoners who have an education or vocational training (Mohammed & Mohamed, 2015). Vocational training has been shown to reduce recidivism rates by 9 percent (Mohammed & Mohamed, 2015).



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Vocational training likely lowers recidivism rates because the certificates make getting a job easier for former inmates (Mohammed & Mohamed, 2015). The ability to land a job after prison likely allows an easier transition to a law-abiding lifestyle for inmates upon release (Mohammed & Mohamed, 2015). These programs are needed because, in 1997, about 41% of inmates in the nation's state and federal prisons and local jails, and 31% of probationers, had not completed high school or its equivalent (Harlow, 2003).

It has been reported by the Bureau of Justice Statistics that about 9 in 10 state prisons, all federal prisons, and almost 9 in 10 private prisons provide educational programs for their inmates (Harlow, 2003). These education programs are usually just basic education programs which includes subjects such as English as a second language, parenting courses, wellness education, adult continuing education, a library, and instruction in leisure-time activities (Federal Bureau of Prisons, n.d.). In many cases, inmates who don't have a General Educational Development (GED) certificate are required to participate in a literacy program for a minimum of 240 hours or until they obtain a GED (Federal Bureau of Prisons, n.d.). It is also required for non-English speakers to take English as a second language courses in most cases (Federal Bureau of Prisons, n.d.). More than 75% of inmates without a high school diploma or GED take high school courses, and about 25% participate in vocational training opportunities (Harlow, 2003). It has been shown that inmates who do not take place in one of the education programs until completion will recommit crimes over 50% of the time, but if they take educational courses, the number drops to around 13% (Hill, 2015). Additionally, the annual budget for the Department of Corrections is roughly 1.2 billion dollars, and providing essentials cost taxpayers more than 22,000 dollars annually, while providing community college courses to inmates costs only 9.8 million dollars annually (Hill, 2015). The Illinois Department of Correction estimated that educational opportunities would save taxpayers 97 million dollars annually due to the reduced number of repeat offenses (Hill, 2015).

Substance Abuse Treatment

An estimated 65% of inmates in the U.S. prison system have a substance use disorder, and an estimated 20% more do not meet qualifications for substance use disorder but were under the

influence when they committed the crime that led to their arrest; this data makes it clear that substance abuse treatment is a needed part of the U.S. prison system (National Institute on Drug Abuse, 2020). The Federal Bureau of Prisons' drug abuse treatment strategy has grown and changed over time (Federal Bureau of Prisons, 2020). Despite these programs being offered, only a small percentage of prisoners who need treatment receive it, and when they do, it is often inadequate (National Institute on Drug Abuse, 2020). An example of inadequate treatment for abusers can be seen in opioid addicts who are forced to quit using in prison and lose their tolerance to opioids (National Institute on Drug Abuse, 2020). However, due to not receiving proper treatment, they often start abusing again upon release and overdose because they didn't realize their bodies could no longer tolerate their previous habit (National Institute on Drug Abuse, 2020). This is supported by data from 1999 to 2009 which suggested that 14.8% of all former prisoner deaths are opioid-related (National Institute on Drug Abuse, 2020). However, even when we consider the failings of this type of treatment for substance abuse disorders, it is important to have programs to treat substance abuse to lower recidivism rates, and such a change is possible by changing an inmates attitudes, beliefs, and behaviors toward drug use (National Institute on Drug Abuse, 2020).

Treatments for substance abuse in prison can include policies such as receiving medication, behavioral therapies, after-release services, and overdose education (National Institute on Drug Abuse, 2020). Behavioral therapies include cognitive-behavioral therapies and contingency therapy (National Institute on Drug Abuse, 2020). Cognitive-behavioral therapy helps modify inmates' drug dependencies and addictive behaviors, while also helping to effectively manage stress and triggers that could cause a relapse (National Institute on Drug Abuse, 2020). Contingency management therapy relies on motivational incentives that inmates can use for vouchers or cash rewards so long as they display "good behaviors" (National Institute on Drug Abuse, 2020). Medications such as methadone, buprenorphine, and naltrexone can help reduce opioid addiction, as shown in various research studies (National Institute on Drug Abuse, 2020). After-release services helping former inmates find employment and housing can also help reduce substance abuse relapse by helping to

reduce stress and allowing for a better transition out of prison (National Institute on Drug Abuse, 2020). Overdose education and drug education may also help inmates stop their drug-abusing habits upon release from prison (National Institute on Drug Abuse, 2020). These steps, while being inconsistently provided and inconsistently utilized by inmates, are an important part of reducing recidivism and saving taxpayers money; in fact, it is estimated that drug use cost taxpayers 193 billion dollars in 2007, most of which was associated with drug-related crimes (National Institute on Drug Abuse, 2020). The cost to treat inmates with substance abuse disorders is estimated at 14.6 billion dollars and can potentially reduce this large sum of money being poured into drug crimes by treating those affected by addiction (National Institute on Drug Abuse, 2020).

Mental Health Support in Prison

It is estimated that the prevalence of mental health disorders in prisons is three to five times that of the general population (Kuppers, 1999). Some common mental illnesses that inmates have are schizophrenia, bipolar disorder, major depression, anxiety disorders, and personality disorders (Hills, Siegfried, & Ickowitz, 2004). The United States Department of Justice reported that 10% of state inmates received psychotropic medications and 13% attended mental health therapy or counseling (Hills, Siegfried, & Ickowitz, 2004). Of those inmates who receive treatment for their mental health issues, only about one-third receive therapy and treatment from facilities with a specialist in mental illness and health (Hills, Siegfried, & Ickowitz, 2004). This treatment is vital, however, for four main reasons, such as decreasing human suffering that can stem from mental illness, keeping inmates, volunteers, visitors, and prison staff safe, to reduce the disabling effects of serious mental illness, and maximizing each inmate's ability to voluntarily participate in correctional programs (Hills, Siegfried, & Ickowitz, 2004). However, if we want to improve these services further, we need to address the identification issues that mentally ill inmates face (Hills, Siegfried, & Ickowitz, 2004). If prisons improve in identifying mentally ill inmates, then they can better treat illnesses and address other factors plaguing these prisoners, such as the negative and detrimental effects of the prison environment (Hills, Siegfried, & Ickowitz, 2004).

Returning Home-Ohio

Prisoners often have difficulties finding housing and readjusting to life outside of prisons, making programs housing reentry programs necessary; an example of such a program is the Returning Home-Ohio (Fontaine, 2013). This program, designed by the Ohio Department of Rehabilitation and Correction, provides "supportive housing to individuals who had behavioral health disabilities and who had histories of housing instability or were at risk for housing instability as they were released from 13 state prisons to five Ohio cities" (Fontaine, 2013). To determine the effectiveness of programs such as this, a quasi-experimental evaluation found that the supportive housing program was associated with recidivism reductions as measured by fewer rearrests and reincarcerations within one year of release (Fontaine, 2013). More specifically, Returning Home-Ohio showed a 40% reduction in rearrests and a 61% lower chance to be reincarcerated within a one-year period following release (Fontaine, 2013). This data was important because it showed that supportive housing is beneficial to the reentry population; however, in some groups, such as people with substance abuse problems and mental illness, these programs provided no benefit and may have increased recidivism in some circumstances (Fontaine, 2013).

Scandinavian Prison Model

When looking for more effective prison models as measured by recidivism rates, Swedish prisons quickly come to mind, with recidivism rates as low as 29%, compared to the 60% recidivism rate in the U.S. (Hedström, 2018). It is theorized that this difference in recidivism rates may be partially attributed to culture, but it might be even more associated with the Swedish Correctional System's focus on non-custodial sanctions and their overall dedication and focus to Rehabilitative Justice (Hedström, 2018). Research has shown that the harshly punitive U.S. prison system plays a part in the increase in recidivism (Hedström, 2018). Prisoners in Swedish prison are allowed to hand-select their food as they "grocery shop," then they prepare it and clean up after themselves to maintain a feeling of normalcy (Hedström, 2018). Additionally, to keep prisoners feeling as if they are part of society, they work and earn money, maintain contact with family and friends, and have the right to leisure time where they can socialize, partake in social

training, exercise, make crafts, and buy other foods and drinks at the commissary once a week (Hedström, 2018). Some inmates also take part in classes and treatment programs (Hedström, 2018). Prisoners further have access to private restrooms which they enter by calling their personal officer, which is what they call their correctional officer, who will open the door for them (Hedström, 2018). These prisons are less packed and thus able to accommodate prisoners' needs better than U.S. prisons can; most prisoners, even at the highest security prisons, have access to cable TV, video games, and CD players in their personal area (Hedström, 2018). All of these factors combine to ensure that prisoners are treated humanely and have a "normal" life while being incarcerated (Hedström, 2018). This data could show a potential way forward for U.S. prisons to follow and potentially reduce U.S. recidivism rates (Hedström, 2018).

LEGAL ANALYSIS

Introduction

In *Ruffin v. Commonwealth*, 62 Va. 790, 796 (1871), it was determined that a prisoner "has, as a consequence of his crime, not only forfeited his liberty, but all his personal rights except those which the law in its humanity accords to him. He is for the time being the slave of the state" (Congress, 2012). However, this ideology has been challenged, as in 1948 the courts argued that "lawful incarceration brings about the necessary withdrawal or limitation of many privileges and rights." The language does apply to due process and equal protection clauses with regard to prisoners (Congress, 2012). In 1972 these constitutional challenges were more directly addressed, with a comment saying that "federal courts sit not to supervise prisons but to enforce the constitutional rights of all 'persons,' which includes prisoners. We are not unmindful that prison officials must be accorded latitude in the administration of prison affairs, and that prisoners necessarily are subject to appropriate rules and regulations. But persons in prison, like other individuals, have the right to petition the government for a redress of grievances"



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(Congress, 2012). Even though the courts affirmed that courts have the responsibility to scrutinize prison practices that may violate the Constitution, at the same time concerns over federalism and judicial restraint have sparked some debate (Congress, 2012). Generally, courts treat challenges to prison conditions as a whole under the Cruel and Unusual Punishments Clause of the Eighth Amendment, while challenges to more specific issues are pursued under the due process clause or, for more specific provisions, the First Amendment's speech and religion clauses (Congress, 2012).

Constitutional Protection

The Eighth Amendment of the United States Constitution says "Excessive bail shall not be required, nor excessive fines imposed, nor cruel

and unusual punishments inflicted (Cornell Law, 2021). *Brown v. Plata* has extended this amendment and specifically cited the cruel and unusual punishment clause to protect prisoners' rights and ensure their access to medical care (Cornell Law, 2019). As noted above, *Brown v. Plata* was a class-action lawsuit filed in April 2001 on behalf of Marciano Plata and several other prisoners which alleged that their Eighth Amendment rights were violated by the California prison system as they were experiencing cruel and unusual punishments (Oyez, 2011). It was determined that the primary cause of the Eighth Amendment had been violated and the court ordered the release of enough prisoners so that the inmate population would come down to 137.5 percent of the prisons' total design capacity (Oyez, 2011). This, combined with a previous court decision, define inadequate health services as unconstitutional as per the Eighth Amendment (Oyez, 2011). *Estelle v. Gamble* further guaranteed and helped ensure prisoners received medical care.

The Fourteenth Amendment of the United States Constitution says under Section 1 that "All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and the state wherein they reside. No state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any state deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws" (U.S. Constitution, 1787). The Equal Protection clause applies to prison inmates by protecting them from unequal treatment and discrimination based on their race, sex, and creed (Jurkowski, 2017). This was further strengthened by the Model Sentencing and Corrections Act, created by the Uniform Law Commission in 1978, which expanded these protections to protect people on the basis of religion and national origin (Jurkowski, 2017). Prisoners with special needs are also protected by the Americans with Disability Act, so that prisoners have similar discrimination protections compared to the general populace (Jurkowski, 2017).

Mandatory Minimums

As previously discussed, mandatory minimums contributed to poor prison conditions which lead to higher recidivism (National Research Council, 2014). This started in the 1980s and 1990s and reflected a clear policy choice to increase

imprisonment passed by federal and state legislatures (National Research Council, 2014). Mandatory minimums were also designed to eliminate judicial discretion to impose sentences below statutory minimums; it has been shown that these guidelines can be unjust in proportionality (Luna, 2010). These minimums were thought to be able to limit judicial discretion and create more uniformity in judgments to create a more equal judicial system (LaCasse and Payne, 1999). However, it has been shown that, after mandatory minimums passed, judges have had more variations in how they sentence criminal offenders (LaCasse and Payne, 1999). Additionally, the longer punishments may adversely affect prisoners, turning them more prone to recommitting crimes (United States Sentencing Commission, 2020).

The theory behind mandatory minimums was that the harsh mandatory penalties would deter would-be criminals from entering the drug trade and incapacitate people who deal drugs (Landsman, 2019). This deterrence theory hinges on criminal researching or becoming aware of these criminal codes and the relevant penalties associated with them, and thus becoming fearful of these penalties and going onto the "straight and narrow" path (Landsman, 2019). Some criminologists argue that mass incapacitation is actually more than a mere deterrent because the people most likely to commit crime are already in jail (Landsman, 2019). However, statistics have determined that neither effect is true and, in fact, mandatory minimums has been detrimental to people and caused more inequality in sentencing (Foster, 2018).

Second Chance Act In North Carolina

Some states, such as North Carolina, have also been advancing prisoners' rights and thus potentially lowered recidivism rates with policies like the Second Chance Act. This act went into effect on December 1, 2021 (NC Senate Bill 562, 2020). The Second Chance Bill states that "Any and all convictions for misdemeanor and/or Class H or I felony offenses committed before Dec. 1, 2019, by a person at ages 16 and/or 17 (other than traffic offenses and offenses that require registration on the sex offense registry) can be expunged by petition after any active sentence, probation and post-release have been completed for all expungable offenses and there are no restitution orders outstanding. District Attorneys can now file these

expungement petitions, which provides an opportunity for mass relief of more than 400,000 convictions. A judge is required to grant any petition for expunction of an eligible conviction" (Second Chance Act, 2020). This bill was unanimously signed into law and endorsed by North Carolina's Attorney General Josh Stein who said that "People are not who they were at their worst moment. Giving people with a criminal past a fair opportunity to successfully rebuild their lives and rejoin their communities makes us all stronger. The Second Chance Act does just that by making it easier for people with old, non-violent felonies and misdemeanors to get their records expunged and by automatically expunging charges of people who were not convicted. With clean records, they can get jobs, provide for their families, and invest in their communities." This statement perfectly encompasses this bill as it describes the real impact this bill might have in North Carolina. Maybe one day a similar bill can be passed at the federal level. It is too early for the full ramifications of this bill to be known, but it likely will help the formerly accused find

employment and may even help them to not return to a life of crime.

PLAN OF ACTION

After learning of the various issues plaguing American prisons and how politicians and the general public have pushed against systemic change due to fear of looking soft on crime and thinking it would be ineffective to change to a rehabilitative model of prisons, an ideal solution would be to start implementing programs to educate the general public about the problems prisoners face, both while in prison and upon exiting it. After the public learns about these issues, we can start introducing the ideas of switching to a rehabilitative style of prisons similar to that of Sweden. We could also introduce information on how private prisons and punitive systems may appear to decrease the cost of incarceration, though both have failed to show a cost-detering effect and perhaps even increased the cost of incarceration. This has become easier in recent years as people have started to advocate for the criminal justice system to be reformed. Once we start working on changing the public's opinion through education, then the public can pressure legislators and other government officials to make change prisons to rehabilitative models.

A potential solution could start by testing a few methods as outlined in my prevention and intervention section. I'd start by testing a model of prisons similar to the one used in Sweden; I'd recommend testing it in a state like Massachusetts due to its small prison population and then test to see its effectiveness across America. This is because it has shown promise in Sweden, though they have a different culture, and testing it in Massachusetts will allow us to gauge its effectiveness in America. Likely it will show a reduction in recidivism rates but will have a high initial cost later offset by the fact that released prisoners would be less likely to return to prison, thus reducing the overall prison population and the cost of running them. This model could work independently or with programs similar to "Returning Home-Ohio" to further drive down recidivism rates.

We could also implement Returning Home-Ohio in other states; this would allow for prisoners to have reliable housing after release. This type of program would work by removing high-risk people from their old community and environment which fostered their criminal behaviors and which has already shown promise in Ohio. To fix the problems with it being



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ineffective with people who suffer from substance addiction and/or mental health issues, we can reallocate probation officers to these high-risk groups to watch them and help ensure they don't start abusing drugs again or return to criminal activity. This solution only addresses the problems with prisoners returning to criminogenic environments and does not address issues of dehumanization that prisons cause. This is why I suggest we test both a supportive housing program similar to Returning Home-Ohio and Swedish-style prisons to reduce recidivism rates and improve the quality of life for prisoners. ❖

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THE ROLE OF GENDER AND CONFLICT IN ROMANTIC RELATIONSHIPS

ABSTRACT

Romantic relationships can encompass a multitude of scenarios, such as marriage, dating couples, and cohabitating couples. Within these relationships, conflict can arise for many different reasons. Gender can influence these conflicts and their resolutions, which raises the question of the role gender plays in these situations. Current research explores several reasons for the development of conflict.

INTRODUCTION

Both men and women are interested in romantic relationships, such as marriage. The majority of adults want to get married, and the majority do at some point in their lives (Cohn, 2013). As with any relationship, conflict will arise. Gender and one's perceptions of gender can impact how a person perceives, manages, and resolves conflict.

NATURE OF CONFLICT

While different terminology can be used to describe conflict between spouses, generally conflict behaviors are divided into three categories: negative or destructive behavior, positive or constructive behavior, and withdrawal or disengaged behavior (Coyne et al., 2017). Negative or destructive behavior includes hostile interactions, such as contempt and criticism. Positive or constructive behavior are helpful actions; this includes active listening and clear communication. Finally, withdrawal or disengaged behavior involves some kind of disconnect, whether it be through lack of communication or refusal to acknowledge the conflict entirely (Coyne et al., 2017).

When referring to married couples, there are two kinds of relational aggression: love withdrawal and social sabotage. Love withdrawal is a direct, usually face-to-face, form of aggression where one spouse withdraws all support and affection during a conflict. This is usually demonstrated when a spouse gives the "silent treatment" to their partner. In contrast, social sabotage is an indirect form of aggression. This may come across as one spouse spreading rumors about their partner or reigning in friends to take sides during the conflict (Coyne et al., 2017). Love withdrawal typically keeps the conflict contained within the relationship, whereas social sabotage does not. Researchers have found that for the majority of couples, relational aggressive behaviors play some kind of role in one's marriage dynamic (Martin et al., 2015).

In a study conducted by Coyne et al. (2017), 311 married couples from the Flourishing Families Project participated in a five-year longitudinal study exploring relational aggressive behaviors. To measure these two types of behaviors (love withdrawal and social sabotage), a modified version of the Couple Relational Aggression and Victimization Scale (CRAViS) was used. As a whole, wives used both behaviors at higher levels than husbands, though the differences between men and women were



not extreme (Coyne et al., 2017). These findings were consistent across all five years.

While these results echo the findings of other studies, there might have been some limitations with this study. Using a longitudinal study helped to buffer the natural effects of highs and lows in all marriages. It is possible that, had a shorter study been conducted, the results could have been skewed by collecting data during a time of high conflict. However, Coyne and colleagues acknowledge their recruitment process slightly underrepresented families of lower socioeconomic status (Coyne et al., 2017).

MALE GENDER ROLE STRESS

Gender roles impact how a person perceives their place in a relationship. Harrington and colleagues conducted multiple studies to explore how male gender role stress could cause conflict in a relationship (Harrington et al., 2021). For this research, 200 different participants were recruited for each study, and Harrington conducted four separate studies, totaling to a sample of 800 heterosexual men. After a meta-analysis of studies one through four, Harrington found men were more likely in a heterosexual relationship to display aggression in response to low relationship power. This response is likely due to the fact that masculine identity is tied to the power men hold. Harrington concluded that males with high levels of gender-role stress were more likely to respond with physical aggression to low relationship power. Men with low gender-role stress exposed to the same low relationship power were not as likely to respond with physical aggression (Harrington et al., 2021). These results were also the same when testing verbal aggression.

Another source of power for men is their career in relation to their partner's career. Hettinger et al. (2014), explored how professional status could increase conflict within a relationship. To study this, 396 students (199 men) at the University of South Florida were randomly assigned to one of four scenarios. The scenarios depicted a married couple, Michael and Anne, with varying professional statuses; all other details remained the same. Participants rated Michael as the least happy in the nontraditional scenario. In this scenario, Michael was forced to be a paralegal due to bad luck on the job market, and Anne was a highly praised attorney. No effect emerged regarding Anne's happiness, suggesting that men are perceived

to rate their professional status as more important compared to women (Hettinger et al., 2014). This study was well organized and successfully kept the focus on professional status. However, the sample solely consisted of college-aged students, limiting the study's ability to be generalizable to other age brackets.

SOURCES OF CONFLICT

When conflict arises, there is usually a definitive source. A common source of conflict for couples is finances. Compared to other types of arguments, conflicts concerning money are often more intense, last longer, and are more difficult to resolve (Kaittila, 2020). This is not surprising since, as money can reflect status and accomplishments, it can be a way to please one's partner, and it is needed for survival.

A study was conducted involving six men and eleven women using individual interviews, and then involving 15 married couples in joint interviews (Kaittila, 2020). Participants gave many different explanations for conflicts over money, but six common themes emerged: feelings of economic pressure, challenging life phases, troubles in communication, unequal practices (such as how one spends and saves money or unequal distribution of bills), spousal differences concerning views on money and consumption, and life history and past experiences. It should be noted that gender influenced some of the responses. For example, when unequal practices were cited as a reason for financial conflict, the perception of the unequal practice was influenced by a participant's personal attitude toward gender equality (Kaittila, 2020). On an individual level, female partners who earned equal income but completed more housework than their male partners expected the male partner to pay more financially to be "fair." When the male partner's individual beliefs did not align with this, conflict arose. Overall, personal beliefs about finances were the main source of conflict, along with economic pressure. Couples who earned less financially experienced more conflict about money. It is reasonable that this sample was limited due to the extensive nature of these interviews. These results are difficult to generalize as they only represent a very small portion of the population.

Couples who have conflicting goals will also experience a higher level of conflict. Existing research has covered how conflict between romantic partners impacted relationship quality or how intrapersonal goal

conflict impacted a person's wellbeing, but not both factors together. Gere and Schimmack (2013) studied these factors combined. Participants filled out two different scales, one pertaining to their wellbeing and another regarding their relationship quality. Participants then listed five long-term goals and had to answer to what extent their relationship was good or bad for their goal progress. The researchers found that higher levels of goal conflict were associated with lower levels of relationship quality. This study focused on long-term goals which means that couples' inability to resolve these conflicts can be damaging to the relationship and result in termination (Gere & Schimmack, 2013). This study was an improvement to the current research because it combined all of these factors. More research studying all of these factors combined would provide much-needed data.

CONFLICT MANAGEMENT

Women are more likely to compromise during a conflict when compared to men, and men are more likely to use a forceful approach to conflict (Helgeson, 2017). However, women are more likely than men to confront conflict. While this may paint women as instigators, this dynamic can offer some insight into the difference in conflict management due to gender.

This gender difference is seen in the demand/withdraw pattern which is

characterized by one person demanding and the other person not responding to these demands or withdrawing (Helgeson, 2017). In most cases, the demander is the woman, and the withdrawer is the man. Keener et al. (2012) attributed this to childhood socialization, agreeing with findings from a previous study done by Maccoby (1998):

This demand-withdraw pattern of conflict negotiation stems from childhood socialization by peers within gender-segregated contexts. In married couples, husbands are less likely to use the agentic strategies that they learned to use with same-gender friends in childhood to manage conflict with their wives. As suggested by Maccoby, in childhood boys learn that using agentic strategies does not work to manage conflict with girls—girls do not respond favorably to boys' use of agentic strategies (Keener et al., 2012, p. 85).

These findings could be interpreted to mean that boys are taught to be independent from a young age while girls are taught to be emotionally close to their peers. This translates to marriage when a wife is "demanding" something of her husband, possibly due to her need for closeness. However, this conflicts with the husband's need for independence, which results in him withdrawing from the conflict altogether. Within these studies, all participants



were in a heterosexual relationship. This limitation makes it difficult to generalize these findings to other relationships.

CONFLICT RESOLUTION

In order to avoid the termination of a relationship, conflicts must be resolved. Just as conflict behaviors could be described as both constructive and destructive, the same can be said for conflict resolution strategies.

Constructive strategies usually involve openness to a conversation, accepting the partner's point of view, and commitment to solving the problem. Destructive strategies include hostile and competitive behaviors and withdrawal (Delatorre & Wagner, 2019).

A common constructive strategy is couples therapy. Many couples enter therapy because they do not feel understood by their partner. There are two crucial components in this issue. The first one is that both people are expressing their true feelings. Secondly, these thoughts and feelings need to be accurately perceived by the listening partner. After testing 155 mixed-sex couples, Sels et al. (2021) found that "When targets reported having expressed their thoughts/feelings more at a given time, their partner was more accurate in inferring these thoughts/feelings at that specific moment in the interaction" (Sels, et al., 2021, p. 1202). These findings are consistent with other research that suggests an expression-accuracy link. A limitation of this study was the lack of a representative sample. All the couples were young (average age of 19), and none were married or had children. It would be beneficial to redo this study with a representative sample to better generalize these results.

Based on the current research, it is clear that men and women approach conflict differently. Within a romantic relationship, women usually "instigate" or face the issue head-on; whereas men attempt to avoid the situation until it diffuses. Conflict may also arise when traditional gender roles are not present. Male gender role stress becomes a factor when the man perceives himself as "lower" in status than his female partner, whether it be through lower income or a less significant job position. A common limitation of many studies regarding romantic conflict is the lack of representative sample size. The current research is flooded with studies about young, heterosexual couples. This lack of diversity does not allow for findings to be accurately generalized to gay and lesbian relationships or older couples. Future research

would benefit from including these populations in the samples. More longitudinal studies may also help improve research in this area. It is easy to obtain skewed research by interviewing a sample once. Those particular participants may be experiencing unusually high conflict or no conflict at all, both of which are unrealistic outcomes for an extended period of time. While research about conflict in romantic relationships is plentiful, the samples need to be refined. ❖

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BUSINESS & COMPUTER INFORMATION SCIENCES



Investment	Value at Year end
339 970	373 967
56 969	804 029
817	1 296 731
58	1 859 317
6	2 499 808
	3 227 076
	4 050 935
	R 28 331

HEALTH INSURANCE LITERACY NEED IN THE HISPANIC COMMUNITY: A LITERATURE REVIEW

The United States' healthcare system is complex. Although it is not controlled by the government, federal and state administrations develop regulations and support programs. The exponential increase of medical costs has raised the concern of healthcare affordability despite the available subsidies. Nowadays, understanding and wisely selecting health insurance coverage is critical to access health care services. For the average American family, making health insurance decisions can be difficult. However, for the Hispanic community, the process is even more challenging. This disadvantaged group generally lacks health insurance literacy, experiences cultural differences, and possesses limited English proficiency, which adds barriers to navigate and access the healthcare system.

According to the U.S. Census Bureau, in 2019, the Hispanic community represented an 18.5% of the American population. In other words, about 60.5 million inhabitants in the United States are Hispanics or Latinos. This significant minority has been identified as the group with the highest percentage of uninsured rates (QuickFacts United States, 2019). As a result, healthcare accessibility and affordability are currently unsatisfied needs. Even though there are many resources, there are none "available" to the people who need it the most. The assistance has not been tailored to address the cultural, literacy, and accessibility barriers Hispanics experience. Many of the programs are unknown and misunderstood due to the lack of education and promotion. Health insurance illiteracy is taking a toll on a hard-working and expanding community. Without timely medical attention, new generations will pay the price of genetics and disinformation. The purpose of this literature review is to explore the impact and need of health insurance literacy in the Hispanic community. At the present time, healthcare coverage education is on demand. The Latinx minority needs to understand, apply, and use the healthcare resources that can help them access care.

This study has a few limitations. First, the peer-reviewed research that has been done on the topic is restricted. Accordingly, only ten articles have been evaluated. Second, in most

cases, the sample size surveyed was small and from a specific area. Considering that the Hispanic population is rapidly growing and is unevenly distributed, the analyzed data can show irrelevant statistics. Finally, researchers failed to address cultural differences within the Spanish-speaking population. Even though this minority group has a common native language, they do not share the same idiosyncrasies, healthcare experiences, and socioeconomic backgrounds. Although the power of this study might be limited, it provides an in-depth evaluation of the effects of health insurance literacy in purchasing, accessing, and using coverage by the Latinx community.

A few patterns were identified while reviewing the existing literature. It has been proven that health insurance literacy is limited among most Hispanics. Questions such as its importance, how to get it, or how to use it are still common. Language barriers and the terminology used in informational resources add to the difficulty in understanding health plan options and true cost. Community assistance, along with outreach-targeted programs, can have a positive influence on the learning process. Despite the efforts of the government and supportive initiatives, Hispanics struggle to use or acknowledge healthcare resources.

Health insurance literacy is commonly unknown by most Hispanic cultures. In fact, when Edward et al. (2018) surveyed a small size of 139 Spanish speakers in the state of Massachusetts, the results showed that 93% of the sample had limited health insurance coverage literacy. Similarly, Guerrero et al. (2017) found that, although 80% of his surveyed group had health insurance, participants had difficulties during the enrollment process, acknowledging, understanding, and using their benefits. Latinos perceive the relevance of having health insurance literacy when a single term can affect their healthcare benefits in their new home. Yagi et al. (2021) analyzed that out of nine studies developed, eight demonstrated the association between low health insurance literacy and delay of care. The smaller the healthcare knowledge, the lower the willingness to seek medical attention. Tipirneni et al. (2018) and Yagi et al. (2021) advise that health insurance literacy is

important to select a health plan, access care, and make informed decisions. For instance, this knowledge allows patients to understand cost-sharing, out-of-pocket charges, preventive services, and in-network advantages. Additionally, enhancing health insurance literacy can also foster efficient and cost-conscious usage of healthcare resources (Yagi et al., 2021).

The language proficiency and terminology used in the healthcare insurance plans challenge the understanding and navigation of resources. Immigrants learn basic words to “survive” and support their families. Guerrero et al. (2017) explain that even when Hispanics receive assistance in their own language, the terms used were unfamiliar and hard to understand. When it comes to health insurance enrollment, insured participants testified that the process was as complicated as the technical terminology used. Along the same lines, Edward et al. (2018) discovered that most of the participants of their study were unfamiliar with the terminology. Due to their limited English proficiency, they struggled to understand messages. Kim et al. (2019), Foiles Sifuentes et al. (2020), and Monnat et al. (2017) explain that a determinant factor in health insurance coverage among immigrants is the limited English proficiency (LEP). Statistics show that the lower the English proficiency, the lower the likelihood of insured status. English proficiency can impact patient-physician interaction, regular medical visits or preventive services, healthcare literacy, cultural behavior such as asking questions, and accessibility to local community support (Foiles Sifuentes et al., 2020). In sum, as Monnat et al. (2017) expose, currently, English proficiency is key to effectively navigate a complex healthcare

system where interacting, communicating, and reading are essential.

When it comes to learning and application, Hispanics rely on community support and government assistance. Kim et al. (2019) and Monnat et al. (2017) explain the impact of co-ethnic communities in healthcare accessibility. Immigrants who live in large ethnic communities get to share information through social ties, receive personalized guidance, and count on experienced support. Hispanic uninsured rates vary by location due to the community settings and customized available resources. In North Carolina, for example, the rate of uninsured Latinos is high due to the lack of large and established communities that can provide guidance (Monnat et al., 2017). These authors advocate for the need of having healthcare professionals aware and educated on the cultural, linguistic, and geographical sensitivity needed to effectively treat the Latinx group. An older immigrant population might need more attention, patience, and specialized assistance. Accordingly, a targeted program can help reduce the health insurance gap between generations and ethnicities. Edward et al. (2018) strongly believe that innovative customized programs are needed to support the Hispanic community. As a result, this minority would be able to make informed decisions when it comes to health insurance coverage and care. Tipirneni (2018) agrees that sharing simple messages with the population through trusted networks can ease accessibility to reliable information. Community-based education and the usage of plain language are key to allow Hispanics to learn at their pace and gain confidence to use their healthcare benefits.



Aiming to decrease the uninsured disparities, the government has provided several legislation and subsidiaries alternatives. Although Lu et al. (2020) found that the implementation of the Affordable Care Act (ACA) helped individuals with limited English proficiency access care, Buchmueller et al. (2020) explain that Hispanics continue to be one of the groups with higher uninsured rates. Despite the efforts of the ACA to expand Medicaid, it is up to state administrations to make the change. Recently, twenty states have tried to add work requirements to the program. Additionally, new legislation of the Department of Homeland Security may scare applicants. On the contrary, Lu et al. (2020) discusses that Hispanics now receive health insurance correspondence in their own language and can interact with professionals culturally aware. However, the researchers point out that rather than issuing additional coverage to dismiss disparities, the government should provide communication support, for instance, providing translators to assist with the navigation, usage, and relevance of benefits. Telemedicine could be a solution to address the language barrier since it allows the use of interpreters, Foiles Sifuentes et al. (2020) and Ray et al. (2017) suggest. Looking into the future, Guerrero et al. (2017) encourage the development of outreach programs through media and community events to educate the Latinx community. Implementing cultural and linguistic strategies while educating the public could encourage uninsured participants to evaluate the opportunities. Ray et al. (2017) agree that racial health disparities can be addressed by providing health education. Using technological devices and applications, the researchers believe, that information materials and interactive resources can be provided. Education cannot only improve health outcomes but enhance health literacy and health insurance education.

Health insurance literacy is a need in the Hispanic community. This minority needs to make informed decisions when selecting health plans, understanding benefits, costs, and using coverage. To effectively communicate, healthcare professionals must be aware of Latinx language barriers and cultural behaviors. Technical language or complicated messages might create confusion instead of providing support. Accordingly, tailored programs, outreach movements, and working closely with the community are recommended strategies. Nowadays, the government should focus its

resources on providing accessible education. An educated and aware population would be able to live healthier lives and save resources. ❖

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ROBERT JAMES NORTON, JR.

“ENVIRONMENTAL, SOCIAL, AND GOVERNANCE” IN TECHNOLOGY

INTRODUCTION

One of the biggest considerations in 2022 among businesses and corporations revolves around ESG, “the acronym for Environmental, Social and Governance, the three broad categories or areas of interest for what is termed ‘socially responsible investors’” (ESG, 2021). As ESG becomes significantly more relevant to workers and investors, companies are being forced to develop their strategy around all three pillars of the ESG mission. Companies that turn a blind eye to ESG and the future expectations and requirements risk the existence of their businesses. When ESG is considered, there are two distinct paths that companies must strategize for, the first of which is how that company will comply and communicate compliance to all of its employees and investors. The second path is determined by how can that company participates in and facilitates compliance for other companies. While both paths are equally important, the second one will be the focus of this study.

BACKGROUND INFORMATION

Manufacturers of personal computers and electronic devices produce a tremendous amount equipment that is sold to consumers and businesses every year. As new devices are purchased, usually, older devices are being replaced and taken out of service. The disposition and disposal strategies for those aged devices are unstandardized and costly to do in an environmentally friendly manner. As stewards in the world of technology, ESG has become an increasingly important priority for electronic device manufacturers for their own compliance and their reputation with customers.

On the compliance side, state and local governments are putting their own laws in place to push environmentally friendly disposal of electronic waste and ensure that the toxic components of electronics don’t contaminate the soil and water supplies. According to a report from the Platform for Accelerating the Circular Economy (PACE), “global e-waste production is on track to reach 120 million tonnes per year by 2050 if current trends

continue” (Bel, 2019). This number is astronomical, with 2019 already having seen 53.6M metric tons generated (Tieso, 2021; see Fig. 1).

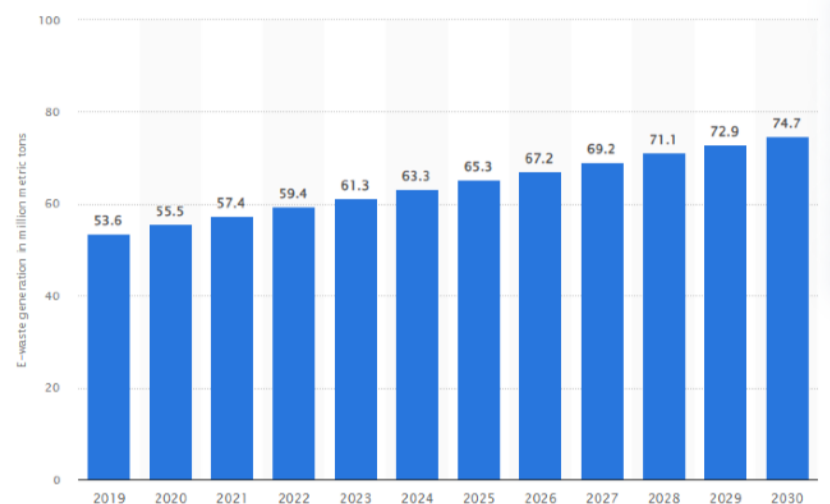


Fig. 1. Estimated metric tons of global e-waste per year through 2030 (Ties, 2021).

The tidal wave of e-waste is coming, and the electronic device manufacturers must start to or continue to strategize around dealing with that wave of aged parts and pieces.

The first step is to recognize and acknowledge the coming storm. This responsibility lies solely on the leadership of companies to change their entire culture with an eye to the end of product lifecycles. No more can a company focus on making as many gadgets as possible while ignoring the danger those products may cause to the environment. The leadership of technology manufacturing companies must make the circular economy a top-level priority and begin designing all their offerings with the environment in mind.

This is the biggest problem with ESG today; companies are just not taking the extra steps in designing for less waste or incurring the extra cost of using more easily recycled components because they don’t have to do so. Every company must prioritize revenue and profit so that they can stay in business. Doing the right thing when it comes to the “E” in ESG, does take investment and commitment. But short-sighted leadership teams only see the cost associated with a focus in end of life, and that doesn’t translate well into the balance sheet. By taking a top-down approach to ESG, and establishing a business management system around it, leadership can start ensuring

that Environmental, Social, and Governance become part of their DNA.

PROBLEM OF PRACTICE

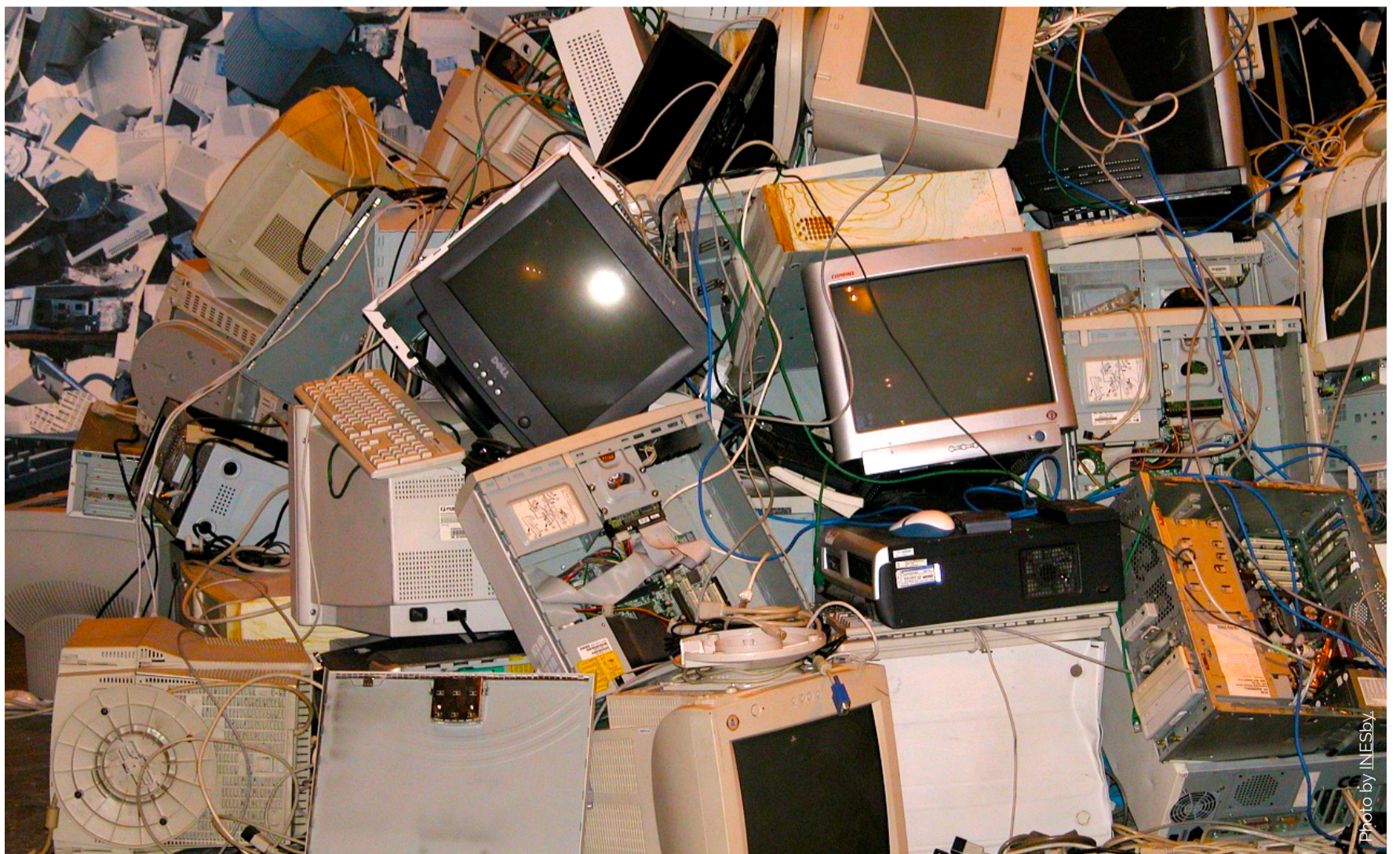
Once the leadership team is fully onboard with prioritizing ESG, the entire company must adopt the mission. Change management is critical to controlling the shift throughout the value stream while maintaining metrics and milestones. Controlled engagement offers another opportunity to spread the message as well: "Change management can help facilitate pressure and is a formal method to speak with employees" (Azizi, 2019). No culture shift will occur without proper expectation setting and pressure to continue the right activities.

The key component of change is communication. The company should seek to be transparent about its activities and motives with both employees and customers. How a company is perceived reflects their social aspect of ESG. The S stands for the relationships and reputation built by the company (Kuehner-Hebert, 2021). This is an arena that needs a lot of work for technology manufacturers and the history of dangerous assembly lines staffed by underpaid and over worked laborers. Even if a company becomes more focused on the Environmental and recycling, those actions

need to be auditable, transparent, and shown as part of the company's reports to investors.

WARRANTED ACTION

For technology companies to fully embrace the ESG mission, they need to address each of the pillars distinctly and effectively. For the Environmental pillar, technology companies need to design products with end-of-life disposal as a consideration. This includes the components used, the ability to separate various materials, and labeling for all hazardous pieces of the device. The Social pillar is all about redefining the mission statement and ensuring all employees are treated fairly. Rewriting policies to focus on inclusion, diversity, and prevention of hostile work environments are important for this stage as well. Add in a healthy dose of customer satisfaction, and major steps can be taken down the path of social improvement by conscientious companies. The third solution focuses on the third pillar of ESG, and that is Governance (Marsh, 2021). A company is only as strong as its leaders, but I would take that one step further. A company is only as compliant as its leaders. That means the CEO and board of directors drive the strategy for the company. The mission of being a strong steward for ESG starts with that C Suite group. Transparency, fairness, and prioritization around



ESG and wages are the first steps to bringing the Governance piece into alignment with best practices.

ENVIRONMENTAL IMPACTS IN TECHNOLOGY

"The e-waste produced annually is worth over \$62.5 billion, more than the GDP of most countries. There is 100 times more gold in a tonne of e-waste than in a tonne of gold ore" (Nijman, 2019). That statement shows how much better our e-waste processing capabilities and solutions need to be. ESG focus is the right thing to do for our planet, people, and profits, literally the triple win.

So why aren't more doing it? The first part of the ESG mission is the Environment, and electronic device manufacturers are focused on the costs of building a component and not on the cost those components have on the broader world. The fix for this is easy on paper, but hard in execution. Simply put, electronics manufacturers need to prioritize the use of sustainable components and design that sustainability into their products. If the battery must contain lithium, then design a way to easily remove and properly dispose of that part. Use recycled plastics instead of newly created ones. Use recycled packaging instead of new packaging. There are so many ways to focus on the environment and sustainability, but right now there is slightly increased cost and, in an industry where a fraction of a penny in cost reduction is a big deal, the roadblocks are many. That is where consumers can help by making decisions with their wallet. Consumers should be willing to pay a few dollars more for products that incorporate recycled packaging and components.

Innovation is another big area to help the environmental pillar of ESG. Are there better building blocks than toxic substances like lithium ion? If there aren't, are there ways to better protect and dispose of those substances that are so prevalent in all our cell phones and computers? These are just a fraction of the problems that can and will be solved by innovative solutions. The main question is how quickly can they get into mainstream electronics and how much will the cost? The value proposition must be expanded to warrant the added costs of doing things the right ways: "ESG technology is definitely a way of engaging millennials" according to the article in Professional Wealth Management (Trovato, 2021). It is time that tech companies, and tech

manufacturers, push the ESG initiatives forward together, and do what is right for our planet.

EMPHASIZING THE "S" IN ESG

While Environmental is quite a big part of ESG, the "S" is becoming more critical now as well. Recent events with social-justice- and pandemic-related outcries have brought the social aspect of ESG to the forefront of consideration for consumers. Social responsibility matters now, more than ever. A weblog post from author Antea explains the "S" in ESG this way: "ESG frameworks highlight the particular social interactions of a company that can be quantified to anticipate risk. It's complex – but not impossible – to show how your company handles social issues and what goals you've set to increase social equity" (Antea, 2021). So, tech companies must form a strategic engagement model and ensure that model accurately represents their corporate culture in a positive light. Consistency is key if the company wants to develop credibility with its customers and employees.

Employers also have a responsibility to do what is best for their employees, and this falls under the social responsibility part of ESG as well (Hunt, 2022). Transparency goes a long way towards showing the company has integrity with their pay and benefits structure. Reporting out the diversity and inclusion metrics of the leadership teams should also be a top priority. Ultimately, this area is the easiest part for a technology company to fix; they announce make their mission statement publicly and back it up with factual data.

A third step for the leadership of tech companies to take is to educate their employees about policy changes and new skills, and to even make additional higher education opportunities available. The commitment to the most important capital asset, their people, is the best way for a company to truly show progress in the "S" of ESG.

Finally, the fourth step for leadership to implement is a way to donate money to charitable causes that are important to society and their employees. These should not be pre-defined but rather more dynamic in nature and dependent on needs of the day. Some companies even have a matching gift program where they will match the donations of their employees. This shows support for the causes most special to the employees while also serving the overall charitable mission of the company.

All these steps start and stop with the executive leadership team. The team needs to be open minded and committed to making sure their company has a positive impact on the world. Once again, the effort is easily quantified and audited, so the leadership should be held accountable or given credit based on the results.

GOVERNANCE STARTS AT THE TOP

The final part of ESG, governance, perhaps is the most dreaded of all three pillars. Compliance officers often see their priorities pushed aside as executive leadership pursues other initiatives. However, it is critical for that compliance officers keep emphasizing the Corporate Governance agenda. One of the biggest mistakes made when it comes to tech companies is when a company sways from the moral and ethical compass or takes shortcuts to make the balance sheet look better. While there may be short-term gains in some situations, there are almost always harsh repercussions, or at the very least tremendous risks for going off the compliant path. The longer or further a company stays out of compliance serves as a force multiplier for their danger and risk as well.

To that end, the governance piece of ESG really comes down to establishing a program for the company. According to Volkov, "an ethics and compliance program is an essential part of corporate governance. As such, an ethics and compliance program has to be factored into any ESG program" (Volkov, 2021). This is very straightforward. If a company doesn't have an ethics and compliance program available for all employees, then it is in major violation of the ESG mission. The Chief Compliance Officers need to defend their priorities because, after all, it truly is what is good for the company.

CONCLUSION

Environmental, Social, and Governance are areas that many tech companies fail to put proper focus on. ESG is becoming more and more critical for the future of business, especially as consumers become more educated about the companies they are buying from. Any company that has good corporate citizenship as part of their mission statement should survive in global marketplace. To correct this huge problem for technology corporations, the first consistent act is to get the executive leaders on board to the ESG mission. From there, it is a series of steps to build and verify Environmental, Social, and Governance

throughout the company. A Business Management System can be put in place to collect data and hold various departments accountable. Changing a company's culture can be difficult, but when the mission resonates with all, as ESG should, that change should go faster and be more complete. Building a better tomorrow is a mission everyone can get behind.



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THE EFFECTIVENESS OF THE SARBANES-OXLEY ACT IN PREVENTING CORPORATE ACCOUNTING FRAUD

ABSTRACT

Accounting fraud at the corporate level has been a topic of intense discussion over the past two decades, especially when occupational fraud is involved. As the most common and costly type of fraud, occupational fraud must be detected and reigned in by companies. This thesis explores how the effects of the implementation of the Sarbanes-Oxley (SOX) Act of 2002 and ethical training can lend themselves to creating fraud prevention and detection measures within a corporate accounting setting. It is important to understand the ramification of the SOX Act in order to properly implement its measures and understand the results they can provide. By discussing the basics of the SOX Act and of ethical training, and then applying that knowledge to case analyses of Wells Fargo, Enron, and WorldCom, I explain how the SOX Act and ethical training have prevented or lessened the loss created by fraudulent behavior.

INTRODUCTION TO ACCOUNTING FRAUD, 2000-2012

Accounting fraud is an ongoing dilemma in the business world, the most common form being occupational fraud. Occupational fraud is described by the Association of Certified Fraud Examiners (ACFE), an anti-fraud organization annually investigating the facts and effects of fraud cases, as fraud committed by an individual against the company that employs them (2022). It is the most common form of financial fraud in the world, and the most costly at that. This is because businesses regularly hire employees to oversee all aspects of their financial information, which then puts these employees in a position to commit fraud. With about 3.3 million people in the U.S. working as accountants, most of whom would not commit fraud, just a small percentage of fraudulent accountants could cause a huge loss (Association of Certified Fraud Examiners, 2022).

On September 13, 2013, Andrew Ceresney, co-director of the Division of Enforcement of the U.S. Securities and Exchange Commission (SEC), stated that the SEC had experienced a decline

in accounting fraud cases in the years following the passing of the Sarbanes-Oxley Act. The United States Securities and Exchange Commission (SEC) is a governmental organization that works to protect investors, maintain orderly and efficient markets, and facilitate capital formation (SEC, n.d.). The SEC had counted 79 financial fraud or issuer-disclosure actions in 2012 as compared to 219 in 2007 (Ceresney, 2013). Directly after the implementation of the Sarbanes-Oxley (SOX) Act of 2002, the SEC saw an increase in restatements, as demonstrated by **Fig. 1** below. A restatement occurs when a company revises financial statements due to material errors. Accurate financial statements are important for executives in a given company as well as for stakeholders to review financial performance over a certain period of time. Restatements increased because of heightened attention and the new guidelines set by SOX, as fewer companies were able to get away with errors and misstatements, intentional or not. In contrast to the years following 2002, Ceresney (2013) notes that the number of restatements from 2006 to 2012 fell from 1,771 to 768. SOX, along with the rising emphasis placed on enhancing and providing ethics teachings for accountants, has led to a significant decrease in the number of fraud cases. It is important for accountants to understand the ethical dimensions of accounting systems and financial statements because they are in the best position to apply professional judgment to complex transactions and oversee the accounting and reporting of financial transactions.

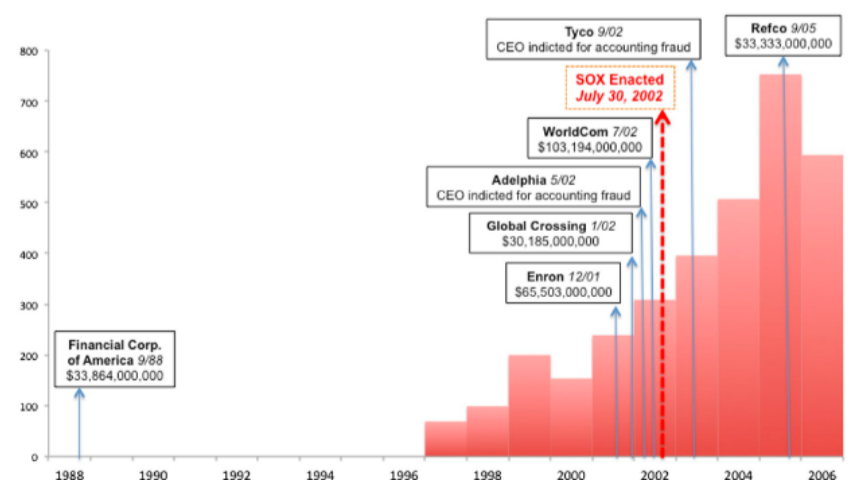


Fig. 1. Pozner, J. E., Mohliver, A., & Moore, C. (2018). Shine a Light: How Firm Responses to Announcing Earnings Restatements Changed After Sarbanes-Oxley. *Journal of Business Ethics*, 160(2), 427-443. <https://doi.org/10.1007/s10551-018-3950-y>

In 2001, Enron filed for bankruptcy after covering billions of dollars in debt and keeping up the façade of success. This scandal resulted in a \$74 billion loss to shareholders. In 2002, WorldCom was found guilty of having committed fraud of \$3.8 billion by overstating revenues and deficiencies within their internal audit department that left the audit committee and external auditors unaware of the true financial status of the company. After these scandals, employees of big corporations, stakeholders, auditors, and financial accountants demanded that actions be taken to prevent this type of large scale fraud from happening again. The response to these demands was met by Congress when they passed the Sarbanes-Oxley Act of 2002.

Although fraud is detrimental to individuals and businesses, it can also cause turmoil in capitalism. Because of the interdependence of many local economies, the capitalist global economy has proven to be sensitive and vulnerable. Fraud and unethical conduct can lead to economic crises on a global scale. It is important that companies develop a crisis leadership plan to manage ethical misconduct and financial fraud. Courts consider a company's failure to plan an issue of liability. For this reason, an employer potentially faces negligence charges in the event that it is shown that they failed to take reasonable steps to eliminate risk. As fraud scandals increase, everyone is affected by negative perceptions and increasingly complex governmental regulations. The billions of dollars that are estimated to have resulted from fraud scandals negatively affect employees, shareholders, and other companies in the same business, even if they are not in the same area. The cases of fraud and ethical misconduct that can create these crises tend to cause so much general mistrust in capitalism that some stakeholders have come to consider it defunct (Hulsart and McCarthy, 2014). Many people wrongly think that capitalism is meant

to satisfy self-interest, which suggests that there is a need for explicitly defining rules of fair play that corporations must follow (Hulsart and McCarthy, 2014).

The purpose of this thesis is to discuss and assess sections of the Sarbanes-Oxley Act of 2002 and the current ethical training provided by educators and employers to show how regulation and training may help to prevent fraud. By examining these anti-fraud measures and specific case analyses, we can explore why and how their implementation has made it more difficult for companies to commit accounting fraud.

ETHICS

Ethics is connected with a person's character and their demonstration of personal integrity. Gomez mentions that "Ethics [...] emphasizes the responsibility and capability of the individual to come to his/her own conclusions through reasoning, and to determine which principles are relevant in a particular case" (Gomez, n.d.). Given this definition, it is easy to understand why ethics are so important in any setting, especially accounting.

There have been reports by the Association of Advanced Collegiate Schools of Business (AACSB) such as *Ethics Education in Business Schools* (2004), that emphasize that completing an ethics program, whether it be in the educational curriculum when studying business or as an ethical training class within a company, can lend itself to individuals



understanding ethical dilemmas. Creating an ethical individual is not only important for business functions, but also to maintain integrity within the accounting profession for practitioners. Kelly (2017) emphasizes the importance of creating well-rounded and ethical leaders. Ethics should be emphasized in every core class, as is the case at Providence College, which uses Mary Gentile's "Giving Voice to Values" curriculum. Gentile, a professor at the University of Virginia's Darden School of Business, focuses on teaching ethics as well as instruct individuals how to stand up for themselves when a situation is ethically challenging (University of Virginia, n.d.). Ethics topics are made clear in every class, and accounting students must cover ethics and every required accounting course (Kelly, 2017).

Most, but not all, accounting students take some sort of ethics course in their studies. According to Steven Mintz (2021), there is no set way to teach ethics in an accounting curriculum. Nevertheless, there are different approaches discussed in papers published by accounting educators. For example, Mary Beth Armstrong discusses the "sandwich approach." This approach "advocate[s] a standalone ethics course, followed by ethical cases integrated across accounting courses, concluding with a capstone course that combined ethics and professionalism" (Mintz, 2021). Moreover, there are textbooks published that support an ethics course. One of the first was Steven Mintz and Roselyn Morris's *Ethical Obligations and Decision Making in Accounting: Text and Cases* published in 2000. This textbook uses case studies to elaborate on basic concepts of accounting and business ethics

based on SEC files or newly developed case studies written to challenge students' ethical decision making skills (Mintz, 2021).

Although it is important to implement these ethical development skills as early on as possible, it is also crucial to continuously refresh those values, especially ones specific to one's company of employment. The Association to Advance Collegiate Schools of Business is a non-profit organization that works with students, educators, and businesses to improve business education (AACSB, n.d.). A recent AACSB report

titled *Ethics Education in Business Schools* (2004) emphasizes the importance of schools assessing their current approaches to ethics education and working to strengthen and renew the ethics requirements that are already part of their curriculum. The AACSB notes that "While a number of business schools have developed innovative strategies for engaging students in the challenge of providing ethical leadership, the assumption of many faculty and program leaders that the majority of students are being adequately prepared in this domain is highly questionable" (2004). This report was written by Deans of AACSB-accredited schools as well as directors of different departments of the



AACSB and concludes that we cannot assume that accounting students have undergone rigorous ethics training. This is why renewing and reimplementing ethical teachings at every stage of a practitioner's career is important, especially if they would like to acquire a Certified Public Accountant (CPA) license. After taking the Uniform CPA Exam, the examinee must also take the CPA Ethics Exam. This exam tests the understanding of and conduct in ethical dilemmas that arise in the accounting

profession (CPAExam, 2022). The exam can vary from state to state because some states may conduct the exam through their own State Society of CPAs and some states do not require it at all. Even if the exam is not required in the state, ethical behavior is expected from every CPA, and failure to abide by ethical standards can result in their license being revoked.

THE SARBANES-OXLEY ACT OF 2002: SECTIONS 302, 404, AND 406

The Sarbanes-Oxley Act of 2002 was passed on July 30, 2002, "to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws, and for other purposes" in regard to publicly traded companies (Herath & Walker, 2019). It was named after the two bill sponsors, Senator Paul Sarbanes and Representative Michael Oxley, and was passed in response to scandals in the early 2000s, some of which will be analyzed below (Cornell Law School, n.d.).

Different sections of the act strengthen different areas of the law in order to create an environment for more accurate financial reporting as well as to "prevent a firm's management from interfering with an independent financial audit" (Cornell Law School, n.d.). The Legal Information Institute at Cornell Law School (n.d.) says that sections 302 and 303 create independence for audits by regulating internal procedures and management actions. The act also includes sections that implement enforcements and oversight provisions, such as section 301, which deems any officers who purposefully submit non-complying financial statements criminals, and section 404, which requires management to create strong internal controls for financial reporting (Cornell Law School, n.d.).

The Sarbanes-Oxley Act of 2002 constitutes one of the most effective forms of fraud prevention because it sets a basis for how publicly traded companies must keep and record financial records. Section 302 of the SOX Act ensures that the company's financial statements "comply with SEC disclosure requirements and fairly present in all material aspects the operations and financial condition of the issuer" by requiring senior corporate officers to personally attest to the accuracy in writing (H.R.3763, 2002). This creates accountability and provides reasonable assurance that the document does not contain false information.

Section 302 of the SOX Act requires corporate CEOs and CFOs to personally attest to and certify the accuracy of financial reports filed with the SEC (Kleckner and Jackson, 2004). This creates accountability that, to the best of the company's knowledge, the financial reports are accurate and that any material weaknesses in internal controls are disclosed. If a financial statement has to be reissued because of noncompliance with the Generally Accepted Accounting Principles (GAAP), under Title III of SOX, executives have to return any bonuses received that year, which helps eliminate incentives to commit fraud (Nickerson, 2019). GAAP is a set of accounting standards and rules for financial reporting, which has been adopted by the U.S. Securities and Exchange Commission (CFA Institution, n.d.). The ACFE's *Report to the Nations* says that executives commit only 23% of occupational frauds, but that their losses are the greatest (2022).

According to the U.S. Securities and Exchange Commission, "section 404 of the Sarbanes-Oxley Act requires public companies' annual reports to include the company's own assessment of internal control over financial reporting, and an auditor's attestation" (SEC, n.d.). In this case, it is easy to see why being ethical is very important, especially in roles higher up in the company. Under section 404(a), businesses are forced to review their internal controls, find the weaknesses therein, and be upfront about them by classifying them as deficient, significantly deficient, or materially weak. Section 404(b) further requires an auditor to evaluate a business's internal controls. When analyzing the quality of internal controls of a business, it can be more beneficial to use material weaknesses disclosed under 404(b) than 404(a). This is because auditors are more likely to spot internal deficiencies, severe ones at that. Another benefit of 404(b) is that "fraudulent managers are likely less able to suppress auditor disclosures than management disclosures" (Donelson et al., 2016). Section 404 also brings to light the internal control deficiencies that management may not have disclosed under Section 302 (Hermanson and Ye, 2009). This is beneficial to investors looking at a company's documents, even though most companies do not supply information about internal control issues under 302.

Sections 302 and 404 of the Sarbanes-Oxley Act interfere most strongly with the ways businesses are run. If the executive signs off on a faulty financial statement, they will be

questioned and investigated. This means that the rules and standards will be followed when creating the statements to ensure that the executives are signing off on accurate documents. Section 404 creates the framework for these documents to be accurate by evaluating the internal controls and making sure they are up to par for the business. These sections work together to create one of the most effective anti-fraud acts passed by the United States government.

Finally, section 406 of the Sarbanes-Oxley Act requires the top financial and accounting officers to adopt a code of ethics (Ahluwalia et al., 2018). In examples like Enron, many regulators thought that the culture at the top of the company had significantly contributed to the actions of everyone involved. By complying with section 406, a company must state "whether it has adopted a code of ethics for the principal financial officer, principal accounting officer, and other senior financial officers and—if not—provide an explanation for why it has not done so" and they must establish written standards to prevent wrongdoing and promote ethical behavior (Ahluwalia et al., 2018). If a business decides to deviate from the code, an ethics waiver must be reported. This is because it is believed that an ethical CFO will create ethical leaders who refrain from financial misconduct (Ahluwalia et al., 2018).

Braswell et al. (2009) argues that for a company to develop a more ethically aware environment and programs, they should periodically monitor and update procedures, create an open and accepting environment, create clear and understandable materials paired with ethical training, ensure top management participation, enforce participation on behalf of employees, and comply with government laws and regulations.

Sarbanes-Oxley Compliance Difficulties

Many businesses had issues when the Sarbanes-Oxley Act was passed. Acknowledging the compliance difficulties contributes to our understanding of the history of SOX and suggests why, regardless of these difficulties, it is important to comply with these policies. One reason companies struggled to adapt to the standards set by SOX are significant internal control weaknesses that resulted in a high level of risk that had to be reported to the SEC. Moreover, many companies found weaknesses within their tax function (Cowan and Mark 2006). Cowan and Mark (2006) discuss

some of the best practices to improve internal controls, which include increasing staff to handle increased demands, providing more technical training in areas like tax accounting and internal controls, and ensuring that the tax departments processes and controls are properly documented.

Another dilemma is the cost associated with SOX compliance. Many firms installed new and improved IT to comply with the SOX requirements. As a result, audit fees for both large and small businesses have also gone up. As described by Fischer et al. (2020), there is much data on compliance costs going up, but most of them point to a more than fifty percent increase in audit fees. Herath and Walker (2019) note that small businesses had to shoulder a larger increase in audit fees, at 0.11 percent of revenue, compared to larger companies, at an increase of 0.035 percent of revenue. This may seem like a burdensome cost of compliance, but section 404 has contributed to accurate financial reporting and corporate governance as a whole (Fischer et al., 2020).

To this day, there is still debate on whether or not the Sarbanes-Oxley Act is effective. It is clear that it has helped the accounting performance of companies in that it has improved internal controls and established strict and legally enforceable consequences for wrongdoers in this environment. SOX is not necessarily meant to enhance fraud detection and prevention, but it does require more accurate and mandatory reporting of financial statements and outlines standards for how to do so, which does help to prevent fraud in the long run. Szu-fan Chen (2014) mentions that these mandates improve investor confidence, promote conservative financial reporting, and help reduce earnings management through accrual manipulation.

CASE STUDIES

The following section discusses three case studies in which additional ethics training and Sarbanes-Oxley compliance could have prevented the losses the employees, customers, company, and investors suffered. The first company discussed is Wells Fargo whose ethical crimes were rooted in problematic and illegal approaches which, in turn, led to fraud committed at multiple levels of command. The second is Enron which committed one of the most famous accounting scandals in history. The last is WorldCom, the largest bankruptcy in United States history. This

was the final grand scale fraud case before Congress decided to interfere. This case discussion is important because these cases contributed to the creation of the Sarbanes-Oxley Act of 2002. My analysis shows that implementation and renewing of ethics policies as well as sections 302, 404, and 406 of SOX would have helped prevent such fraud if they had been in place and properly followed.

Wells Fargo

Wells Fargo constantly emphasizes that their values are about building lifelong relationships, one customer at a time, by doing the right thing, the right way, while striving to be recognized by their stakeholders as setting the standard among the biggest companies for integrity and principled performance (Tayan, 2019). Gallup, a global analytics and advice firm, recognized Wells Fargo in their "Great Places To Work" many years in a row (Tayan, 2019). However, in 2013, about thirty employees were terminated for opening new accounts and credit lines without customers' knowledge in order to meet their daily cross-selling targets. Cross-selling refers to the practice of selling a different product or service to an already existing customer. By default, customers with many services within one company are more profitable (Tayan, 2019). As Tayan (2019) notes, outside observers mentioned the pressuring environment at Wells Fargo, but Tim Sloan, Wells Fargo's chief financial officer at the time, responded with a simple "I'm not aware of any overbearing culture." This is not convincing, but in the defense of Sloan, there were multiple controls in place to prevent abuse, including a senior management incentive system that "had protections consistent with best practices for minimizing risk, including bonuses tied to instilling the company's vision and values in its culture, bonuses tied to risk management, prohibitions

against hedging or pledging equity awards, hold-past retirement provisions for equity awards, and numerous triggers for clawbacks and recoupment of bonuses in the cases where they were inappropriately earned" (Tayan, 2019). It was clear that their controls needed to be assessed and modified.

The controls to prevent abuse at Wells Fargo were clearly weak, seeing that in September of 2016, the company was found guilty of creating more than 1.5 million unauthorized debit accounts and 500,000 unauthorized credit accounts (Albrecht et al., 2017). To meet sales quotas, employees created fake accounts using real customers' names. This had a detrimental impact on customers, as demonstrated by Albrecht et al. (2017) who



Photo by Anna Nekrashevich

observed that “The misused information and consequential opening, closing, and reopening of accounts usually impacted customer credit scores negatively.” Once the public became aware of the fraud Wells Fargo’s stock price fell about 20% (Albrecht et al., 2017).

The Fraud Triangle



Fig. 2. Georgia Government Finance Officers Association. (2019). The Fraud Triangle Illustration. <https://ggfoa.org/press-releases/the-fraud-triangle>

Albrecht et al. (2017) studied Wells Fargo’s fraud case through the lens of the fraud triangle illustrated in Fig. 2 above, which suggests that fraud occurs because three underlying conditions are met: perceived pressure, perceived opportunities, and rationalization. Wells Fargo was characterized by policies and a company culture that placed pressure on branch employees to meet unrealistic metrics. If an employee failed to meet their daily sales quota, they could be reprimanded or assigned to cold-call current customers to upsell products and attain bonuses. Due to managerial greed, such behavior was condoned and encouraged, and sometimes whistleblowers would be punished (Albrecht et al., 2017). An unsafe environment was created for those who tried to speak up. They were harassed or fired, which led to even more motivation for managers to continue without consequences.

Wells Fargo’s fraud case is one of many possible unethical behaviors. It is clear that all levels within a company, and within a single branch, should emphasize ethical behavior and training. At Wells Fargo, unethical behavior was seen at the upper levels of management and among regular branch bankers. It was unethical for the employees to create fake accounts, but

management’s poor oversight and carelessness played just as important a role in this debacle. Many customers whose information was abused faced significant difficulties, including failure to find employment, due to botched credit scores which threatened their and their family’s economic survival (Albrecht et al., 2017).

Brief Timeline of Consequences. In 2016, Wells Fargo paid \$185 million to settle a lawsuit filed by regulators and Los Angeles city and county. Their stock price fell 2 percent after this was made public, but their stock price differed after this case, as shown by Fig. 3 below (Tayan, 2019). \$2.6 million were paid to customers whose accounts had incurred fees due to being opened without their knowledge, and 5,300 employees were fired within a five-year period (Tayan, 2019).



1. Wells Fargo announces \$185 million settlement with CFPB and OCC.
2. Stumpf resigns as CEO; replaced by Sloan.
3. Wells Fargo board of directors releases report of independent investigation.
4. Wells Fargo annual meeting; 9 directors reelected with less than 75 percent support.
5. Wells Fargo discloses auto loan insurance violations; mortgage product violations.
6. Wells Fargo increases the number of potentially unauthorized consumer accounts to 3.5 million.
7. Federal Reserve imposes asset cap on Wells Fargo; the bank enters into a consent order.
8. Wells Fargo announces \$1 billion settlement with CFPB and OCC.

Fig. 3. Tayan, B. (2019). Wells Fargo: Stock Price [Graph]. <https://corp.gov.law.harvard.edu/2019/02/06/the-wells-fargo-cross-selling-scandal-2/>

In August of 2017, estimates of unauthorized consumer accounts were raised to 3.5 million accounts, and Wells Fargo paid an additional \$2.8 million in fee refunds (Tayan, 2019). In February 2018, the company’s asset size was limited by the Federal Reserve Board to \$1.95 trillion in assets it had that year until they proved they had more effective corporate controls (Tayan, 2019).

In April 2018, Wells Fargo paid a \$1 billion settlement with the Consumer Financial Protection Bureau and the Office of the Comptroller of the Currency to resolve auto and mortgage lending violations (Tayan, 2019). In the same month, they agreed to pay \$480 million to settle a securities class action lawsuit over cross-selling. To resolve civil claims for cross-selling, auto lending, and mortgage lending violations, Wells Fargo agreed to pay \$575 million (Tayan, 2019). Although Wells Fargo

negatively affected many lives with this scandal, they are paying the consequences for their actions.

Enron

Enron was a result of the merger of Houston Natural Gas and Internorth after the federal deregulation of natural gas pipelines. The merger created massive debt for the company, and Enron lost the rights to their pipelines. In order to develop Enron's business strategy, Kenneth Lay, the CEO, hired Jeffrey Skilling from McKinsey & Co. Skilling had a background in banking and asset and liability management (Thomas, 2002). He proposed that Enron create a "gas bank" in which Enron would buy gas from suppliers and sell it to a network of consumers which guaranteed a supply and a set price point while assuming risks and charging fees for the transactions (Thomas, 2002). This was the start of an impressive fraud scheme.

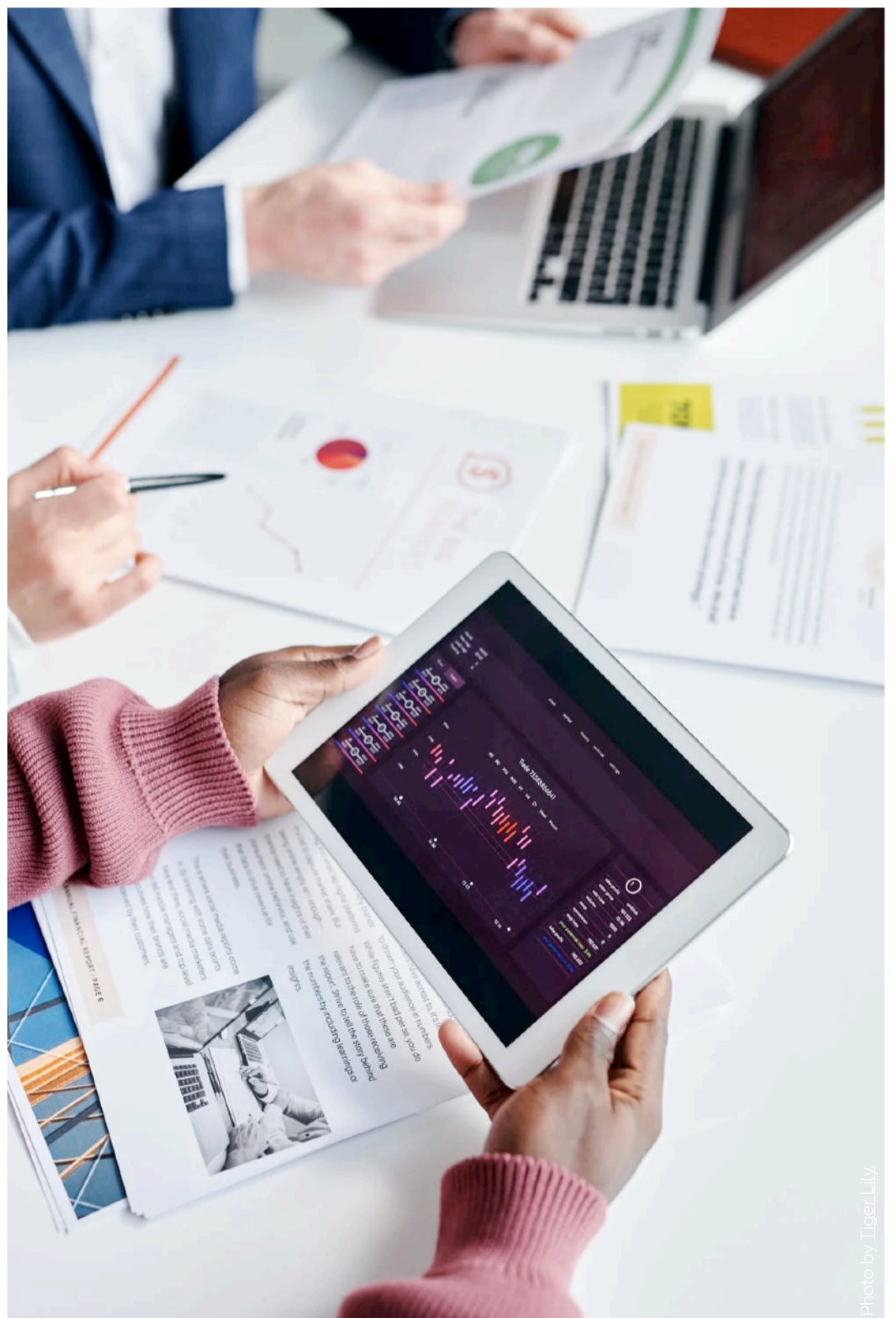
In 1990, Lay created a new division of the company called Enron Finance Corp. and assigned Skilling to run it. Soon, Enron dominated the Western market for natural gas contracts. The corporate culture at Enron began to change, and only the most effective traders were hired, many from top MBA schools (Thomas, 2002). Although the employees had exhausting schedules, they were given many benefits which included use of the company gym and concierge services. Andrew Fastow, a Kellogg MBA, worked his way up the company ranks and eventually became Lay's protege (Thomas, 2002).

Although Enron's image was one of power and success, the environment for employees was bad. Enron adopted the performance review committee based on Enron's values: respect, integrity, communication, and excellence (Thomas, 2002). Enron said it valued integrity and respect, but employees felt that they were really only reviewed based on profit production. Due to this review, employees were quick to "do deals" and report earnings. The employees were ranked on a performance scale from 1-5, 1 being the highest and 5 the lowest.

Employees ranked towards the tops were personally closer to Skilling, and those at the bottom were closer to being fired (Thomas, 2002). Enron replaced up to fifteen percent of its workforce each year and, combined with the grueling ranking system, an environment of intense competition was created intentionally.

During this time, in the 1990s, the U.S. economy was experiencing the longest bull market in its history (Thomas, 2002). Citizens Bank (n.d.) defines a bull market as a market in which "investment prices are on the rise for sustained periods." With new investment opportunities opening up everywhere, Wall Street demanded double-digit growth, and Enron made sure to deliver (Thomas, 2002).

When Skilling became the chief operating officer in 1996, he proposed to Lay that Enron



apply their gas bank model to a market for electric gas. Soon, Enron became a major political player in the United States and lobbied for the deregulation of electric utilities (Thomas, 2002). In 1996, for about \$2 billion, Enron purchased the electric utility company Portland General Electric Corp to create one of the largest sellers of electricity in the United States. By late 1996, the division known as Enron Capital and Trade Resources became the nation's largest wholesale buyer and seller of natural gas and electricity. Their revenue increased by \$5 billion, and their employee numbers rose from 200 to 2,000 (Thomas, 2002).

In October of 1999, Enron created Enron Online (EOL), an electronic commodities trading website. On EOL, Enron was a counterparty to every transaction. Due to their participation as a buyer or seller in every transaction, credit risk management was important, and Enron's credit gave the traders on EOL the confidence that the website provided a safe transaction environment (Thomas, 2002). EOL handled \$335 billion in online trades in 2000 (Thomas, 2002).

In 2000, with the initial public offering market for technology and communication broadband companies taking off, Enron announced the plan to build a high-speed broadband telecommunications network and to trade network capacity in the same way it traded electricity or natural gas (Thomas, 2002). When Enron made a deal with Blockbuster to provide on-demand streaming via high-speed internet lines, it was obvious that Enron was

investing in the broadband market, but there was little return. To reward them, Wall Street granted \$40 on their stock price (Thomas, 2002). By August of the same year, their stock price had hit the all time high of \$90.56, and Enron was deemed one of the most admired and innovative companies in the world by many well-known business publications (Thomas, 2002).

Enron's success motivated other energy companies like Duke Energy and Dynegy to increase their profits and performance, and by 2000, Enron's competitive advantage had begun to weaken (Thomas, 2002). The opportunity for large trading gains were reduced in the first quarter of 2001 because energy prices began to fall after the attack of September 11, and the world economy went into a recession (Thomas, 2002). To keep up with these factors, deals at Enron were made quickly and without much regard as to whether they aligned with the company's strategic goals or their risk management policies. Thomas (2002) states that an employee said "Good deal vs. bad deal? Didn't matter. If it had a positive net present value (NPV) it could get done. Sometimes positive NPV didn't even matter in the name of strategic significance" in response to these deals.

As their profit declined, the executives began to partake in unethical accounting practices to hide their decline and increase their credit ratings. Andrew Fastow, who became CFO, pressured the companies to increase Enron's

rating, and failed. Although Fastow's efforts proved futile, there were other ways to decrease Enron's debt ratio (Thomas, 2002). Enron took part in market-to-market accounting which allowed the company to claim unrealized future gains from trading contracts in the current income statement which showed higher current profits than it had (Bondanko 2021). Enron used specialpurpose



entities (SPEs) to access capital or hedge risk. Special purpose entities are used to provide liquidity or to obtain external funding (Crawford, 2003). By doing this, Enron was permitted to increase leverage and its return on assets without having to report debt on the balance sheet (Thomas, 2002). Large sums are then borrowed to purchase assets and conduct other business transactions without the debt or assets showing up on the financial statements. Enron abused the use of SPEs and "parked" their troubled assets that were losing in value so that the losses would not show up in their financial statements. Enron used thousands of SPEs (Thomas, 2002).

Arthur Andersen, one of the world's leading auditing firms at the time, was the firm that helped Enron to hide their fraud. It conducted all of Enron's internal and external audits (Thomas, 2002). It purposefully dismissed many material misstatements and ignored weak internal controls. There were even memos created that said Andersen agreed with Enron's accounting practices that hid debts and inflated earnings (MBA Knowledge Base, 2018). Anderson went out of its way to shred Enron documents that contained evidence of the fraud and poor performance of the company.

The decrease of Enron's stock price accurately reflects how quickly Enron's success declined. By February of 2001, Lay had retired and Skilling became the new president and CEO of Enron. Skilling was very confident in his abilities and bragged that the stock should be trading at around \$126 per share, although, at the time, it was valued at \$80 per share. Blockbuster and Enron announced the cancellation of their partnership in March of 2001, and, by then, the stock was valued at \$60 per share (Thomas, 2002). Several risky deals resulted in a shortfall of cash during the summer. On August 14 of 2001, Skilling resigned due to "personal reasons." Shortly after, the stock price fell below \$30 (Thomas, 2002).

WorldCom

WorldCom started in the 1990s as a telecom company. At their peak, John Sidgemore, a top executive at the company, stated that WorldCom had earned about \$30 million in revenues, had won more than 20 million customers, and had become the largest internet carrier in the world. WorldCom's operations provided internet to about 100 countries in six continents. Even the United States government used them as a provider of network services

and voice and data communication services (Zekany et al., 2004).

The CEO of the WorldCom at the time was Bernie Ebbers, who was at the top of *Fortune's* magazine list of "People to Watch in 2001." Ebbers was overzealous and risk-seeking, and a powerful leader. This worked to attract admirers to the Board of Directors, as well as stockholders, members of the investment community, and the press. Ebbers was reported to say "Our goal is not to capture market share or be global. Our goal is to be the No.1 stock on Wall Street" (Zekany et al., 2004). By relying on WorldCom stock as currency, Ebbers conducted mergers with 75 companies, MCI being the largest. This may have seemed like a successful and smart move, but eventually that many mergers can become hard to manage.

With the reorganization that had to be done as a consequence of the mergers, customer support took a toll. Zekany et al. (2004) says that it seemed that WorldCom's desire to acquire more companies overshadowed their ability to make existing acquisitions work. Overall, according to its stock prices, the company reflected a good performance. The Chairman of Lucent Technologies stated that "Stock price should be a byproduct: stock price should not be a driver" (Zekany et al., 2004). It was evident that Ebbers' main driver was stock price. Investors usually measure a company's performance by looking at an "earnings estimate" or "analyst expectations" based on the company's previous performance. If the company fails to meet these expectations, the price of their securities fall (Zekany et al., 2004).

CFO and CPA Scott Sullivan helped Bernie Ebbers to lead WorldCom. Sullivan was seen as a "whiz kid" and was awarded the CFO Excellence Award by CFO Magazine in 1998. Both Ebbers and Sullivan were respected and had a large following, and they created a culture that did not question or challenge company executives. A former budget and financial analyst, Kim Emigh, witnessed first-hand the anger of the executives when he questioned WorldCom's practices (Zekany et al., 2004).

As proven by the anger Emigh had experienced, loyalty was highly valued and compensated at WorldCom. Some employees were compensated beyond the company's approved salaries and bonus schedules for their positions. This was to ensure future employee loyalty. The Board of Directors also showed loyalty to Ebbers and Sullivan. On one occasion,

Ebbers made a request that should have been denied, but the Board approved it because “they were simply not willing to take the chance of confronting him” (Zekany et al., 2004). Loyalty was the reason that information at WorldCom was so closely guarded (Sekany et al., 2004).

In the summer of 2000, WorldCom began to experience a decline in earnings. Their expenses as a percentage of their revenue began to increase, lowering their rate of growth. This provided a risk that their numbers would not reflect the earnings estimate, and in return, their securities price would fall. As this risk increased, so did the pressure from investors, analysts, and especially from Bernie Ebbers and Scott Sullivan. All of his personal outside business acquisitions were made with WorldCom as collateral and a loss would lessen the company’s value. Without those loans, the debt would force margin calls that he could not meet (Zekany et al., 2004).

This pressure was felt by all employees, but especially company accountants Betty Vinson and Troy Normand. In response, Vinson and Normand lowered expenses to meet the Wall Street expectations, but that was not enough. Buford Yates, their superior, claimed that Sullivan asked them to take \$828 million from a company reserve to pay expenses, but that violated accounting rules because “reserves are supposed to be developed only if top managers believe there will be losses in that unit” (Auburn University, 2015). Initially, Vinson refused to make the changes, but under increased pressure, Vinson and Normand caved, under the pretense that this was a one-time thing. The guilt was too much and they planned to resign, but Sullivan told them that the transfers to lower expenses were not illegal and he would take full responsibility, so Vinson rationalized the situation and continued working for WorldCom (Auburn University, 2015).

This was not a one-time occurrence, and Vinson and Normand, along with the rest of the accounting team, were asked to manipulate the numbers on more occasions. They were asked to conduct improper transfers of expenses from the operating expense accounts to the capital expenditures accounts. This was because capital expenditures were subtracted from income over a longer period of time, so the expenses would not immediately retract from the bottom line. This happened through every quarter of 2001, and when the accountants realized they would have to continue doing this in 2002, the guilt became too great, and they

refused to continue. By this time, the SEC was already becoming suspicious as to how WorldCom was doing so well when other telecommunications companies were struggling (Auburn University, 2015).

In March 2002, Cynthia Cooper, the vice-president of internal audit at WorldCom, was visited by the head of WorldCom’s wireless business to discuss \$400 million that was put aside to cover customers who did not pay bills. This \$400 million was used by CFO Sullivan to boost the company’s income, which was suspicious because, according to accounting rules, when there is uncollected debt, there must be a reserve set up to make up for the debt without making the firm look like it is more valuable than it is. Cooper approached Arthur Andersen, one of the “Big Five” accounting firms at the time and previously Enron’s auditors, about the matter and was ignored (Auburn University, 2015).

Cooper went to the board about the matter and was later personally phoned by Sullivan, who told her not to discuss the matter with the Andersen firm. This was a major red flag that fraudulent activity was occurring. After Cooper’s team discovered more unauthorized capital expenditures without documentation to substantiate them, an audit was announced. Sullivan asked them to wait until the third quarter was over, which was yet another red flag. Cooper continued with the audit and ultimately decided to report the fraud. Sullivan was given a week to justify the modifications and, when he could not, he was fired. WorldCom announced to the public that profits had been inflated by \$3.8 billion in the last five quarters (Auburn University, 2015). WorldCom admitted to violating generally accepted accounting principles and hiding their debt, and filed for bankruptcy on July 21, 2002. Experts estimate the total value of WorldCom’s accounting fraud at \$79.5 billion (Auburn University, 2015).

REACTIONS TO SCANDALS LIKE WELLS FARGO’S, ENRON’S, AND WORLDCOM’S

Wells Fargo Rethinks Its Ways

As the AACSB said, it is important to revisit and refresh the existing ethical programs in educational curricula, and this proves to be true with programs that businesses themselves offer as well. While the grand fraud scheme at Wells Fargo progressed, the company in fact ran ethics programs to instruct employees on spotting and addressing conflicts of interest. An internal whistleblower hotline was in effect to

notify senior management of violations, and bonuses were tied to instilling the company's vision and values in its culture and risk management (Tayan, 2019). Regardless of these ethical protections, they did not prevent fraud.

The Director of the Consumer Financial Bureau, Richard Cordray, states that Wells Fargo failed to "monitor its program carefully, allowing thousands of employees to game the system and inflate their sales figures to meet their sales targets and claim higher bonuses under extreme pressure. Rather than put its customers first, Wells Fargo built and sustained a cross-selling program where the bank and many of its employees served themselves instead, violating the basic ethics of a banking institution including the key norm of trust" (Tayan, 2019). Here, Cordray concisely shows how Wells Fargo crossed the line of ethical management in its branches, which allowed for this vast fraud scheme.

Since then, Wells Fargo has announced several remedies, including eliminating product sales goals and reconfiguring branch level incentives to emphasize customer service rather than cross-sell metrics (Tayan, 2019). In 2016,

Wells Fargo updated its code of ethics and business conduct to "provide additional clarity and focus on the ethical behavior we expect of all team members and members of our board" (Wells Fargo and Company, 2018). This is an extension of its Vision, Values, and Goals booklet that is shared with every team member and forms the basis of an interactive online training that all team members have to complete annually. The members of the Board also have to acknowledge that they have read and understand their obligations under this code (Wells Fargo and Company, 2018).

There is now a moral obligation to work towards creating a better environment for those Wells Fargo employees who want to speak up but do not do so in fear of retaliation or firing. It is emphasized that there will be a better environment overall for the employees and for employees to act in customers' best interest. Wells Fargo and Company's Business Standards Report (2018) states that managers are expected to reinforce high ethical standards, to ensure that there is no tolerance for unethical behavior, and to report it immediately if it occurs. Most of these practices were already



Photo by Mikhail Nilov

part of Wells Fargo's business language practice, but the scandal in 2016 forced the company to reaffirm how important ethics and ethical behavior are to the business. This logic of frequently analyzing and renewing ethics programs is important not only in the educational setting (AASCB, 2004), but in the workplace as well.

Enron & WorldCom's Part in the Creation of The Sarbanes-Oxley Act of 2002

When the world became aware of the Enron and WorldCom fraud scandals, the U.S. government acted aggressively. The Sarbanes-Oxley Act was passed on July 30, 2002, less than a month after WorldCom filed for bankruptcy, in

direct response to these scandals. From then on, section 302 required executives to personally testify that the information on the financial documents is not misleading and inaccurate. At Enron, neither Lay, Skilling, nor Fastow cared to report on the accuracy of their financial statements. In cases like Enron and CFO Sullivan at WorldCom, the officers were directly and personally involved in assuring that the numbers did not accurately represent the present performance of the company. Furthermore, there are responsibilities outlined in section 302 that state that signing officers are responsible for maintaining and implementing internal controls, that they have to have created effective internal controls to detect any material information within that reporting period, that

they have properly evaluated those internal controls, and that they have reported on the effectiveness of those internal controls based on their evaluation (SEC 2002). This would have helped when Sullivan used the \$400 million that were set aside to cover the payments that customers did not make. If the proper internal controls had been in place, Sullivan would not have had access to that reserve and the accounting principles would not have been disregarded.

Similarly, section 404(a) requires an adequate internal controls structure to be established and maintained. Moreover, the controls must be assessed at the end of the most recent fiscal year to report their effectiveness. section 404(b) states that each registered public accounting firm that prepares the audit report for a company must attest to and report on the assessment made by management (SEC 2002). This way, internal controls cannot be dismissed or brushed over. Instead, if there are issues with internal controls, those must be reported to the Securities and Exchange Commission, too. Arthur Andersen did not properly handle the fraud at Enron, and instead supported and aided the fraud. In this case, Cynthia Cooper at WorldCom had set the prime example of what an auditor should do when the



instance of fraud has been detected. By conducting an audit and investigating further, Cooper was able to expose the ongoing fraud at WorldCom (Auburn University, 2015).

If these measures had been in place, Anderson's fraudulent behavior would have been exposed sooner and the damage caused by fraud could have been smaller, especially considering that internal and external auditing conducted by the same firm is not allowed (Locatelli, 2002). Internal controls are a significant part of a manager's duty, and, in order for controls to work, they have to prioritize them. Locatelli (2002) says that Enron's managers failed to "identify the major risks facing their operating areas and develop control practices and procedures for employees to follow." Had the managers developed adequate control practices and procedures, the risks would have been identified and solutions could have been presented.

Neither the Enron or WorldCom scandals would have happened had the members of the board and the people they hired thought of or cared about ethical consequences. Obviously, Skilling, Lay, Fastow, Ebbers, and Sullivan did not care about the consequences that their employees, investors, shareholders, economies, and themselves would have to suffer as a result of their crimes. Even the board of directors at WorldCom were exposed to have given leeway to Sullivan and Ebbers with their demands because of intimidation and loyalty (Zekany et al., 2014). Their ethical codes did not align with an ethical outcome or the law, but having a solid ethical code is just as important as being able to act on it. Accountant Betty Vinson knew well that what they were being asked to do went against her code, but she gave in to the pressure and false security from Sullivan.

Section 406 of the Sarbanes-Oxley Act focuses on the businesses' President/Principal Executive Officer and Treasurer/Principal Financial Officer following a code of ethics that promotes the following:

honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships; full, fair, accurate, timely and understandable disclosure in reports and documents that are filed with, or submits to, the SEC and in other public communications made by the Funds; compliance with applicable laws, rules and regulations; an environment that encourages disclosure of ethical and

compliance related concerns; the prompt internal reporting of violations of the Code to an appropriate person or persons identified in the Code without fear or reprisal; and accountability for adherence to the Code. (U.S. Securities and Exchange Commission, n.d.)

For example, if the board of directors had not waived the ethics requirements when they noticed Fastow's removal of liabilities from the balance sheet, the catastrophe at the levels of investors and employees could have likely been prevented. Furthermore, section 406 could have helped Enron and Arthur Anderson develop a code of ethics that they were obligated to follow, which could have prevented many unethical decisions. If Vinson had not waived the ethical requirements and reported the fraudulent behavior that was about to be committed, WorldCom could have been stopped well before it misstated billions of dollars.

MCI emerged in 2004 as WorldCom's successor. The former SEC chairman served as MCI's court appointed monitor, and he placed restrictions on board members "to make their actions more transparent," including an obligation for directors to give two weeks' notice before selling MCI stock (Gilpin, 2004). The company's debt was greatly reduced and reorganization had happened, but it would take years for the memories of the scandal to fade. The impact of these scandals will live on through government regulations and global economy reactions.

PROPER IMPLEMENTATION DOES HELP

Enron and WorldCom could have been detected and possibly prevented if companies had been obligated to implement the Sarbanes-Oxley Act. Enforced ethical training could have prevented the spread of unethical and illegal behavior within Wells Fargo before it affected millions of customers. Section 406 of the Sarbanes-Oxley Act uses ethics rules to try to create an environment that decreases financial misconduct. Ahluwalia et al. (2018) conducted research on companies found on *Fortune's* 500 list, which contains large businesses in various industries that have to comply with the SOX section 406 provisions. They observed the implementation of a specific code of ethics for financial officers during 2005 and 2011 and how their companies' future earnings restatements were affected by their behavior due to the adoption of a code of ethics. Future earnings

restatements were chosen as the subject because these restatements have a significant impact on the value of the company, making any effect of the adoption of a code of ethics for officers economically significant and important. Also, chief financial officers, accountants, and financial executives are closely working with the values presented on the statements, so any behavior on their behalf is reflected on the statements (Ahluwalia et al., 2018). By observing the effects of the implementation of a code of ethics for officers on the firm's behavior, or lack thereof, Ahluwalia et al. were able to come to the conclusion that the specific code of ethics for officers led to more scrutiny which resulted in fewer mistakes in the earnings statements and that, if there were errors, such errors were caught more quickly. There were more conscientious judgment choices by executives at the firm, and the integrity of financial reporting was overall strengthened by the implementation of section 406 (Ahluwalia et al., 2018)

There are practices that cement compliance with ethical guidelines and SOX requirements which are now used at staple companies, such as PepsiCo, which is a big international business that has had much success over the years. Wagner and Dittmar at the *Harvard Business Review* (2006) discuss the practices implemented at PepsiCo to evaluate the condition of their control structure, a practice required by section 404 of SOX, as well as practices to strengthen their ethical culture. Their internal auditors distributed a questionnaire to about 100 senior executives that targets hiring practices, employee evaluation, contract solicitation, incident reporting, objective setting, and other areas (Dittmar and Wagner, 2006). To strengthen their ethical culture, PepsiCo tests their financial employees' understanding of the responsibilities of their role. This annual training is a package that includes scenarios where ethical dilemmas may be experienced and suggestions to responses given, and is taken by about 25,000 managers. The other 135,000 employees are given a code of ethics manual and experience different levels of reinforcement and training depending on their unit. Auditors can then see the record of this training (Dittmar and Wagner, 2006). These may seem like simple practices, but they lend to the implementation of practices that comply with the Sarbanes-Oxley Act.

ETHICAL SARBANES-OXLEY COMPLIANCE

The professional accounting field emphasizes integrity and professionalism because these values reflect on the accuracy of financial statements, the potential risk associated with auditing financial statements, and the integrity of internal controls that are now required by the Sarbanes-Oxley Act. By introducing ethical dilemmas to students that they may encounter once they enter their managerial and accounting roles, students will be prepared to detect intentional and unintentional irregularities that can occur with financial reporting. The AACSB argues that exposing students to these experiences will not only enhance their abilities to recognize ethical issues, but will increase their ethical sensitivity and awareness (2004).

Abiding by sections 302, 404, and 406 of SOX goes hand in hand with ethics because a company has to safeguard the integrity to accurately assess its own reports and deficiencies and truthfully attest to weak internal controls and financial reporting. By analyzing the scandals from Wells Fargo, Enron, and WorldCom, and discussing the effects of the implementation of ethical training and the Sarbanes-Oxley Act of 2002, it can be concluded that the support offered by these practices can create an effective form of corporate accounting fraud prevention and detection. ❖

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SCIENCES & MATHEMATICS



EMILY KETCHUM

CLINICAL PHYSIOLOGY FOR SYSTEMIC LUPUS ERYTHEMATOSUS

ABSTRACT

Systemic lupus erythematosus (SLE) is a complex, multi-system autoimmune disease that is characterized by inflammation and an attack of the body's tissues and organs. SLE is the most common and severe form of lupus. The cause for the manifestation of SLE is unknown, but there are uncontrollable and controllable risk factors that contribute to the possible developments of this condition (Lupus Foundation, n.d). Genetic, environmental, and hormonal factors are the three main factors that researchers believe contribute the most. Among females, there is a higher prevalence (9 of 10) than in men (1 of 10) (CDC, n.d). SLE affects approximately 16,000 individuals per year (Lupus Foundation, n.d).

Additionally, mortality rates have decreased with medical advances, but rates of SLE patients still remain 2 to 4 times higher than the general population's.

Maintaining healthy behaviors and lifestyles can contribute to the reduction of SLE severity. Drug therapy is one approach to the treatment of SLE. However, there is no treatment for disease activity. Physicians use drug therapy to manage the severity of symptoms. According to Yuen and Bagley, exercise does not change disease activity of SLE. However, exercise training does decrease the severity of symptoms and increases the patient's quality of life (2016). Exercise prescription for SLE patients should consist of aerobic training, resistance training, and flexibility training. The role of exercise is important when considering the severity of SLE.

INTRODUCTION

Systemic Lupus Erythematosus (SLE) is a complex, multi-system autoimmune disease. SLE is an inflammatory disease where the immune system attacks its own tissues and organs. Of the four

different types of lupus (SLE, cutaneous lupus, drug-induced lupus, and neonatal lupus), SLE is the most common type. Uncontrollable and controllable risk factors contribute to the possible manifestation of SLE. There is no known cause for the development of the disease (Lupus Foundation, n.d). However, it is believed that genetics, environmental, and hormonal factors contribute most to the manifestation of SLE. This condition affects females with an average of 9 in 10 women being diagnosed between the ages 15-44 (CDC, n.d).

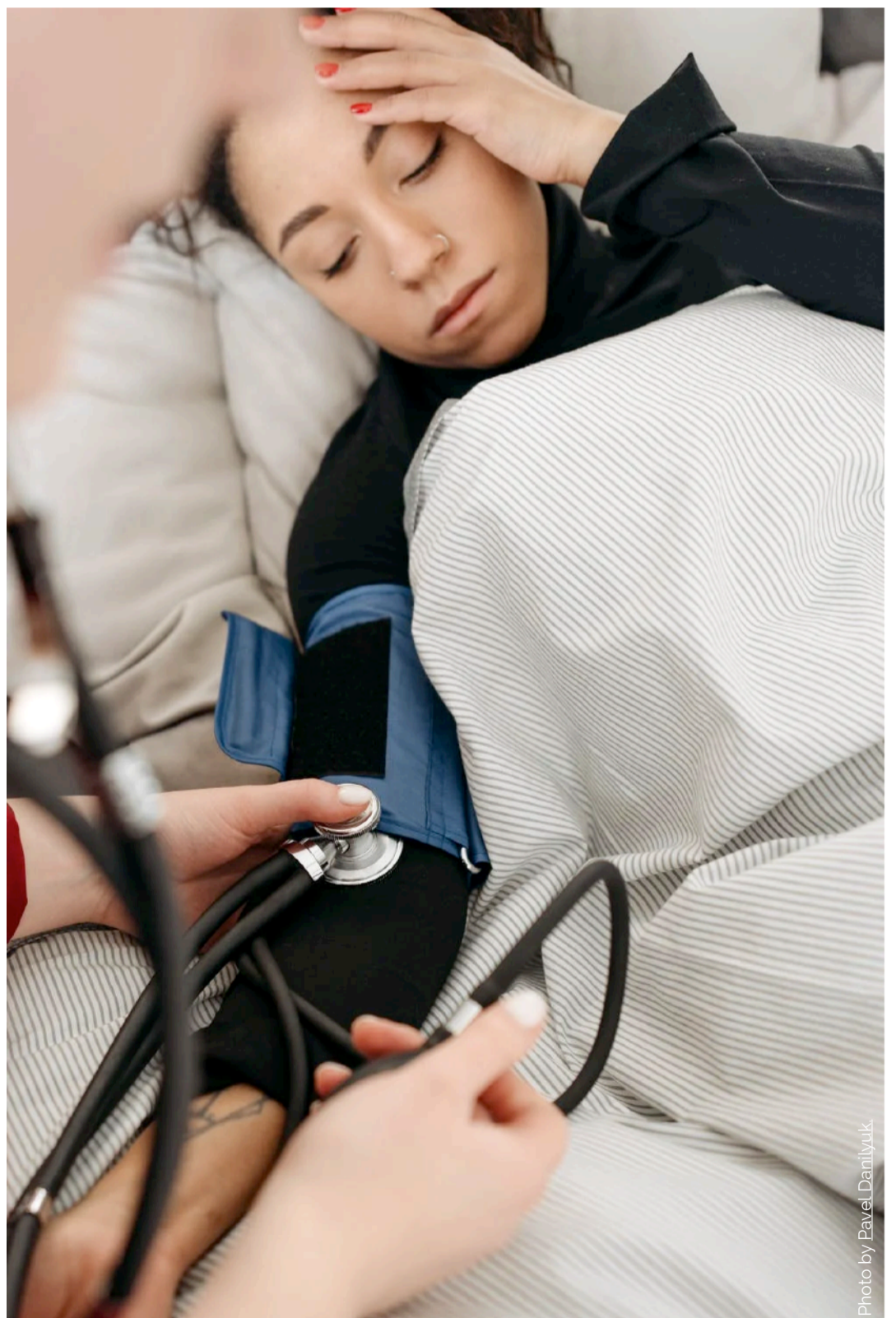


Photo by Pavel Danilyuk

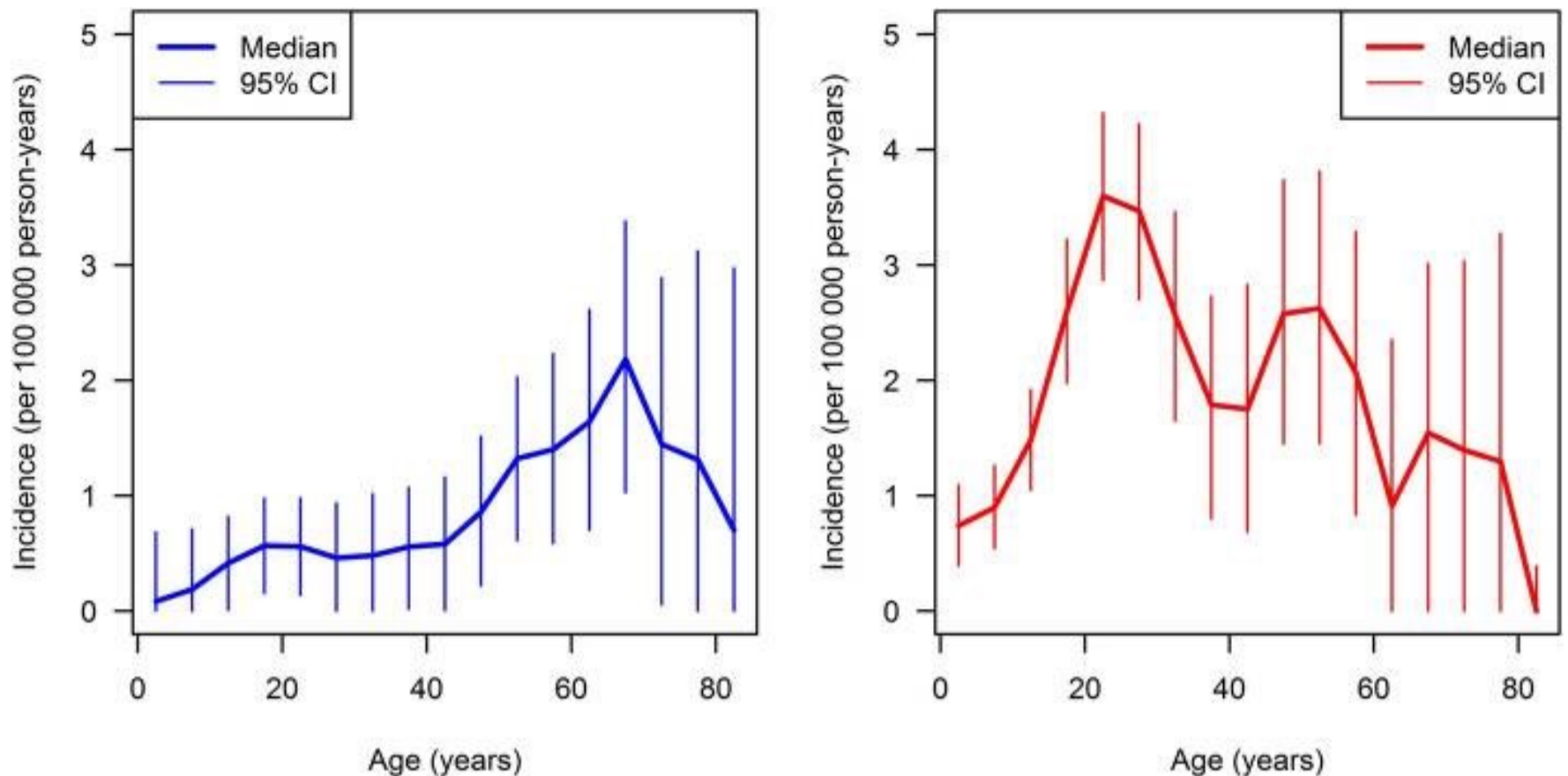


Fig. 1. Age-specific Systemic Lupus Erythematosus incidence in German males (left) and females (right) from Brinks et al.

SLE is treated with drug-therapy, but it is also important to understand the role of exercise for patients with SLE.

EPIDEMIOLOGY

SLE affects several different areas of the body. There are multiple causes that are thought to lead to the development of this condition. According to the Mayo Clinic, uncontrollable risk factors such as age, sex, race, and family history can influence SLE (n.d). Sex influence might account for 90% of susceptibility of SLE. Women have an incidence rate of 9 in 10 for developing SLE, while men have an incidence rate of 1 in 10 (Lupus Foundation, n.d & Guillermo et al., 2010). There are controllable risk factors such as smoking, alcohol consumption, environmental exposure, sedentary lifestyle, and unhealthy diet. Each of these factors can collectively increase the risk of developing SLE (Barbhaiya & Costenbader, 2016). Almost, 16,000 individuals will develop some form of lupus per year (Lupus Foundation, n.d.).

Age and sex are large factors to include in the understanding of this autoimmune disease. The Lupus Foundation shares that most individuals will manifest SLE between the ages 15 and 44 (n.d). However, a review gives a good overview of different age-specific relationships worldwide. The peak incidence for the United Kingdom and Canada is 50-54 years and 45-64 years, respectively, while, in smaller countries, such as Hong-Kong, Malaysia, Philippines, and Saudi Arabia, the findings showed a peak

incidence between 20 and 32 years (Fortuna & Brennan, 2013). An age-specific and sex-specific incidence study was completed in Germany which found that the age incidence in the male population was between 65-70 years, while German woman had an age-specific incidence between 20-25 years. The graph below visualizes these findings (Brinks et al., 2016; Fig. 1).

When considering race and ethnicity, incidence of SLE among African Americans increases 3 to 4-fold in comparison with that of Caucasians (Barbhaiya & Costenbader, 2016). Danchenko et al. similarly found that, in the United States, there is a 2-fold to 3-fold higher incidence rate in African Americans than in European Americans (2006). A 5-year study was conducted in Allegheny County, Pennsylvania which presented the relationships between race and SLE within an incidence rate of 100,000 persons per year. They found that the crude incidence rates of definite SLE were 0.4 for white males, 3.5 for white females, 0.7 for African American males, and 9.2 for African American females (McCarthy et al., 1995).

SLE is a disease that affects individuals worldwide. According to Guillermo et al., prevalence rates generally range from 20 to 70% per 100,000 (2010). The Center of Disease Control presents multiple prevalence rates of different areas within the U.S. A prevalence rate calculated for Michigan from 2002-2004 showed to be higher in African American women than in Caucasian women with a rate of

111.6 vs. 47.5 per 100,000 people, respectively, while in Georgia, there was a 128.0 vs. 39.9 per 100,000 people, respectively. The CDC also reports age-specific prevalence in Michigan of 9.3 vs. 1.5 per 100,000 people in females and males, respectively (n.d).

From the 19th century to the 21st century, the percentages of mortality from SLE have varied greatly, showing increases and decreases. Due to increasing medical advances and the increased knowledge of SLE, the mortality rate has slowly decreased. The survival rate increased from 50% in the 1950s to 95% in the 21st century (Fortuna, 2013 & Guillermo et al., 2010) However, these individuals' mortality rate remains 2 to 4 times higher in comparison with the general population (Fortuna & Brennan, 2013). One study that examined mortality in SLE patients had the largest studied population that interacted with 23 different international centers with 9,547 patients. Researchers found that there was a 2.4 standard mortality ratio (SMR) in those who had SLE. They also found that those individuals who had other underlying comorbidities such as circulatory disease, infections, renal disease, non-Hodgkin's lymphoma, and lung cancer had an increased risk of mortality. Important characteristics that they found significant were those who were female, African American, and of young age (Bernastsky et al., 2006). A population-based study confirms Bernastsky's study; the study found as well that the highest SLE mortality rate was in those of racial/ethnic groups besides Caucasians. Additionally, a general population-based study in the United Kingdom performed a meta-analysis that showed that those with SLE had a 2.6 fold increase in SMR (Stojan & Petri, 2018). Furthermore, researchers found that there was a significantly increased rate for those with renal disease (SMR 4.689), cardiovascular disease (SMR 2.253), and infection (SMR 4.980), as well like Bernastsky found (Stojan & Petri, 2018).

PATHOPHYSIOLOGY

Just like for any other autoimmune disease, the mechanisms that create a response within an individual's body remains unknown. Several studies have tried to demonstrate what the etiology may be that contributes to one's susceptibility to SLE. Genetic susceptibility has been studied intensively. Unfortunately, there is no single genetic polymorphism that is strictly involved in the manifestation of SLE. However, there are many variations that seem to play a

role, such as interleukin-6, interleukin-10, IFN, human leukocyte antigens, and others (Chun et al., 2007). Other studies have investigated the autoimmune response itself based on the self-organized criticality theory. The theory states that an overstimulation of the immune system leads to its inability to function properly. This in fact creates further autoimmune responses (Fortuna & Brennan, 2013).

It is important to understand the role of autoantibodies and their relationship to SLE. According to Choi et al., the initiation of tissue injury stems from the production of pathogenic autoantibodies which can be sorted into approximately 150 different types of antigens (2012). One study found that although there are many different types of autoantibodies, the target double-stranded DNA was important to notice within SLE patients. This strand correlates with one's disease activity and specific organ damage from the disease (Ghirardello et al., 2011). Hormonal status is also an important variable to look at when considering the pathophysiology of SLE. Hormones should be considered, because 9 out of 10 patients are female (Lupus Foundation, n.d.). According to Fortuna & Brennan, the three major classes of hormones that can be altered are: sexual hormones, thyroid hormones, and hypothalamic axes (2013). An imbalance in these hormones can influence severity and incidence of SLE. Lastly, studies have shown that environmental factors prove to be a major factor that plays a role in the development and severity of SLE. One study showed that exposure to environmental factors can induce oxidative stress and directly damage endogenous proteins, which can cause further damage to DNA, genetic mutations, and gene activation. Some environmental factors include, but are not limited to, cigarette smoking, silica, alcohol consumption, antioxidants, oral contraceptives, postmenopausal hormones, pollution, ultra-violet light, occupational exposures, and viral infections. Furthermore, dietary factors such as the consumption of more than 200 ml of coffee per day, low intake of omega-3, and high consumption of carbohydrates are other environmental exposures. While these factors are important to consider when examining the manifestation of SLE, there are still gaps remaining regarding the full explanation of the effects by each of these factors involved in the disease's pathogenesis (Barbhaiya and Costenbader, 2016; Fortuna & Brennan, 2013).

There are many different contributions to the manifestation of SLE. Pan et al. provide a list of immunological cells that are being further investigated in relation to the pathogenesis of SLE and suggest new treatment for SLE patients. The list of cells include NETosis neutrophils, polymorphonuclear dendritic cells, blood dendritic cell antigens, B-cell lymphoma, interleukins, interferon, tumor necrosis factor, etc. (2020). Researchers continue to search for new ways to understand the severity and development that is individualized within each patient. Although research continues to advance, there remain knowledge gaps. Unfortunately, the possibilities are endless regarding any autoimmune condition.

TREATMENT

Treatment guidelines for SLE were first established by the American College of Rheumatology in 1999. Due to the unknown underlying cause of SLE, physicians have had no choice but to give treatments aiming to control the symptoms and severity of the disease (Pan et al., 2020). A systemic review of clinical practice guidelines examined the scope, quality, and consistency of what clinical practice guidelines were for the diagnosis, monitoring, and treatment of SLE within patients. In this

review, five different guidelines were examined for treating SLE. Treatment guidelines recommended goals of focusing on long-term survival, the prevention of organ damage, reducing flare-ups, and improving individuals' quality of life. Pharmacotherapy is the main form of treatment using antimalarial drugs, corticosteroids, and nonsteroidal anti-inflammatory drugs (Tunnicliffe et al., 2015). As there is an increase in medical advances, there is an increasing need of providing a new direction for targeting specific biomechanisms that manifest the disease. Tunnicliffe et al., additionally found that an important treatment to consider was physiologically based. Some guidelines recommended that individuals with SLE receive the proper education of their disease through counseling to address the importance and need for support for the management, complexity, and unpredictability of the disease (2015). The search for a treatment that will alter SLE disease activity will continue to be an ongoing study until the disease is fully understood.

ROLE OF EXERCISE

Physical inactivity is one of the risk factors of SLE and other autoimmune disorders in our society. Nearly 31.1% of all adult Americans are



Photo by Michelle Leman

reported to be physically inactive. For those who are active, only 51.6% of those individuals meet the guidelines of the recommended amount of activity (Liguori et al., 2022). SLE is the most common and debilitating form of lupus. Since this condition affects multiple organs of the body, it is important to understand the overall negative effects on quality of life. Since SLE has no cure, physicians treat patients by managing their symptoms and lessening their severity. Studies have shown that drug therapy as well as the prescription of exercise is beneficial (Yuen & Bagley, 2016). Exercise is a type of physical activity consisting of planned, structured, and repetitive bodily movement done to improve and/or maintain one or more components of physical fitness (Liguori et al., 2022). Exercise is known to not only help an individual with physical function, but can also benefit an individual psychologically, emotionally, sociologically, and help with overall quality of life. Due to the unknown pathophysiology of SLE, it is important to understand how exercise can attribute positively to this disease (Ayan & Martin, 2007). SLE patients experience symptoms such as pain, extreme fatigue, systemic inflammation, cognitive issues, and physical impairments. Some may suffer from other symptoms such as strokes, disfiguring rashes, and pain within their joints. Additionally, some may find that they do not experience visible symptoms at all (Lupus Foundation, n.d.). According to Yuen and Bagley, exercise training does not alter lupus disease activity. However, it does decrease the severity of symptoms which leads to an increased the quality of life in patients with this lifelong disease (2016).

A pilot study performed on fifteen sedentary African American women with SLE showed the effect of a 10-week home-based intervention. The individuals participated in a light-to-moderate Wii-fit intervention three days a week for thirty minutes. Before the intervention, participants described their fatigue and pain to be at moderate to severe levels, in addition to high anxiety levels. After intervention, results showed that there was a reduction in fatigue, body weight, waist circumference, anxiety levels, and overall pain (Yuen et al., 2011). This shows that exercise has a positive effect on SLE.

The American College of Sports Medicine (ACSM) gives guidelines regarding the importance of obtaining health-related physical fitness testing. Exercise testing can be important to collect baseline data, educate individuals on

their health and fitness status, help develop proper individualized exercise programs, allow for short- and long-term evaluations of progress, and motivate individuals to attain fitness goals (Liguori et al., 2022). There are different positive benefits to participating in exercise testing. When individuals with SLE begin to exercise, some of these considerations are important. Since there is little research on SLE and its relationship to exercise testing, it is hard to identify which testing procedure should be used. If symptom-limited exercise testing is implemented, supervisors should adhere to the same recommendations for apparently healthy adults. Typically, those who have SLE will have a lower exercise capacity, anaerobic threshold, max minute ventilation, max heart rate, and resting lung function. These are important factors to be aware of when patients are participating in exercise testing (Ayan & Martin, 2007). Additionally, SLE patients may experience a 27% lower Vo_{2max} than normal which may attribute to quicker fatigue (Yeun et al. 2016). When participating in exercise testing, it is important to give adequate warm-up time, understand the possibility of flare-up due to the testing, and the monitoring of pain using the Borg CR20 scale (Liguori et al., 2022).

The goal when creating an exercise prescription (ExRx) is to enhance one's physical fitness and promote healthy modification for reduction of chronic risk factors. Beginning an exercise training prescription should include an individualized program to suit the needs of the patient. The program should include specific intensity, frequency, duration, mode, and rate of progression for SLE patients. According to ACSM, the general recommendation for healthy individuals is to perform 30-60 minutes of exercise 3-5 times a week. This results in approximately 150 minutes of aerobic moderate intensity or 75 minutes of vigorous intensity weekly (Liguori et al., 2022). However, those who have been diagnosed with SLE should participate in a combination of aerobic, resistance, and flexibility training 3 to 5 times a week. A study was conducted with 92 patients who were sorted into groups to examine the improvements in quality of life and function when comparing cardiovascular and respiratory training. A variety of exercises were administered to the groups: walking, cycling, free weights, and elastic band training. The results showed that within each group there was an increase in both aerobic capacity and reduction of symptoms (Abraham et al., 2016).

This study shows that it is important to incorporate a variety of exercises to meet the needs of the individual. Yuen and Bagley provide guideline tables that compares apparently healthy individual guidelines to individuals with SLE (2016). For unconditioned individuals, ExRx should begin at a lower intensity and frequency then slowly progress forward. For those conditioned, they should begin at a moderate level and adjust accordingly.

It is difficult to identify the effects of exercise on the biomechanisms of SLE. A major consideration are inflammatory markers. Again, there is limited information to confirm whether exercise reduces inflammatory markers in SLE. Some studies have shown that exercise can reduce specific symptoms and risk factors for SLE patients. A 12-week intervention study of aerobic training examined the effects of exercise attenuating to inflammation in women with SLE. During the intervention, researchers found that SLE patients felt a decrease in fatigue severity. In the post test, they found there was a reduction in the resting TNFR2 levels and IL-10 inflammatory marker levels. Ultimately, the study found that aerobic exercise training programs help the inflammatory response in SLE. This can further attribute to the

role of exercise on autoimmunity (Perandini et al., 2014). Additionally, Molina et al.'s review suggests that regardless of the limitation of confirmed data, regular exercise has been associated with the decline in inflammatory markers (IL-12, CRP and TNF-a) in SLE patients in comparison to those without SLE (2021). Ayan and Martin gives rise to the understanding of exercise on specific patient symptoms in a review (2007). One of the most common symptoms that SLE patients experience is fatigue, with an average of 80-90% within individuals (Fortuna & Brennan, 2013). It is common to see SLE individuals not participating in physical activity because of the increase in fatigue. However, Ayan and Martin share that by not participating in exercise to increase aerobic fitness and muscular power, the individual will have an increase in fatigue and severity of symptoms (2007).

Obesity is a risk factor that plays a role in the severity of SLE patients. Studies have shown that there is high concentration levels of the inflammatory markers, IL-6 and CRP, in obese individuals which contributes to the manifestation and increase in inflammation (Ayan & Martin, 2007). A study conducted on 115 individuals gathered multi-follow up information regarding obesity in SLE patients. Research identified that on the first follow up, 11.8% of individuals were obese. By the end of the study, some patients had increased weight gain and showed signs of an increased severity and risk for SLE overall (Tedeschi et al., 2017). Advising patients to participate in exercise 30 minutes a day, 3 times a week, can contribute to weight loss and lower the risk of obesity. Regardless of the limited information, exercise does attribute to the reduction of some symptoms and risk factors of SLE.

CONCLUSION

SLE is the most common form of lupus that causes the body's immune system to attack its own tissues and organs. This autoimmune disease is most prevalent in African American women (Guillermo et al., 2010). It is thought that three different factors contribute to the disease: (1) genetics and inflammatory markers, (2) environmental factors such cigarette smoking, alcohol consumption, oral contraceptives, and (3) hormonal factors. Pharmacotherapy is the main form of treatment for SLE and aims to control the individual's symptoms (Pan et al., 2020). Patients with SLE may experience symptoms of pain, fatigue, and inflammation.



Photo by Klaus Nielsen

There is research that gives evidence that exercise does not alter disease activity itself. Yet, exercise does have a positive effect on the symptoms that coincide with SLE (Yuen & Bagley, 2016). Many studies do advise SLE patients to participate in a combination of aerobic, resistance, and flexibility training to minimize symptom severity and increasing the risk of other risk factors to contribute to the severity of the disease. ❖

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CAMERON POLLARI

WHY IS ENVIRONMENTAL ENRICHMENT SO IMPORTANT FOR ANIMALS IN CAPTIVITY?

INTRODUCTION

Animals have been an integral part of human life for centuries. In early times, animals were a functional life necessity, used both as a food source and as tools for labor. Over time, they slowly became companions in addition to their more functional duties. Today, more than ever before, the human-animal bond is held in the highest regard. Humans keep house pets, service animals, support animals, farm animals, and exotic wild animals. Moreover, humans have great admiration for animals and care about their welfare. These advancements in the way animals are regarded have brought much joy to humans, but they have also raised concern for animals' needs and how we can best care for them. The welfare of animals has been a trending topic for decades, and much research

has been done on their healthcare needs, nutrition, husbandry, and their environmental and emotional enrichment needs. This paper will highlight what research has proven about the environmental needs of the most common domestic and undomesticated animals and why they are so important.

KEY SUBJECTS IN STUDYING ENVIRONMENTAL ENRICHMENT

In this paper there will be discussion of the environmental enrichment needs of both domestic and undomesticated animals (or wild animals). The two animal groups are widely different in their interactions with humans, but as will be noted, they share common needs regarding environmental enrichment, mental, and physical needs. A domestic animal is one



who has been bred over time for desirable traits that make them ideal to live alongside humans (Daly 2019). This term is often used interchangeably with an animal being 'tame,' although they are not the same thing. A wild animal can become tame from socialization and training with humans, but its wild instincts will remain (Daly 2019), and the likelihood to behave as a wild animal is always present. A domesticated animal, as previously noted, is bred over generations to eliminate wild instincts and expresses genetic traits that allow the animal to live harmoniously with humans (Daly 2019). Domestic animals can be pets, livestock, and working or service animals. Also, it is worth noting that just because an animal is commonly kept as a pet, that does not mean it is domesticated, for example, many pet bird species are not considered fully domesticated yet (Peng and Broom 2021). This paper will look at the environmental enrichment needs of some common domesticated and wild animals in captivity, but it will not cover livestock.

HISTORY OF ENVIRONMENTAL NEEDS OF ANIMALS IN CAPTIVITY/ZOO ENVIRONMENT

The study of environmental enrichment and its effects on animals can be traced all the way back to Darwin (Zentall 2021). Darwin is famous for his study of finches and their physical evolution, but he also studied the differences in brain size between domestic and wild rabbits, and how these differences related to their environmental enrichment (Zentall 2021). Despite Darwin's early studies, most of what we know about animals' needs for enrichment arose from operant conditioning techniques used to train captive wild animals to accept humans to provide proper husbandry (Fernandez and Martin 2021). One example of this is a simple food reward that an animal gets when it travels to one side of an enclosure so that a human can clean or provide food in the opposite direction of the enclosure. The most impactful early contributors to these techniques and theories were B. F. Skinner, a psychologist and professor at the University of Minnesota, and two of his graduate students, Keller and Marian Breland (Fernandez and Martin 2019). Skinner launched the science of operant behavior. During the development of operant training it was discovered that the stimulus provided not only helped train the animals to perform certain tasks, but also provided them with activity and stimulation (Fernandez and Martin 2021). This is how more interest in their

environmental enrichment needs became a topic to be further studied.

Hal Markowitz, who was later known as the "father of zoo enrichment" (Fernandez and Martin 2021), started the implementation of environmental enrichment in the zoo setting. Markowitz, along with his colleagues, were the first to promote a systematic approach to animal behavior in the zoo by utilizing behavioral engineering (Fernandez and Martin 2019). The term behavioral engineering was taken directly from Skinner's work with operant behavior, and like any other form of engineering, Markowitz used machines and fabricated devices to create environmental stimuli. For example, Markowitz and his team were able to create mechanical levers for gibbons to swing across their enclosure. The gibbons could activate the levers and receive a food reward. In addition, Markowitz had polar bears trained to vocalize into an operated relay system that would then launch a frozen fish into the enclosure (Fernandez and Martin 2019). His work was initially criticized, with detractors claiming the environments were not similar enough to the animals' natural surroundings. Eventually, Markowitz and others combined the naturalistic approach in creating an environment like each animal's native environment, in combination with behavioral engineering (Fernandez and Martin 2019).

The early work on environmental enrichment and its importance was focused on wild animals in the zoo setting. The knowledge gained from those studies now also applies to pets, livestock, working animals, shelter animals, and animals housed in research facilities. Dogs were the first domesticated animal, originating from wolves and first domesticated for work (Daly 2019). Although there are still working dogs today, most are kept in homes as pets. In addition to dogs, cats and birds are also commonly kept as household pets. Research on maintaining proper environmental enrichment for all types of animals, and as an animal welfare endeavor, is continually ongoing.

PROBLEMS WITH THE ABSENCE OF ENVIRONMENTAL ENRICHMENT IN CAPTIVE ANIMALS

Generalized Behaviors and Ailments

There are many behavioral and even medical problems that have shown to be associated with animals not being provided with enough stimulation or enrichment in their environment.

In the absence of enrichment, animals in captivity can exhibit depression, decreased activity, withdrawal, self-destruction, increased stress, decreased cognitive function, inappropriate urination and defecation, increased vocalization, aggression, nutritional deficits, mating problems, and psychological deficits (Desforges 2021; Hall et al. 2021; Oliveira et al. 2015; Peng and Broom 2021; Salas et al. 2021; Why Environ 2021). These issues are not fully inclusive and can be seen in any combination among them.

Dogs

Dogs are most likely to exhibit separation anxiety, excessive vocalization, aggression or shy behavior, inappropriate elimination, and inappropriate chewing (Desforges 2021). Many

of these behaviors stem from a lack of self-confidence and boredom, both of which can be positively influenced with increased environmental enrichment. A limited pilot study was done with 10 dogs to compare the effects of 7 distinct types of environmental enrichment (Hunt et al. 2021). Hunt et al. describe the techniques used as bonding, bubble machine play, conspecific play (time with other same species animals), interactive toy play, playhouse, stuffed toy, and tug play. The study showed a direct correlation between the enrichment activities and a decrease in time spent exhibiting stress, and an increase in time spent in a relaxed state. Hunt et al. also mention that the food-based activities had the least affect in the dogs of all different enrichment activities, but notes that the study is limited, and food motivation can vary by breed and disposition.



Cats: From Sofa to Safari

House cats and their wild cat cousins have many similarities and differences. One frequent problem with life in captivity they have in common is the drastically decreased size of their living space and their need to move around freely (Antonenko 2021; Oliveira et al. 2015). Also, according to Antonenko et al. and Oliveira et al., both domestic and wild cats desire having an area high in a vertical space to rest and scan their environment. Domestic cats can display their own unique set of inappropriate behaviors when they are not provided with the proper environment. Domestic cats, both in shelters and the home, can display inappropriate urination or marking, excessive grooming, aggression, obesity, diabetes, urinary disease, and self-destructive behaviors (Desforges 2021; Oliveira et al. 2015).

Feathered Friends without Flight

As previously mentioned, pet birds, while typically considered tame, are not actually technically domesticated, except for farm

fowl, some finches, and cockatiels (Peng and Broom 2021). Pet birds in captivity have unique needs and an increased likelihood of behavior problems when their needs are not met. Basic bird welfare needs are described by the EFSA and include a variety of necessities that must be met for proper welfare. These include the ability to breathe, rest, and sleep, exercise, fear avoidance, provision of food and drink, access to an appropriate hiding or resting place, exploration, social contact, minimization of disease, preening, thermoregulation, avoidance of harmful chemical agents, and avoidance of pain (Peng and Broom 2021). Many of the listed needs on the list are husbandry issues rather than enrichment needs, but, according to Peng and Broom, some enrichment issues that arise primarily due to poor husbandry, are lack of exercise, poor rest and sleep, lack of the ability to avoid fear, no access to hiding and resting places, and no place for exploration. The primary complaint of pet bird owners is the report of self-destruction, specifically feather plucking. It is believed this can arise from nutritional deficiencies, but it is thought to be a byproduct of stress (Peng and Broom 2021). Stress in pet birds (caged birds) can happen because of many of the reasons listed above, the inability to have somewhere to hide and escape things they deem scary, lack of exercise due to insufficient cage size, poor sleep due to lack of a place to rest, and a lack of mental stimulation and therefore confidence (Peng and Broom 2021). Another commonly reported behavior among pet birds is excessively loud vocalization. Some vocalization is considered normal behavior for birds, but it can also be caused by the same enrichment deficits as mentioned above that lead to stress (Peng and Broom 2021).

Wild but not Free

Wild animals in captivity or zoo habitats suffer from many of the same ailments previously described in house pets and kennel or caged animals. Without physical and mental enrichment, wild animals suffer from depression, inappropriate aggression, malnourishment, withdrawal, self-destruction, increased stress, mating failures, and overall impaired function (Antonenko 2021; Clayton and Shrock 2020; Fernandez and Martin 2021; Froberg-Fejko 2009; Greco et al. 2016, Hall et al. 2021; Salas et al. 2021). Wild animal enrichment has unique requirements compared to domestic pets' because of the need to replicate their native

wild habitat. Primates, for example, become depressed and withdrawn in the absence of other conspecifics (Frosberg-Fejko 2009). Primates are very intelligent and will show undesirable behaviors when left bored and intellectually unstimulated. Elephants can become overweight and subsequently develop medical ailments because of inactivity if the proper environment is not provided (Greco et al. 2016). Tigers and other large cats in captivity may develop excessive grooming and aggression when not provided with adequate stimulation and the proper environment to meet their exercise and hunting needs (Clayton and Shrock 2020).

WHAT DO WE DO ABOUT IT?

For an environment to be considered enriching, it must prove to contribute to an improvement in the animals' state (Hunt et al. 2022). Fortunately to date, countless studies have been done evaluating enrichment techniques and their usefulness to multiple species. There are five main categories of enrichment, and they include cognitive, physical habitat, food, social, and sensory (Hall et al. 2021; see Fig. 1).

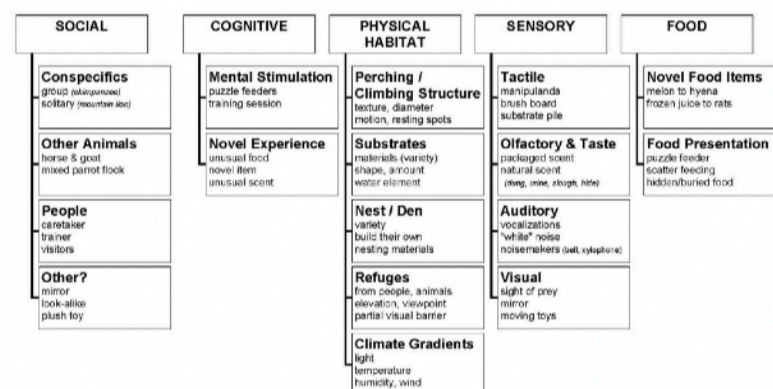


Fig. 1. Five enrichment categories, not mutually exclusive. From [https://www.enrichment.org/Complimentary-Resources-to-Download-\(PDF\)](https://www.enrichment.org/Complimentary-Resources-to-Download-(PDF)).

Food

The most well-known and widely used type of enrichment is based on food. Quality of food and proper diet are critical for all animals' overall wellbeing, but for the purpose of this paper, we are focusing on the delivery of food and the intellectual stimulation that hunting or working for food can provide. Dating back to the days of Skinner and his introduction of food into operant conditioning, and Markowitz with his interactive food games, it was quickly observed how these activities also fulfilled other enrichment needs (Fernandez and Martin 2021). For many wild animals, their instincts are to search or hunt for food, so providing simulations of this fulfills those needs. Primates for example, are far more interested in food they must find compared to

food they are given, and they would spend 60% of their waking time foraging for food in the wild, so it is understandably important to provide behaviorally engineered ways to reproduce this in captivity (Froberg-Fejko 2009). Foraging is also commonly used and recommended for caged birds (Peng and Broom 2021). Foraging toys replicate what birds know in the wild and provide intellectual stimulation for problem-solving and mental exercise (Peng and Broom 2021). Dogs also benefit from working for their food in the form of commands and tricks or eating by using puzzles and foraging toys, although, according to Hunt et al. and Desforges, this can vary by breed and disposition. Animals that hunt for food in the wild, such as large cats, benefit from being fed live animals in their habitat and provided with areas within their enclosures to hide and wait for their prey (Clayton and Shrock 2020).

Social

Social enrichment can take the form of interaction with people, conspecifics, other species, or other items like inanimate objects or mirrors. The type of social enrichment provided depends on the species-specific needs. Primates are highly social, and studies show that they require time with conspecifics (Froberg-Fejko 2009). It is also noted in the Froberg-Fejko study, that primates prefer a degree of control over their environment, and they must be given the ability to remove themselves from any situation and have access to inanimate objects and mirrors for an alternate way to socialize (Froberg-Fejko 2009). Domestic cats also share this behavior where they enjoy conspecific interaction and play, but they also need places to hide or escape to avoid confrontation when needed (Oliveira et al. 2015). Dogs are also highly social animals, and multiple studies have shown that they prefer time with other dogs. When taken away, there is an increase in behavior problems, increased stress, decreased cognitive function, and immune problems (Desforges 2021, Hunt et al. 2022).

Cognitive

Cognitive enrichment is something that stimulates the mind and requires problem-solving. For enrichment to be considered cognitive, it must meet certain criteria: the enrichment engages evolved cognitive skills by providing opportunities for problem-solving and it has at least one validated measure of wellbeing (Hall et al. 2021). Darwin observed that

the brains of rabbits that lived in the wild where they worked for their food and had to use problem-solving to hide from prey were larger than the brains of domestic rabbits that were given no cognitive stimulation (Zentall 2021). Studies since then have shown similar outcomes in brain and neuron size. Puzzle feeders, mazes, learning activities, learning to perform tricks, and having to manipulate machinery for food are all examples of cognitive enrichment. Many enrichment techniques from other categories also provide cognitive enrichment. Foraging toys and puzzles (food), conspecific play (social), climbing courses (physical), and scent tracking (sensory) are all also forms of cognitive stimulation.

Physical Habitat

As shown in **Fig. 1**, the physical habitat category of enrichment consists of many features specific to individual animal species. Primates, for example, need to be provided with areas to climb at various levels, swing, and the ability to retreat to high locations when they feel threatened as well as at night (Froberg-Fejko 2009). Tigers and other large prey cats, in addition to their domestic cousins, need to have places to hide, climb, and rest vertically (Clayton and Shrock 2020; Desforges 2021; Oliveira et al. 2015). Greco et al. state that elephants need adequate room for exercise, as well as various levels of substrates to avoid obesity and the medical conditions to which obesity contributes. Of all animals discussed, dogs were shown to have the least demanding needs regarding habitat, but their welfare can be improved with simple modifications such as when. Desforges discusses the behavior improvement of kennel dogs when given a raised substrate/platform that allowed them to visualize other dogs. A unique need for caged bird habitats is the need for perches of varying sizes at varying heights (Peng and Broom 2021).

Sensory

As shown in **Fig. 1**, sensory enrichment can be visual, auditory, olfactory, or tactile. These may be the least known and underutilized for animal stimulation, but they come in a wide variety of possibilities, such as textiles, aromas, nesting materials, cardboard boxes, music, bubbles, animal sounds, and more. Elephants are fond of the tactile experience of water and are frequently provided water holes; birds enjoy chewing on different textiles and textures; and cats have specific materials they wish to sink

their claws into (Desforbes 2021; Greco et al. 2016; Oliveira et al. 2015; Peng and Broom 2021). One of the most notable olfactory treatments for anxiety and stress is in the form of synthetic feline pheromones. These pheromones are available in plug-in diffusers and sprays, and while they provide relaxation and stress relief, they are only noticeable to felines (Desforbes 2021; Oliveira et al. 2015). Dogs are a great candidate for olfactory enrichment and training, and are extremely proficient at finding scent. Scent work in dogs is proven to facilitate relaxation, decrease stress, and provide exercise (Desforbes 2021).

BENEFITS BEYOND WHAT MEETS THE NEEDS OF ANIMAL WELFARE

The primary goal of environmental enrichment is to provide proper animal welfare. It is used to decrease stereotypical and abnormal behaviors and decrease physiological stress (Antonenko 2021; Clayton and Shrock 2020; Desforbes 2021; Hall et al. 2021; Hunt et al. 2022). According to Zentall, not only is enrichment a genuine need for proper animal welfare, but it has proven to go beyond basic needs by increasing cognitive function, decreasing impulsivity, reducing sub-optimal decisions, and improving the overall health of animals compared to their wild counterparts. Zentall showed an overall increase in brain size, neuronal bodies, blood capillaries, and better brain healing compared to those in the wild. In Zentall's experiment, the rats also were found to have increased dopamine, decreased sensitivity to harmful pollutants like nicotine, and showed greater inhibitory control.

CONCLUSION

Environmental enrichment for animals in captivity, both domestic and wild, has been proven to be highly beneficial for the animals as well as their caretakers. Each species has unique needs dependent on their environment, but they all have the same five basic needs that must be met: cognitive, sensory, physical, nutritional, and social. It is evident that there have been significant advancements in this area, but there is always a growing need for further understanding. There is a particular need for people who visit zoos to understand why animal exhibits are set up the way they are and understand that while the tiger hiding is not optimal for their visit, it is what may be optimal for the tiger at that time (Salas et al. 2021). In addition, pet owners can always benefit from

increasing their knowledge on the needs of their pet, and for their veterinary staff to be able to provide proper advice not only on medical care, but their enrichment needs as well. Lastly, research laboratory staff and kennel staff should be educated on the proper ways to meet those animals' enrichment needs at the highest level for their welfare. ❖

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CASE STUDY FOR CHRONIC ANKLE INSTABILITY

THIS ESSAY CONTAINS GRAPHIC IMAGES.

ABSTRACT

Chronic ankle instability is the long-term impairment born from repeated ankle sprains. The lateral ankle complex, which is composed of the anterior talofibular, posterior talofibular, and calcaneofibular ligaments, is subject to elongation and tears when excessive inversion movements overwhelm its support capabilities. The result can be catastrophic to those who want to move and function at an optimal level. Below, there is a detailed background of CAI that includes the description, symptoms, causes, diagnosis, treatment, and preventative measures. Following this, my personal experience with CAI incorporates further application, so a better understanding of the implications, processes, and potential preventative measures can be reached.

Keywords: Chronic ankle instability, lateral ankle complex, implications, processes, preventative measures

BACKGROUND

Description

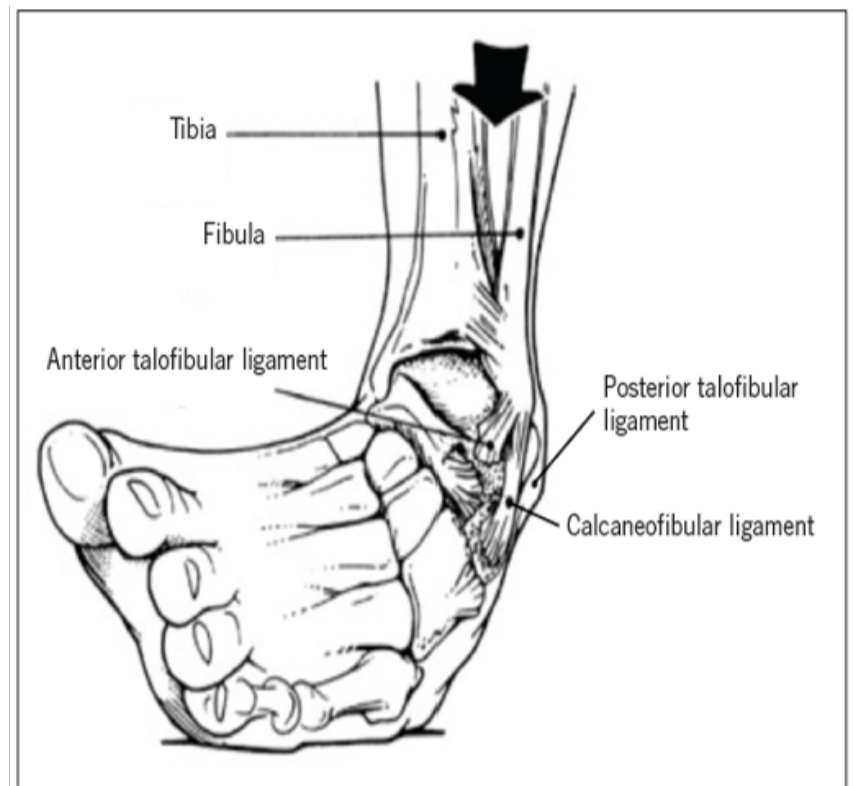
Chronic ankle instability (CAI) is the result of repeated sprains to the lateral side of the ankle. There is a feeling of “giving way” in the ankle joint caused by stretched or torn ligaments that form the lateral ankle complex (American College, n.d.). These ligaments include the anterior talofibular ligament (ATFL), posterior talofibular ligament (PTFL), and the calcaneofibular ligament (CFL). An example of the lateral complex can be seen in **Fig. 1**.

Symptoms

Common issues with CAI include persistent ankle turning, lack of balance, excessive supination, ankle pain or tenderness, overload in parts of kinetic chain (i.e. legs, knees, hips, and back), and chronic swelling above the affected ligaments (American College, n.d.)

Causes

The two main causes of CAI are mechanical and functional instability. Mechanical instability can be described as the “pathologic laxity after ankle-ligament injury” (Hertel, 2002, p. 364).



Functional instability, on the other hand, is “the occurrence of recurrent ankle instability and the

Fig. 1. The lateral collateral ligament, also known as the lateral complex, is a trio of ligaments that provide resistance to supination. They are the ATFL, PTFL, and CFL. Ankle sprains can cause elongation and tears of these ligaments. Consultant360. (2013). Lateral Ankle Sprain [Image]. HMP Global, Malvern, PA, United States. <https://www.consultant360.com/articles/weekend-athlete-common-foot-and-ankle-injuries>

sensation of joint instability due to the contributions of proprioceptive and neuromuscular deficits” (Hertel, 2002, p. 364).

Mechanical Instability. When the anatomy of the ankle complex becomes susceptible to intense stress from ankle sprains, anatomical changes occur that encourage future ankle sprains. Three key elements are pathological laxity, arthrokinematic impairment, and synovial and degenerative changes.

For pathological laxity, the anterior drawer (transverse plane) and talar tilt tests (frontal plane) are used to determine ankle laxity caused by ATFL injury, which is the main ligament of investigation in this case study. Note that when the ATFL is elongated or torn, talus subluxation (dislocation) can result from the talus excessively supinating (Hertel, 2002, p. 369).

The next main insufficiency is arthrokinematic impairment. If the fibula becomes displaced inferiorly and anteriorly, the ATFL can elongate at rest. This can cause persistent instability and a greater chance for

future ankle sprains because the talus has more range of motion (ROM) during supination.

Furthermore, hypomobility (limited ROM) with respect to dorsiflexion is another element because the talocrural joint (distal tibia, distal fibula, and talus) will not reach its position of congruency when standing. As a result, supination and internal rotation is highly expressed (Hertel, 2002, p. 369-370).

The final component are synovial and degenerative changes. When the synovial thickens and impinges, or when lesions in failing joints form, pain tends to occur. This also correlates with persistent instability of the ankle complex. According to Hertel (2002), patient undergoing ligament repairs were over three times as likely to develop bone spurs as the result of degenerative changes in the ankle complex when compared to those with asymptomatic ankles (p. 370).

Functional Instability. When focusing on the neurological side, functional instability explains more insufficiencies related to proprioception and sensation impairment, neuromuscular-firing pattern impairment, and postural impairment.

According to Hertel (2002), "evidence suggests that alteration in the muscle-spindle activity in the peroneal muscles may be more important [...] in the manifestation of proprioceptive deficits at the ankle" (p. 370). Since the muscles spindles around the ankle control muscle hypermobility by signaling for muscle contractions, alterations to this function can lead to the feeling of "giving way" if the muscles overstretch.

For impaired neuromuscular-firing patterns, Hertel (2002) covers patterns related to repetitive lateral ankle sprains and reflexive response times of peroneal muscles to inversion motions. Some possible results in impaired peroneal response in CAI patients are lower muscle sensitivity, reduction in nerve-conduction velocity, and "central impairments in neuromuscular-recruitment strategies" (370). The central impairments, in particular, have shown that neuromuscular impairments do not exist solely at the ankle with CAI but also other connected neuropathways, such as the gluteus medius (370-371).

Finally, impaired postural control is seen with CAI patients during single leg stance exercises. According to Hertel (2002), deficiencies in postural control deviate from ankle strategy, or the natural pronation and

supination of the ankle to stay upright, to a hip strategy that uses the hip flexors to maintain a single leg stance. This deviation is caused by impairments in central neural control (p. 371).

Diagnosis

A podiatrist or orthopedist will perform an evaluation, consisting of questions regarding relatable injuries in the past, examination of areas of pain and swelling, X-rays and MRIs, and anatomical tests to show signs of ankle instability, such as the anterior drawer and talar tilt tests (American College, n.d.).

Treatment

There are both non-surgical and surgical options to consider. Non-surgical options will be considered first and will typically include a combination of physical therapy, bracing, and anti-inflammatory medication.

According to Denegar and Miller (2002), the first step in physical therapy treatment for restoration in ligamentous stability is to "understand the timeframe for acute inflammation and repair, so that adequate time is allowed for deposition of collagen before healing tissues are exposed to stress" (p. 433). This supports the stage for low to non-weight bearing methods for initial healing because reduced stress increases the success for proper tissue remodeling around the ankle joint (the time frame varies with the injury and individual).

Following this, it is necessary to address any subluxation and increase ROM if accessory joint mobility (available movement without ligamentous tension) has limitations (pp. 433-434). Afterwards, gradual stress loading of the affected tissues will allow for optimal progression and tensile strength (resistance to tension rupture). It is important to note that while initially strengthening the muscles around the ankle, the injured tissues should remain in shortening anatomical positions. This begins with neutral to the midrange positioning of the ankle complex and eventually progresses to the end-range positioning as healing allows. For example, the ATFL healing process would first allow for neutral positioning and dorsiflexion of the ankle. Then, the movements would progress to plantar flexion and inversion (p. 434).

Overall, during the first month of strength training, low resistance and high repetitions should be incorporated into the exercises (allows for tissue remodeling progression) before higher resistance and lower repetitions

are executed (p. 434). Exercises that focus on stability and strength should be implemented to retrain the muscles around the weak lateral complex, including the peroneals and calf muscles. Bracing and over the counter anti-inflammatories (i.e. ibuprofen and Tylenol) will also likely be recommended in order to prevent excessive supination, ankle turning and sprains, and chronic swelling (American College, n.d.). Going along with this, Denegar and Miller (2002) conclude by suggesting that “addressing the spectrum of [the aftereffects] to the initial injury rather than focusing solely on the ligaments of the lateral ankle” can potentially reduce the occurrence of CAI (p. 434).

However, when these non-surgical methods are deemed non-successful for joint laxity and inflammation, surgery becomes the answer. Ligament reconstruction in the lateral ankle complex fixes elongated and torn ligaments and encourages future ankle support. The type of procedure and recovery time will vary based upon the severity and activity of the patient (American College, n.d.).

Prevention

According to Denegar and Miller, it is not clear if proper care of the injured ankle can prevent CAI. However, a treatment plan that “manages the symptoms of inflammation, restores normal joint motion, and gradually applies stress to healing tissues” can be a potential solution (Hertel, 2002, p. 434).

PERSONAL EXPERIENCE

Situation

During the fifth and sixth cross-country USA South Championships held on November 2, 2019 and February 27, 2021, I rolled my right ankle each time and put most of my body weight on it during my strides. The more recent championship race, however, is what ultimately caused my CAI because my lingering symptoms of inflammation and instability have led back to that race (I have not rolled my ankle since then). However, due to the nature of the CAI forming from repeated incidents, I can confidently say that the only other time I rolled my ankle severely was during my first championship race in 2019. It is very possible that other ankle tweaks and biomechanical movements could also be considered, but the only two distinct memories that I have regarding my right ankle are those two races.

Symptoms

My symptoms included an initial bout of swelling for about a week around the right ankle and on top of my right ATFL. Along with this, there was limited ROM in plantar flexion as well as excessive supination and a “floppy” feeling during any inversion movement (i.e. supination or rolling away from the midline of the foot). There was pain and tenderness with the initial swelling, but they went away when the swelling reduced after a week. My plantar flexion improved to nearly 100% after about six months at the end of August 2021 (I did not work on ROM consistently, which slowed down improvements). However, there remained chronic, non-painful swelling on top of the ATFL until after surgery.

Additionally, my Achilles tendon, peroneal muscles, tensor fascia latae (TFL), and primary hip flexor muscles on my right side as well as my lower left back were chronically inflamed after high-impact activities, such as running, basketball, and tennis. I noticed that activities that involved explosive movements and change of direction (i.e. tennis) tended to aggravate those areas of inflammation more than less explosive and straightforward movements (i.e. long runs). Moreover, the longer the distance and higher the elevation that I covered when moving, the more irritated my symptoms became as well. Typically, any activity, regardless of intensity, of more than one mile distance and involved some uphill terrain brought up some inflammation.

Diagnosis

After months of chronic inflammation above my right ATFL, limited ROM in my right ankle, and inflammation in my peroneals, hip flexors, TFL, and lower back (primarily on the left side), I went to Shenandoah Podiatry on December 1, 2021. I began with several X-rays capturing various angles of my right foot. Afterwards, my podiatrist, Dr. Natalie Allen, examined the inflammation above my right ATFL and performed a series of tests that show symptoms of CAI. The anterior drawer test was performed, which showed the “amount of anterior displacement of my talus from the tibiofibular mortise” (Hertel, 2002, p. 369). Also, the talar tilt was performed to show the amount of inversion during slight plantar flexion (10-20 degrees). In addition, I was asked to walk the length of the room and ended up showing signs of excessive supination (weight on the outer toes) when I landed on my right foot (Hertel, 2002).

Unfortunately, I had positive signs of ankle instability in all the tests, but further information was needed to prove if I had any ruptured ligaments in my ankle complex. The X-rays I received at the start of my appointment were inconclusive. As a result, I had to get an MRI (see **Fig. 2**) soon after the new year (January 6, 2022) for a clearer image of my right ankle. The MRI showed mild ATFL attenuation (lengthening) but no ligament ruptures.

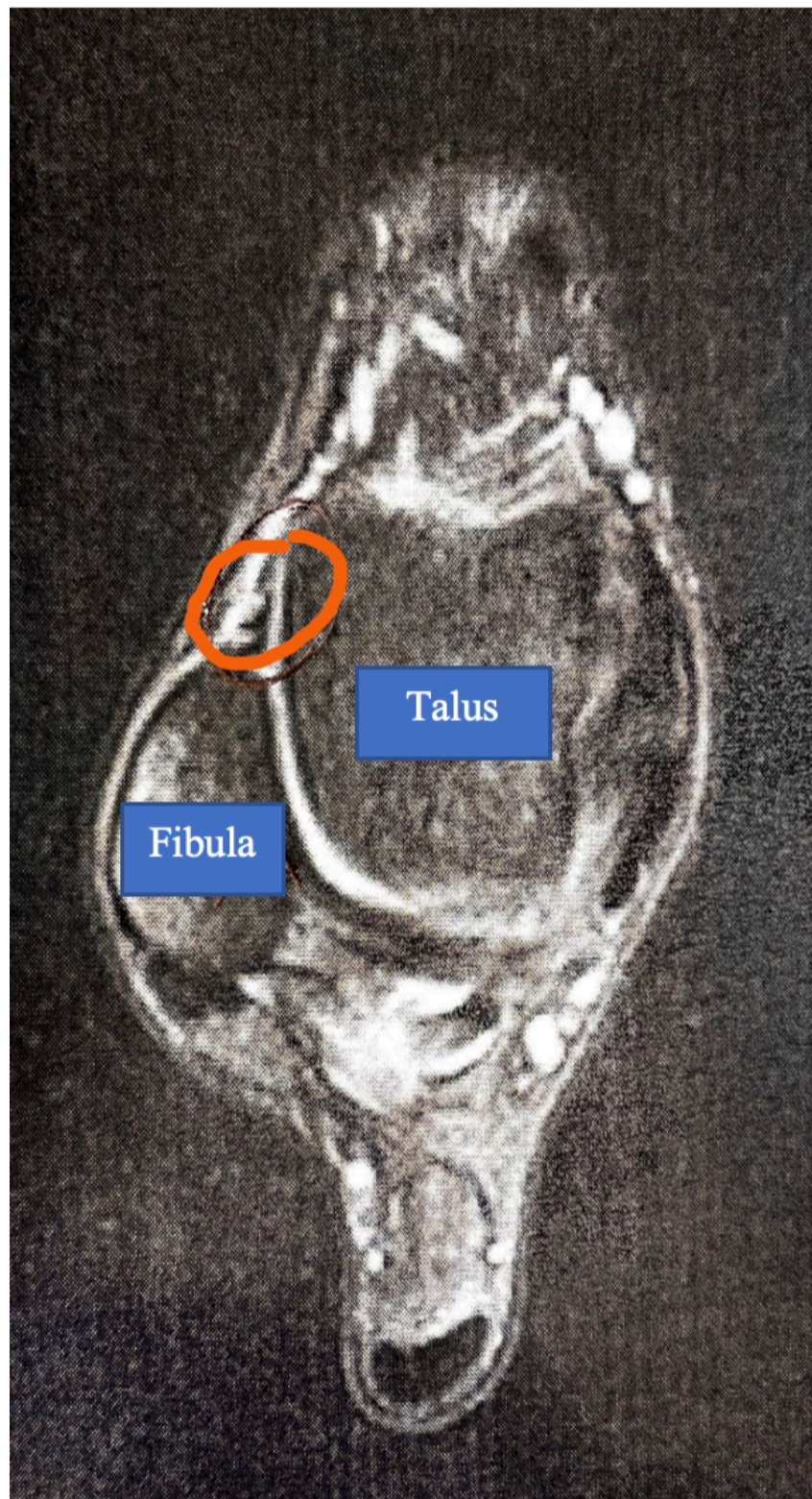


Fig. 2. This is an MRI cross-section of my right ankle joint. Particularly, it shows mild attenuation of my ATFL, which is conjunction to anterior talus subluxation (proven from an intraoperative X-ray by Dr. Natalie Allen).

Treatment Process

My treatment process included non-surgical methods of physical therapy and bracing followed by surgery on my right ATFL when improvements were not made.

Pre-Operation. My treatment process began with three weeks of physical therapy (one day per week) at Back-to-Basics Family Physical Therapy in Roanoke, VA, from December 2 to 21. I underwent massage therapy of the right peroneals, electrotherapy with an E-STIM machine on the right peroneals and around the ankle joint, heat therapy on the right leg and foot, and dry needling of the primary hip flexors, TFL, and peroneals on the right side. As for strength training, I had to perform single-leg balance exercises, single-leg step-ups (forward, backward, lateral) with my right foot leading, bilateral incline squats (heels raised), pistol squats, front and side lunges with weight (70 pounds in total), heel and toe walks, and resistance band training for plantar flexion, dorsiflexion, inversion, and eversion of the right foot. Along with this rehab process, I had to wear an ankle brace (ACE Deluxe Ankle Stabilizer) all day from December 2, 2021 until surgery on April 18, 2022.

Operation. Unfortunately, the swelling above my ATFL and ankle laxity did not improve with any of these therapy techniques. As a result, I underwent ligament reconstructive surgery of my right ATFL on April 18, 2022. According to Dr. Natalie Allen (2022), I was mildly sedated upon entering the operating room and then underwent general anesthesia. My right leg was cleansed, and an intraoperative X-ray was used to help determine the type of procedure and the location of incision. Particularly, the X-ray showed anterior talus subluxation. As a result, the Modified Broström Procedure was executed.

In step one of the procedure, an approximate 2-inch curvilinear incision was made over the distal end of fibula (lateral malleolus) with a #15 blade all the way to the subcutaneous tissue, which showed the extensor retinaculum (see **Fig. 3**). Next, the extensor retinaculum was dissected and mobilized proximally, so the capsule and anterior edge of the fibula's periosteum could be seen as seen in **Fig. 4** (Li et al., 2009). Afterwards, the opening was sterilized with saline before two anchors were inserted (1 cm proximal to the apex/tip of the fibula and 1 cm proximal to the first anchor) upon the removal of bone in the anterior leading edge of the fibula (see **Fig. 5**). Sutures were then used with the anchor to move the ATFL and surrounding capsule back to the anterior leading edge of the fibula with a 3-0 Vicryl suture (right foot maximally dorsiflexed and everted); this was

followed by the advancement of the inferior extensor retinaculum to the periosteum of the distal fibula using a 4-0 Nylon suture (see **Figs. 6-8**). And finally, the surgery wrapped up with a 0.5% Marcaine injection (local anesthesia) and dressing (Allen, 2022).



Fig. 3. A curvilinear incision (1-2 inches) over the lateral malleolus of my right ankle shows the extensor retinaculum.

Post-Operation . Initially, I had to wear a high boot (mid-calf and down) and use crutches and a walker for two weeks (April 18-May 3); I could not bear weight during this time. Currently, I am in the partial weight bearing stage, using my boot and one crutch to put some weight on my right foot for a week (May 4-10). During the following week (after May 10), I will be allowed to wear my high boot and put full weight on my right foot without extra support for the following 3-4 weeks. During this full weight bearing stage, I will be attending University Physical Therapy in Cave Spring, VA to regain ROM and strength around my right ankle. Upon completion of physical therapy, I will gradually return to high impact activities.

Prevention

It is feasible to say that through intentional bracing and strengthening of my right ankle complex and surrounding muscles, I could have potentially prevented CAI. However, it would



Fig. 4. The extensor retinaculum is dissected and mobilized proximally for future advancement.



Fig. 5. After the anterior leading edge of my fibula is "gouged" with a rongeur, two anchors are placed 1 cm proximal to the tip of my fibula and 1 cm proximal to the previous anchor.



Fig. 6. Suture orientations from both anchors are shown.



Fig. 7. My ATFL and surrounding capsule are brought back to the anterior leading edge of my fibula. A 3-0 Vicryl suture is used to close the subcutaneous layer. .

have been important to go through the proper rehabilitation protocol as described earlier, even when my ankle felt normal; repetitive ankle injuries cause weaknesses in the ligaments of the ankle complex. Not to mention, it is impossible to know if my two severe ankle sprains in 2019 and 2021 were the only cause(s).



Fig. 8. The extensor retinaculum is advanced and repaired to the fibula's periosteal layer for further reinforcement. A 4-0 nylon suture is used to close the epithelial layer.

I had more ankle “tweaks” spread across my collegiate and high school careers during cross country and track, which supports the idea that rehabilitation would have needed to be relatively ongoing for the best chance of CAI prevention.

CONCLUSION

Chronic ankle instability is the bear that has woken from its slumber. The repetition of ankle sprains wears down the lateral ankle complex and causes aggravating symptoms due to mechanical and functional instability. For those who want to move at an optimal level, this means proper treatment procedures will need to be enforced. Through proper diagnosis and gradual progression of healing and load, physical therapy, as well as the implementation of bracing and anti-inflammatories, may be all that is needed to diminish the effects of CAI. However, for more extreme cases (like myself), surgery may be necessary to repair elongated or torn ligaments in the lateral ankle complex, including the anterior talofibular, posterior talofibular, and calcaneofibular ligaments. Overall, preventative measures still need future testing to determine if CAI can be avoided

through proper care of the ankle, but it is clear that there are viable plans intact that can minimize and potentially circumvent the repercussions of CAI.

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