Letter from the Editors:

Researchers are heroes

What makes a hero? That word might remind you of Marvel or DC characters with capes and superpowers. While it’s unlikely that you’ll see Batman driving his Batmobile down the street, there are heroes all around us, working to advance knowledge and make the world a better place. A hero is admirable, someone who has outstanding achievements and noble qualities. You don’t need a magic lasso or superstrength to make a positive impact on the world. There’s probably someone in your life that inspires you to push forward, even when success seems far away. Research can be daunting, but each student has a faculty member motivating them to work towards a new discovery. In this sense, researchers are heroic every day they walk into the field. Throughout the research process, they’re planning, adapting, and thinking creatively. Despite setbacks, they’re innovative and committed. Regardless of whether the results go as predicted, each advancement puts that field closer to a unique finding. This persistence through struggles will mold the hero, so if they haven’t reached conclusive results yet, just think of it as a cliffhanger for the next chapter. Get ready for our next series of heroes because soon you’ll learn about attitudes towards recycling, understanding PCOS, gender and racial norms for beauty standards, implicit racial biases, diversity in the geosciences, and gravestone studies. This issue of Carolina CrossTalk shows research as a story of heroism.

For researchers, every day entails a quest of discovery into the unknown land of possibilities and questions. To actively choose to spend time in the land of such uncertainty is in the face of failure and obstacles, researchers turn to their superpowers of curiosity and persistence and continue onwards. Just like superheroes on media have an origin story, researchers have their own origin story—a collections of moments and experiences that encouraged them to become researchers in their field. As you flip through the next pages and learn about the exciting journeys of superheroes/researchers, ask yourself:

What is your origin story?
This is an introduction to the concept of implicit bias, which is a subconscious influence on judgements that occur automatically and are based on characteristics of outgroups which members of ingroups tend to stereotype or evaluate differently.

In this class, I was introduced to the term “implicit bias.”

Implicit biases are subconscious judgements that people hold about members of outgroups which influence how they treat or interact with those outgroups.

We examined the causes of implicit bias and its implications, particularly in policing. Dr. Lowell guided me through a literature review. In one study, I discovered that mindfulness meditation had been implemented in emergency healthcare and had reduced racial implicit bias. However, this intervention had not been explored in policing, and could translate into mitigation of racial implicit bias in a policing scenario. We created a research study based upon implementing mindfulness meditation into a threat/no-threat computer simulation involving angry/ fearful expressions on both white and African American male subjects who were armed or unarmed. We established three assessment groups: a control group who watched a 10-minute documentary with no instructions, a focused attention group who was asked to listen for a key word in the 10-minute documentary, and a meditation group who listened to a 10-minute mindfulness meditation video and was asked to meditate 10 minutes daily between visit one and visit two (roughly a week apart). We utilized implicit association tests, which are designed to detect participants’ implicit biases, to track the effectiveness of mindfulness meditation in our treatment group and create a baseline for our control group and control attention group.

Unfortunately, there were limitations to my study. First, I had to rely on participants’ self-reporting to estimate the time spent meditating by those assigned to the meditation group. Second, the duration of my experiment was limited to one week between the first and second visit, which may not have been enough time for the meditation to be impactful. Mindfulness meditation did not have the effect that I had hoped. However, we found that the focused attention group outperformed both the control and meditation groups on their second visit. Dr. Lowell and I discovered that honing one’s attention to a keyword (also referred to as attentional focus) prior to the threat/no-threat simulation could increase situational awareness during the scenario, thus reducing errors in performance. It also yielded positive results on the implicit association tests for the focused attention group.

My research has also influenced my focus as a student. I am utilizing findings from my literature review to address errors in performance. It also yielded positive results on the implicit association tests for the focused attention group.

Through my research, I have participated in different projects and interventions. For example, I have been involved in a project to reduce racial implicit bias by using loving-kindness meditation. The project involved creating a baseline for participants’ implicit biases, to track the prevalence of effectiveness of loving-kindness meditation instead of mindfulness meditation to see if that is more effective, given the higher prevalence of effectiveness of loving-kindness in the literature relative to mindfulness.

Undergraduate research has provided me with many opportunities. I have presented my work at the Southeastern Psychological Association Conference in 2022, Discover USC-2022, as well as the Association of American Colleges and Universities 2022. Through these conferences, I have networked with other professionals in the field who have influenced my continuing research. I obtained Graduation with Honors in 2021-2022, and now, a Magellan Ambassador, promoting the benefits of undergraduate research to other undergraduate students. Additionally, I have had the honor of graduating with Leadership Distinction at the Associate’s level in Research, and I am currently pursuing Graduation with Leadership Distinction in Diversity and Social Advocacy at the Bachelor’s level. I have been involved in different research studies in my time at USC-Union involving all three areas of my academic focus. For my research, I have been funded by the PURE grant, as well as the Magellan Scholar grant 2021-2022. Both of these grants enabled me to dedicate more time and resources toward my research.

The PURE grant funded my summer research study “Multicultural in the Curriculum: Do Core Classes Work?" with Dr. Steven Lowens and Dr. Maggie Aziz, which examined USC’s core curriculum to ascertain the levels of multicultural awareness and global citizenship that is incorporated in the university’s curricula.
Want to Get Leadership Distinction in Research?

More information on the GLD pathway

You can pursue it through the Center of Integrative and Experiential Learning and their Graduation with Leadership Distinction Program.

Already involved? Write about it.

As the primary author of an article in our Carolina Crosstalk magazine, you can complete the GLD in Research pathway’s publication requirement. Guidance from the Crosstalk editorial team, designer, and photographer will enhance your publication.

Need general information about GLD? Scan here:
Want to get involved with us?

More information on Carolina Crosstalk

We are a student-run research magazine at USC that features the stories of undergraduate researchers from all the diverse disciplines. We aim to communicate student research in an engaging manner to encourage conversation and inspire others to pursue their own research interests.

Calling all...

Researchers
Writers
Editors
Graphic designers
Photographers

Interested in sharing your research or nominating a researcher for the fall 2023 issue?

Interested in joining the team?

email carolinacrosstalk@gmail.com - follow our IG @carolinacrosstalk for more information
Close to Home: Understanding PCOS

Written by Riley Watson, Associate Writer - Edited by Silvi Patel, Editor
Designed by Polly Tappan - Featuring Charlotte Burts, Nursing major, class of 2024

Women’s health, to me, seems like it is behind a lot of other specialties in health care,” Burts said. “I think there is a lot still to be learned about reproductive diseases and chronic conditions related to women’s health.”

When it comes to choosing a research topic, inspiration can come from anywhere. Sometimes, we find the things we are passionate about through the people we love. An old friend’s hobby, our grandmother’s favorite pastime, or in Charlotte Burts’ case, her best friend’s lifelong metabolic syndrome involving hormonal dysregulation.

After Burts’ friend was diagnosed with Polycystic Ovary Syndrome, PCOS, Burts struggled to understand the disease. At the time, there was a relative lack of online resources pertaining to the disease. Burts has always wanted to understand what her friend was going through, so she was interested in researching its impact on women.

“When I found out there was a researcher on campus that focused on Polycystic Ovary Syndrome, PCOS, I jumped at the chance to if on campus that focused on Polycystic Ovary Syndrome, PCOS, I jumped at the chance to do research and get more information on the disease. Burts has always wanted to understand what her friend was going through, so she was interested in researching its impact on women.”

PCOS involves a hormone imbalance present in a rapidly growing number of women. According to the CDC, anywhere from 6% to 12% of women of reproductive age are affected by PCOS. Despite this large number, many people that suffer from this disorder feel lonely. Studies conducted by the Endocrine Society have shown that women with PCOS are 77% more likely to have anxiety than women without the disorder. It is this statistic and others like it that Burts and her mentor Dr. Pamela Wright’s focus is to better understand women’s experiences surrounding PCOS. Burts spends her days conducting and transcribing interviews from women with PCOS, then analyzing the contents for emerging themes and ideas.

“With my research, it’s an advancement and a look into how women perceive a condition like [PCOS],” Burts explained. “Rather than always starting with a negative or positive light, we’re letting them guide the research.”

A historical lack of attention to women’s health issues has contributed to stigma and misunderstanding surrounding disorders that primarily affect women such as PCOS. According to a study published by the National Library of Medicine, receiving a PCOS diagnosis took at least 2 years for 33.6% of women diagnosed with PCOS. An even larger number of women (47.1%) reported that they had to meet with three or more health professionals before receiving their diagnosis.

The work that Burts and Dr. Wright are conducting is extremely important to understanding not only PCOS as a disorder, but also the people behind the diagnosis. So often, these women get caught up in statistics and assumptions. The weight of other people’s ideas about PCOS can be overwhelming. Burts wants to give these women a voice, and find out “what’s most important to them.” The best way is to talk to them, of course. That’s why, inspired by her work with Dr. Wright, Burts has taken up a passion project.

“When I started this, I just wanted to understand what women were going through,” Burts said. “Now I realize there could be so many things done, like the creation of a digital platform or analyzing survey data in tandem with interviews to get a more holistic perspective on the attitudes, perspectives—all of these women.”

With the growing number of PCOS sufferers, and the immense lack of information on the intricacies of the disorder and all of its physical and mental effects, it’s easy to see the value of Burts’ and Dr. Wright’s work.

Burts said, “I think there is a lot still to be learned about reproductive diseases and chronic conditions related to women’s health.”

Charlotte Burts giving an oral presentation at the College of Nursing Research and Scholarship day

Charlotte Burts presenting on a scoping review centered around PCOS and Digital technology

BACKGROUND
Polyovistic ovary syndrome (PCOS) is the most common endocrineopathy among women
Types of digital technology
- Social media, online games, multimedia & mobile phones
Common uses of digital technologies for chronic conditions
- Medication adherence, symptoms management, communication

She also plans to expand upon her research with Dr. Wright and continue researching in her personal life. Burts recently received the Magellan Scholar Grant and a Mini-Magellan Grant to interview women with Polycystic Ovary Syndrome to get better insight into their perspective. Thanks to her courageous and essential research, less women will feel alone in their diagnosis.

Burts would like to thank her mentor Dr. Wright for all of her guidance and support during this process, as well as Dr. Cindy Corbett and all the ACORN center faculty for their help and expertise in research.
From SpongeBob Squarepants to Caribbean Taceaeans

Written by Heather Bruck, Student Researcher
Edited by Audrey Galimba, Associate Writer - Designed by Mary Stafford
Featuring Heather Bruck, Biology, Class of 2023

If you ask my family whether they are surprised by my career path, they would not say at all. They seemed to know what my future held before I did. When I was very young, maybe five or six years old, my mom sat me on the table while she reviewed SpongeBob SquarePants with a smile and a mask. That moment was the start of a trend that had been developing with me since I was just a kid. My dad was Nick SpongeBob in the true spark of my love of marine organisms. Who wouldn’t want to be a marine scientist after watching a show where a sponge lives in a pineapple and a crab runs a restaurant? I was fortunate to get my PADI Scuba certification alongside my family when I turned 12. At that time, I didn’t realize how helpful that experience would be. I just thought I was cool for being a scuba diver from Ohio, nothing more. On family vacations, we would dive along reefs and wrecks. I loved seeing the fish and everything around me. I remember feeling like I was diving right into the marine life than understanding how they interact. It wasn’t until a research trip to Honduras in the summer before my senior year of high school that I realized how fascinating research can be. It was a two-week volunteer program through Operation Wallacea, a group of students from our school spent a week in the cloud rainforests of Honduras and another in the reefs of Honduras. The entire trip focused on contributing to scientific fieldwork, where graduate students and professors collected data on a variety of life in the area. We helped with bird abundance counts by listening to their songs, tree health surveys by measuring the size and condition of hundreds of trees, and even made traps for doing beetle collection. The latter was by far my favorite activity, it involved rolling tailor-made boats into the pools to catch crabs as a part of the research. The research community I found within Operation Wallacea was electrifying. I wanted to be a part of the never-ending operations and the pursuit of knowledge about the natural world. While I was working on my Robotics project, I came across a way to get at least a few feet tall. At that moment, I had the cliché “aha” moment where angels sing and the world gets a bit brighter. There was so much to do in one place. Everything I learned, I used. I continued my passion for research with and without live plants. Fortunately, Dr. Jeffry Dudycha in the Oceanic and Atmospheric Science department at Ohio State University developed an independent project alongside Swanson’s work as an independent researcher. While I was working on my Robotics project, I came across a way to get at least a few feet tall. At that moment, I had the cliché “aha” moment where angels sing and the world gets a bit brighter. There was so much to do in one place. Everything I learned, I used. I continued my passion for research with and without live plants.

When I arrived at USC, I began looking for research opportunities to get my foot in the door. I chose the lab of Dr. Jeffry Dudycha in the Biological Sciences department, who was interested in developing a project involving the study of marine life. I met with the professors who do research on a topic you are interested in and have a passion for a research. I thought marine science work in high school was fun, and I had killed every plant I ever had. I was looking for any opportunity with macrofauna and without live plants. Fortunately, Dr. Jeffry Dudycha in the Biological Sciences department was open for undergraduates to join the lab. I began with an independent project studying the physical traits of seawater, a common freshwater autecosystem, to determine if there were differences in body characteristics within a population from the same Wisconsin lake. For two months, I measured the body length, tail length, and age of seawater fish. Two months later, I learned that all of the samples were stored for too long and had broken down too much for the data I had collected to be useful. This was devastating; it was my first-ever research project and it failed like a failure. However, it was an important lesson in research. Not everything will lead to the results you are looking for (and for the way you collect and store your samples REALLY matters). Research is enticing when you hear about the major discoveries and exciting new knowledge, but 90% of the time research ends in insignificant results or different outcomes than expected, and that is OK. That is how research is meant to be. It is an exploration of ideas, theories, and methods. If it always ended in significant answers, then you are not asking hard enough questions. From that experience, I was able to work with Trenton Aguilas and Matt Bruner (graduate students in Dr. Dudycha’s lab) on their projects on nutrition accumulation and agepignates of water fleas. It was a great experience but I taught that I am not a geneticist nor desire to ever be one. While I do not mind detailed procedures, genetics involves hours of work that may ultimately have to be reduced due to a single contamination or missed step, and it is not worth the passion for such a career. I enjoyed the ecological concepts learned in my classes, but I wanted to do research to see if that field was a better fit for my interests. I helped Jake Swanson (another graduate student in Dr. Dudycha’s lab) with his ecological project studying phytoplanktonic communities in local South Carolina lakes. The ability to learn how phytoplanktonic interest with one another and their environment was immediately a hit for me, and I dove into the deep and of ecology.

In the spring of 2022, I studied away at the University of the Virgin Islands through the National Student Exchange. While I got to spend a semester on the beach, I was also looking to get field experience. Fieldwork is research in the environment you are studying rather than in a lab. For the semester, I took a scientific diving class (AASU Diving) to allow me to legally do research while diving under the water. From going just looking at pretty fish and being able with my own dive to learning how to gather data and be aware of others’ safety was a big jump. It helped me feel comfortable gathering data with the water under limited time and stressful environments. With this, I helped graduate student Matt Souza with his ecology-focused project studying the impacts of invasive seagrasses, Halodule uninervis, on the diversity of crustaceans and the distribution of native seagrasses. That project solidified my interest in marine invertebrate ecology. I was fascinated by all of the different invertebrates we located among the seagrass and how the invasive seagrass was impacting the entire community. With that focused research interest and my scallop certifications, I entered my Hollings internship excited to delve further into my future career.

Therefore, it is more common than not for the outcome of scientific work to be insignificant relationships or "failed" experiments; it is simply the nature of a career in science. This past year, I have made an effort to celebrate rejections and "failures" alongside successes. For every scholarship, or project; it is simply the nature of a career in marine invertebrates. It is such an incredible program and experience; I encourage all those interested in ocean and atmospheric sciences to apply. If you are interested in applying, the Hollings Fellowship Program of USC has employed an ongoing national scholarship awarded to applicants who demonstrate the potential to make significant contributions to their field within oceans and atmospheric sciences. If it is an incredible program and experience, I encourage all those interested in ocean and atmospheric sciences to apply. If you are interested in applying, the Hollings Fellowship Program of USC has employed an ongoing national scholarship awarded to applicants who demonstrate the potential to make significant contributions to their field within oceans and atmospheric sciences.

"Research is enticing when you hear about the major discoveries and exciting new knowledge, but 90% of the time research ends in insignificant results or different outcomes than expected, and that is OK."
Beauty Standards that arise from Media & Culture

Written by Nicole Hanner, Associate Writer - Edited by Marina Ostoin, Associate Editor
Designed by Polly Tappan - Featuring Kate Kuisel, History and Philosophy majors, Media and Film studies minors, Class of 2023

Growing up in the late 20th century, women are faced with beauty standards at every turn. These standards are often presented as the norm, but what do these beauty standards do to us? How do they affect our physical and emotional health? And what role does the media play in perpetuating these standards?

Kuisel wanted to study the gender and racial standards of beauty in American culture. She did not always rely on quantitative analysis; instead, she examined images and graphs. Essentially, collecting qualitative data is a way to capture your hypothesis. In 1968, Bem and Feindern found that “in order to rely on personal qualitative observations” that gender exists at an unconscious level. Kuisel wanted to understand how personal experiences and background play a part in the formation of beauty standards.

Kuisel decided to create her own makeup line dedicated to women of color. Although this was a big step for the time, beauty lines today still only have 3-5 shades for women of color, whereas there are 8-10 available shades for lighter skin tones.

Finally, some progress was seen in Shades of Africa, which sold makeup bottles named after countries in Africa. In order to appeal to the Pan-African movement, dedicated to establishing independence for African nations and cultivating unity among black people throughout the world, the marketing was written in Swahili. Eunice Johnson, wife of John Johnson and founder of Ebony, noticed that her models for Fashion Fair, which was a traveling African-American fashion exhibition, were mixing foundations to match their skin color due to the lack of darker shades in the current makeup industry. Johnson decided to create her own makeup line dedicated to women of color. Although this was a big step, beauty lines today only have 3-5 shades for women of color, whereas there are 8-10 available shades for lighter skin tones.

Kuisel looked at advertisements directed at women of color, and Eurocentric beauty. Diving deeper into evaluating these standards, Kuisel looked at advertisements directed at African American women. As an example of one of the advertisements was a skin whitening cream, which contained hydroquinone. This cream would alter hormones and could contribute to the rise of depression and anxiety. Where do these beauty ideals come from? Is it from the media, is it cultural, or is it from our own experiences and background?

Kuisel decided to create her own makeup line dedicated to women of color. Although this was a big step for the time, beauty lines today still only have 3-5 shades for women of color, whereas there are 8-10 available shades for lighter skin tones.

Finally some progress was seen in Shades of Africa, which sold makeup bottles named after countries in Africa. In order to appeal to the Pan-African movement, dedicated to establishing independence for African nations and cultivating unity among black people throughout the world, the marketing was written in Swahili. Eunice Johnson, wife of John Johnson and founder of Ebony, noticed that her models for Fashion Fair, which was a traveling African-American fashion exhibition, were mixing foundations to match their skin color due to the lack of darker shades in the current makeup industry. Johnson decided to create her own makeup line dedicated to women of color. Although this was a big step for the time, beauty lines today only have 3-5 shades for women of color, whereas there are 8-10 available shades for lighter skin tones.

Although the past holds many mistakes, historical research allows us to learn from these mistakes in order to treat people better in the future. Nowadays, marketers have to be very careful to not offend any group of people. Yet still, Arab and other minority groups face passive discrimination much like African American women in the 1970s due to both media and cultural influences. It is important to spend time observing these influences and how they form and impact beauty standards for women. Ultimately, it becomes everyone’s personal responsibility to stop allowing harmful beauty standards to arise in media that discriminate, tear people down, or harm our bodies physically and mentally. While an advertisement may not seem directly offensive to you, consider the history and background of the people it is truly targeting. Kuisel’s research shows a great light onto the cultural and media impact on beauty standards, specifically African American women during the 1970s, and she is now seeking to expand this research into the Ph.D. program at UC Berkeley next fall.

Finally some progress was seen in Shades of Africa, which sold makeup bottles named after countries in Africa. In order to appeal to the Pan-African movement, dedicated to establishing independence for African nations and cultivating unity among black people throughout the world, the marketing was written in Swahili. Eunice Johnson, wife of John Johnson and founder of Ebony, noticed that her models for Fashion Fair, which was a traveling African-American fashion exhibition, were mixing foundations to match their skin color due to the lack of darker shades in the current makeup industry. Johnson decided to create her own makeup line dedicated to women of color. Although this was a big step for the time, beauty lines today only have 3-5 shades for women of color, whereas there are 8-10 available shades for lighter skin tones.

Although the past holds many mistakes, historical research allows us to learn from these mistakes in order to treat people better in the future. Nowadays, marketers have to be very careful to not offend any group of people. Yet still, Arab and other minority groups face passive discrimination much like African American women in the 1970s due to both media and cultural influences. It is important to spend time observing these influences and how they form and impact beauty standards for women. Ultimately, it becomes everyone’s personal responsibility to stop allowing harmful beauty standards to arise in media that discriminate, tear people down, or harm our bodies physically and mentally. While an advertisement may not seem directly offensive to you, consider the history and background of the people it is truly targeting. Kuisel’s research shows a great light onto the cultural and media impact on beauty standards, specifically African American women during the 1970s, and she is now seeking to expand this research into the Ph.D. program at UC Berkeley next fall.

Finally some progress was seen in Shades of Africa, which sold makeup bottles named after countries in Africa. In order to appeal to the Pan-African movement, dedicated to establishing independence for African nations and cultivating unity among black people throughout the world, the marketing was written in Swahili. Eunice Johnson, wife of John Johnson and founder of Ebony, noticed that her models for Fashion Fair, which was a traveling African-American fashion exhibition, were mixing foundations to match their skin color due to the lack of darker shades in the current makeup industry. Johnson decided to create her own makeup line dedicated to women of color. Although this was a big step for the time, beauty lines today only have 3-5 shades for women of color, whereas there are 8-10 available shades for lighter skin tones.

Although the past holds many mistakes, historical research allows us to learn from these mistakes in order to treat people better in the future. Nowadays, marketers have to be very careful to not offend any group of people. Yet still, Arab and other minority groups face passive discrimination much like African American women in the 1970s due to both media and cultural influences. It is important to spend time observing these influences and how they form and impact beauty standards for women. Ultimately, it becomes everyone’s personal responsibility to stop allowing harmful beauty standards to arise in media that discriminate, tear people down, or harm our bodies physically and mentally. While an advertisement may not seem directly offensive to you, consider the history and background of the people it is truly targeting. Kuisel’s research shows a great light onto the cultural and media impact on beauty standards, specifically African American women during the 1970s, and she is now seeking to expand this research into the Ph.D. program at UC Berkeley next fall.
I began my research.

Though quite unconventional, I deeply enjoyed my research, entitled, “Iconography, Inscription and the Gendered South: An examination of gender differences in public and private cemeteries in 1800-1900s Columbia.” I examined 52 grave monuments in both the Elmwood Cemetery (public) and the Bethel United Methodist Church Cemetery (private). I concentrated on those who had carved imagery, called iconography, on the stones, and kept an even split of male to female persons. I led a small team of two to three people, not including myself, in gathering as much data as possible from the individual’s monuments. Through this, I found that due to the circumstances of the time, women always had their relationships to family - specifically a man-written, or inscribed, on their gravestones, whereas men did not. I also discovered that by far, plants imagery, particularly daffodils, appeared on graves the most, regardless of resting place. This is interesting because typically in southern grave studies, roses, and daffodils are the most common plants.

Instead of focusing on the iconography, most research rarely addresses comparisons according to gender, and how that may shape the language used. The distinction is that my research has a dual focus on both inscription and iconography, carefully looking at both, and how the social climate of the time influenced what people had carved on gravestones as well as the shape of the stones themselves. I also included the way that the social climate influenced the inscriptions on the stones, and how that varied according to the sex of the individual. All in all, my research was nowhere near as scary as I expected. The most difficult part was finding 15 sources for my literary analysis. Once I began thinking about my topic, I looked at what variables I would look at - making sure to check for confounding variables. I included a total of 10 variables that would allow me to accurately analyze my findings such as iconography, proximity to relatives, shape, grave goods, gender, epitaph, statistical data, and any other pertinent distinguishing factors of a skeleton. I do still feel a special connection to archaeology, though I have now expanded my knowledge and appreciation for all four subfields of anthropology: linguistic anthropology, cultural anthropology, biological anthropology, and archaeology. I never realized how pursuing research would open doors for me.

Undergraduate Research. The title alone would open doors for me. It all began when my advisor at the time, Dr. Sharon DeWitt recommended ANTH 201 Anthropological Inquiry in Undergraduate Research. The title alone was terrifying. After some back and forth, I decided to take the class, one of my best university decisions to date. The professor of this course, Dr. Eric E. Jones, broke the concepts of research and theory into bite-sized chunks in an open and supportive environment. On our first day of class, Dr. Jones explained that we would be using in-class material such as gravestone and cemetery studies, to do research. I was immediately interested and began thinking about how much I would like to pursue that as my topic, as I had always had a healthy appreciation for the macabre. I spoke to him about the class about my research idea and the fact I wanted to do gravyesone studies. He replied with an emphatic “Yes!” Along with his positive reassurances in the following weeks, (and it being a requirement for the class) I began my research.

Despite that, the fieldwork portion of the project was my favorite. If I had unlimited resources, I would record these variables and capture the images of the stones for the entirety of Elmwood Cemetery. Even more of a surprise was how long it took to enter the information into a database and to analyze it, a somewhat monumental task. Going into my research, this was the aspect I was most nervous about, as I didn’t think that I had the level of skill and knowledge needed to accurately analyze my data. Once I had (painstakingly) entered all the data, patterns in the data practically jumped out of the program that I was so dear to me. Making sense of the patterns was incredible, and I was thankful I collected as much data as I did. When it came time to apply the theory and make sense of the data, I realized that my positionality, (how my positions in the world and society shape my thoughts, feelings, and actions) led to deep feelings about my findings in the data. Though I identify as non-binary, I was raised as a female and thus have feminized experiences as a baseline for most of my life. I was both horrified at the blatant and normalized view of women as property that I saw, and somehow proud that in the Bethel Methodist graves the women were shown as educated and intellectual for all eternity.

The research I conducted has led to incredible developments in my university career. One of the things I am most grateful for is mentorship from Dr. Jones. He helped me come out of my shell and feel comfortable as a student researcher and also pushed me to pursue the DURT track (Distinguished Undergraduate Research Track), a form of recognition for anthropology majors. The completion of this research also gave me the confidence to pursue a non-binary queer person to research the effects of mask wearing (in relation to COVID-19) on the transgender and nonbinary community and how it affects their day to day life. I am also researching gatekeeping in the goth community on TikTok and how it shapes users’ language and interaction with others. The fact that my research is distinct from those published in the field has also given me the confidence to reach out to publications such as Carolina CrossTalk to publish. Finally, through the love of research this experience showed me, I decided to apply to become a Magellan Ambassador for the Office of Undergraduate Research, hoping to instill that love in other students. This experience gave me the push I needed to blossom and truly live up to my potential as a student.
During the last month of my freshman year, I began to question some assumptions I had been taught, especially regarding diversity and inclusion. As I took GEOL 101: Introduction to the Earth, I started to see how research in the geosciences could be a good opportunity for me. I felt that the field of geology had the potential to make a difference in the world, and I wanted to be a part of that change.

As a student in the Ryker Lab, I have had the opportunity to work on a project that focuses on understanding the experiences of non-traditional students in the geosciences. This project has allowed me to explore the intersection of diversity, equity, and inclusion in science education, and I have learned a great deal about the importance of inclusive teaching practices.

My research project pushes the limits of the geosciences because it encourages conversation around diversity, equity, and inclusion. As researchers, we have a responsibility to challenge institutionalized racism. This research project became more literature-based over the past six weeks. I received many questions and comments from instructors who were interested in my work. The highlight of the program was being awarded the Outstanding Researcher Award. This award was given to someone in the cohort who was outstanding in their research and was an example for others.

In the future, I plan to continue my research on diversifying the geosciences. I believe that my research can change my field because since the diversity of the geosciences is so limited, any efforts to increase diversity are worth celebrating. I am fortunate to receive the Magellan Scholar and the Magellan Graduate Grant. This scholarship allows me to continue my research and pursue graduate studies.

I am proud of the progress I have made so far, and I am excited to see where this research will take me. Thank you to all who have supported me throughout this journey.
Hi Dr. Clark. Thank you for sitting down with me to offer some of your insights regarding research at the USC. To start us off, can you tell us a little bit about yourself?

I’m the new director of the Office of Undergraduate Research here at USC, and I am very excited to be in this role where I work with some of the brightest minds at a large research institution. I started here at USC as an assistant professor in the College Geophysics. After that, I was an assistant professor at the College of G"evential Services, and then I moved into my current position in the Office of Undergraduate Research.

It’s incredible how all those experiences led you to be where you are right now. How do you think your mentoring experiences supported your personal growth, and how are students right now as the Director of the USC? I have a lot of favorite USC’s students. They are extremely bright and passionate. I enjoy learning about their fascinating research projects in diverse disciplines. I enjoy seeing students gain confidence through their research experiences and progress to new opportunities. I love the energy at Discover USC when students are sharing their research with others in the USC community. We have an impressive volunteer corps of Magellan Ambassadors, who are undergraduate research students, as well as the overall organization of Discover USC. Our outstanding faculty, along with our research mentors and support, provide a valuable opportunity for students to explore different research interests and develop new skills.

Students are incredibly lucky that they have the OUR’s support when it comes to all aspects of their research journey. What are some of your favorite aspects of your position as the director of the OUR? I have had fantastic research experiences and mentors as an undergraduate student. My first exposure to research was through the Pritchard’s Island Loggerhead project. I had a research experience through a lot of time spent working with Dr. Lauren Clark, and she was my mentor throughout my college years. I also had the opportunity to manage the SPARC Graduate Research Program and programming for summer research opportunities. I was able to work as a research assistant at Texas State University, and a research assistant at the University of California, San Diego, and I had a research experience through the Lab at the University of California, San Diego.

Once students are involved in research, I would encourage them to take advantage of every opportunity that is available to them. If there is an opportunity to present at a conference, do it! If there is an opportunity to publish, do it! Because research progress is often circuitous and not linear, it is very important to doubt oneself when something is not working. The key is to have mentors who can help you work through the research and the feelings of self-doubt. It helps to know other students involved in research so that you can share your experiences with each other. The OUR team is also here to listen and provide encouragement.

What do you think is the role of faculty mentors and the OUR staff in supporting students to research? I believe it is important for faculty mentors to be helpful and encouraging. You are the students’ first point of contact, and you can provide valuable guidance and support. It is also important for the OUR staff to be supportive and responsive. Our outstanding faculty, along with our research mentors and support, provide a valuable opportunity for students to explore different research interests and develop new skills.

What are some qualities your students should be mindful of when applying to graduate school? What are some tips for students who are applying to graduate school? I believe it is important for students to be mindful of their academic performance, as well as their research experience and skills. It is also important for students to be mindful of their communication and interpersonal skills, as well as their ability to work in a team. For tips on applying to graduate school, I encourage students to reach out to professors and mentors who can provide guidance and support. It is also important for students to be mindful of their financial resources and to plan their next professional steps.

In terms of expectations, students must be willing to learn, and they must be curious. In the research area, I encourage students to ask questions and try to understand where their project fits into the larger picture, and what the project means to the research team. It is helpful to know that students are involved in undergraduate research if curiosity, which is ultimately what drives research.
Want to get started in research at USC?

More information from the Office of Undergraduate Research

1. Find a faculty research mentor

2. Embark on your research journey
   - Register your project
   - Apply for funding
   - Share your work

![QR Code]
Interested in publishing a research article to share your work with the world? Carolina CrossTalk is a student-led and student-centered research magazine at USC, and we are accepting manuscript-style articles for peer review from members of the Journal Club!

Why publish?
- Advance your career
- Contribute to knowledge in your discipline
- Expand your portfolio
- Connect with experts in your field

What can you expect?
- Feedback from at least 2 peers from the Pre-Health Journal Club
- Grammatical edits from an editor at Carolina CrossTalk
- Electronic access to your article once published
- Limited paper publishing available

EMAIL SOJOCLUB@MAILBOX.SC.EDU AND CAROLINACROSSTALK@GMAIL.COM TO LEARN MORE!
After I completed designing my survey, I started asking my friends and people around me to fill out my survey by sharing a QR code or through flyers. In order to balance my sample, I tried to survey an equal number of international and U.S. students. The first exciting moment for me was when my sample size reached 31, which is the essential amount for sampling distribution to be normal. Immediately I put all of the responses into the Statistical Package for the Social Sciences (SPSS), a computer software widely used by psychologists to conduct statistical tests and analysis, which was also required for the class. Then I would conduct an analysis of variance (ANOVA), a statistical test to examine whether the mean recycling attitude scores for each personality type were the same, or different from one another. Later on, simply out of curiosity I would run an ANOVA whenever I had new responses come in. It was so dedicated to the project that I worked hard to get more participants and exceeded the minimum by 10.

Finally, I found a statistically significant result for conscientiousness (C), which indicated that people who are high in conscientiousness personality score on average higher in the recycling attitude questionnaire. This outcome aligned with my hypothesis, the results concluded that people who are conscientious have on average a more positive attitude towards recycling.

Now I have identified conscientiousness as the personality trait that has more positive recycling attitudes, what’s next? One of the good applications of this study is that in the future, we could make conscientious people our prioritized target audience so that limited resources could result in maximized effects on them in encouraging recycle behaviors. There are many ways in which one could advertise recycling, for instance, we could come up with slogans. Slogans are effective because they resonate with people psychologically. Many historically successful slogans or advertisements have psychological reasoning behind them. I kept all of this in mind when conducting my research in hopes that if we can get conscientious people to participate more actively in recycling, then those around them could turn be influenced. I assume that those who are high in agreeableness may join next after seeing their conscientious friends participate in recycling behaviors. With all being said, my research was definitely limited. First, like I mentioned above, my research did not look directly at the relationship between personality and recycling behavior, rather at the relationship between personal recycling attitude.

Frequently, people would tell you that they have a certain attitude or viewpoint towards something, but chances are, they may not actually do so accordingly. I want you to ask anyone whether recycling is important, most would agree it’s important, but may not actually do so. Therefore, the number of responses I collected for each personality type is quite uneven, and they tend to fall in one or two categories. I remember having only a few responses for neuroticism (N), while for openness (O) I had more than 10 responses. Ideally I would have wished to obtain an equal number of responses in each personality category to make the result more accurate. In other words, I would have loved to have, say 8 responses for all five different personalities. Nonetheless, this would undoubtedly lead to the need of a much greater sample size, for one is not capable of predicting people’s personalities, nor can one assign participants a personality. I had to hand choosing an ideal sample when I was recruiting my participants, because it is possible that there are just few people who fall under neuroticism that would be willing to participate in my research simply by chance. In the future, with more time and monetary resources at hand, I would definitely want to study people’s recycling behavior instead of their attitudes. Perhaps I could offer participants drinks in recyclable containers while I have them complete the personality survey, and collect data on how they throw away the containers.

Having completed research as the final paper for my PSYC 228 class broke the barrier between me and conducting research because I used to think of researching as something grand, forced and terrifying. Yet treating it as a class assignment really made conducting research more approachable. Now, I am more confident in myself doing research. Completing this research project has also solidified my interests in doing research. When I first started college, I thought about going to graduate school. This undergraduate research experience exposed myself to research, and it allowed me to know if doing research is something for me, something I would like to pursue as a career. Turns out that I actually felt excited and engaged with the research. Currently, I am participating as an undergraduate research assistant in professors Dr. Wedell and Dr. Shinokura’s lab in the Institute for Mind and Brain (IMB). Our lab studies primary decision making, and it is a great opportunity for me to step forward and learn about different research instruments such as Electrocardiogram (ECG) that measures heart rate, and Electroencephalography (EEG) that measures muscle response. Through my participation in conducting research and in the lab, I have gained many hands on research experience that will not only prepare me for future challenges but also for my goal in pursuing a Ph.D. in psychology and career opportunities.
Correlations of Alcohol Consumption with Feelings of Stress and Anxiety in College Students

Alcohol consumption, stress, and anxiety are common among college students. The purpose of this study is to determine the relationship between alcohol use and stress and anxiety levels among college students and evaluate whether there is a correlation between these components that students often face during the college experience. Previous studies have claimed that there is a causal relationship between higher levels of stress and drinking rates, including among college students. In a study conducted in Swedish universities for first-year students, it was observed that using alcohol as a coping mechanism leads to various problems including increased stress. After implementing alcohol intervention programs, stressors and other alcohol-related issues decreased (Andersson et al., 2009). These findings display how the reduction of alcohol consumption through intervention leads to decreases in stress in college students.

Not only is alcohol use associated with increased stress levels, but both of these factors also lead to problematic drinking. This is illustrated in another study that focused on college freshmen, who were surveyed after their first experience of underage drinking to report their levels of stress, which showed that alcohol consumption and stress levels independently and additively predict drinking problems, including underage drinking, substance abuse, and related violations (O’Hare & Sherrer, 2006). The current study investigates the relationship between alcohol and stress for college students regardless of class level. It does not distinguish between those that recently had their first experience of drinking; those that had been drinking for a while, or those that were drinking while underage. Interestingly, increased alcohol consumption is also observed as a consequence of high-stress levels. In a study where college students self-reported their mood and stress when they consumed alcohol, results showed students with a more negative mood and stress were more likely to drink alcohol the next day (Luk et al., 2008). Luk et al. found that people are more likely to consume alcohol after a stressful event.

Based on existing literature, there is a connection between alcohol use and increased stress levels in college students, who may partake in risky drinking behaviors after a stressful event. Upon implementation of substance abuse intervention programs, both alcohol use and stress levels decreased (Anderson et al., 2009). While these studies provide an understanding of the relationship between drinking and stress, the use of alcohol as a coping mechanism and increased feelings of anxiety, a common issue that often appears alongside stress among college students, are topics that have not fully been explored. It is predicted that there will be a positive relationship between alcohol consumption and the combined factors of stress and anxiety including stress factors, among college students. This study will also assess the effectiveness and prevalence of alcohol as a coping mechanism for students who face high levels of stress.

Methods

Participants

This study was open to any student attending the University of South Carolina, and it involved students at various life stages, including those who were living off-campus to participants in different academic disciplines, and it was distributed electronically through a Google Form to a variety of different students. There were 25 participants, of which the mean age was 20 years old. Ten participants (40%) identified as female, 2 (8%) participants identified as male, and 3 (12%) participants identified as non-binary/non-conforming. Information regarding ethnicity, class level, GPA, majors/minors, and hometown was also obtained in this survey. About 67% of participants were white, 21% were Asian, 10% were Black, and 2% preferred not to say. Among these, 15 participants were seniors, 8 participants were juniors (32%), 7 were sophomores (22%), and 1 was a freshman (3%). The majority of participants had a GPA of 3.5 or higher, and the majors, minors, and hometowns of participants varied greatly.

Procedure

After the link to the survey was sent to different groups on campus, participants were able to access the survey, which was estimated to be completed within one to three minutes. First, participants read an informed consent form that explained the purpose of the study, the length of the survey, and the confidentiality agreement. Then they answered the questions about alcohol and feelings of anxiety after they answered the questions about alcohol. Thus, questions about demographics (i.e., race, age, gender, and year in college) were asked. Finally, at the end of the survey, a debriefing statement detailing the anonymity of participants as well as campus-provided mental health resources are provided.

Results

A Pearson Correlation analysis, a common technique used to measure linear correlation between two factors. The analysis was conducted to determine whether there was a relationship between alcohol consumption (M = 5.029, SD = 2.760) and the combined factors of stress and anxiety levels (M = 2.357, SD = 2.343) in college students at the University of South Carolina (Table 1).

Table 1

Descriptive Statistics

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Consumption</td>
<td>5.029</td>
<td>2.760</td>
<td>35</td>
</tr>
<tr>
<td>Stress Levels</td>
<td>2.357</td>
<td>2.343</td>
<td>35</td>
</tr>
</tbody>
</table>

Descriptive statistics were calculated for alcohol consumption and stress and feelings of anxiety measures for 35 participants. Standard deviations and means are displayed.

The independent variable was alcohol consumption, and the dependent variable was the combined factors of stress and feelings of anxiety. The results suggest that there is a significant positive relationship, r(33) = 0.417, p = 0.013, two-tailed. Based on a significance level of p = 0.05, the results are significant (Table 2).

Table 2

<table>
<thead>
<tr>
<th>Descriptive Measure</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Consumption</td>
<td>5.029</td>
<td>2.760</td>
<td>35</td>
</tr>
<tr>
<td>Stress Levels</td>
<td>2.357</td>
<td>2.343</td>
<td>35</td>
</tr>
</tbody>
</table>

Descriptive statistics were calculated for alcohol consumption and stress and feelings of anxiety measures for 35 participants. Standard deviations and means are displayed.

The independent variable was alcohol consumption, and the dependent variable was the combined factors of stress and feelings of anxiety. The results suggest that there is a significant positive relationship, r(33) = 0.417, p = 0.013, two-tailed. Based on a significance level of p = 0.05, the results are significant. (Table 2)

Zainab Nathani
Pearson Correlations were calculated for alcohol consumption and stress and feelings of anxiety. These results indicate that as alcohol consumption increases, stress and feelings of anxiety among college students also increase. A scatterplot was created to display this relationship and the linear representation shows a strong positive correlation (Figure 1).

The small sample size and lack of diverse perspectives could be attributed to the white, causing a sampling bias. This hurts external validity because it may not accurately represent the student population at the University of South Carolina. There was not a lot of diversity among the participants, most of which were seniors, females, and who recently change their alcohol consumption level in a specific way (O’Hare & Sherrer, 2006). In the future, this research could be replicated on a larger scale and to each other. Specifically, programs could be implemented targeting the student population that deals with daily stressors and unhealthy coping mechanisms. In one study that took place in Swedish universities, interventions including primary alcohol misuse prevention and stress management programs reduced stress-related concerns for freshmen students (Anderson et al., 2009). To promote early intervention, incoming freshmen could be introduced to required substance use and healthy relationships training in future years so that they could start off their college experience with a better understanding of these topics. This is especially important because the results of one previous study have shown that stress affects those who recently change their alcohol consumption level in a specific way (O’Hara & Sherrer, 2006). In the future, this research could be replicated on a larger scale and to include strategies on how students may learn effective coping skills for stress and alcohol abuse, all of which are very common issues on college campuses that need to be addressed. This could be accomplished by expanding the counseling and psychiatry resources on campus to include workshops to help with substance use as well as major stressors in students’ lives, making sure to touch upon how they relate to each other. Specifically, programs could be implemented targeting the student population that deals with daily stressors and unhealthy coping mechanisms. In one study that took place in Swedish universities, interventions including primary alcohol misuse prevention and stress management programs reduced stress-related concerns for freshmen students (Anderson et al., 2009). To promote early intervention, incoming freshmen could be introduced to required substance use and healthy relationships training in future years so that they could start off their college experience with a better understanding of these topics. This is especially important because the results of one previous study have shown that stress affects those who recently change their alcohol consumption level in a specific way (O’Hara & Sherrer, 2006). In the future, this research could be replicated on a larger scale and to include strategies on how students may learn effective coping skills for stress and alcohol abuse, all of which are very common issues on college campuses that need to be addressed. This could be accomplished by expanding the counseling and psychiatry resources on campus to include workshops to help with substance use as well as major stressors in students’ lives, making sure to touch upon how they relate to each other. Specifically, programs could be implemented targeting the student population that deals with daily stressors and unhealthy coping mechanisms. In one study that took place in Swedish universities, interventions including primary alcohol misuse prevention and stress management programs reduced stress-related concerns for freshmen students (Anderson et al., 2009). To promote early intervention, incoming freshmen could be introduced to required substance use and healthy relationships training in future years so that they could start off their college experience with a better understanding of these topics. This is especially important because the results of one previous study have shown that stress affects those who recently change their alcohol consumption level in a specific way (O’Hara & Sherrer, 2006). In the future, this research could be replicated on a larger scale and to include strategies on how students may learn effective coping skills for stress and alcohol abuse, all of which are very common issues on college campuses that need to be addressed. This could be accomplished by expanding the counseling and psychiatry resources on campus to include workshops to help with substance use as well as major stressors in students’ lives, making sure to touch upon how they relate to each other. Specifically, programs could be implemented targeting the student population that deals with daily stressors and unhealthy coping mechanisms. In one study that took place in Swedish universities, interventions including primary alcohol misuse prevention and stress management programs reduced stress-related concerns for freshmen students (Anderson et al., 2009). To promote early intervention, incoming freshmen could be introduced to required substance use and healthy relationships training in future years so that they could start off their college experience with a better understanding of these topics. This is especially important because the results of one previous study have shown that stress affects those who recently change their alcohol consumption level in a specific way (O’Hara & Sherrer, 2006). In the future, this research could be replicated on a larger scale and to include strategies on how students may learn effective coping skills for stress and alcohol abuse, all of which are very common issues on college campuses that need to be addressed. This could be accomplished by expanding the counseling and psychiatry resources on campus to include workshops to help with substance use as well as major stressors in students’ lives, making sure to touch upon how they relate to each other. Specifically, programs could be implemented targeting the student population that deals with daily stressors and unhealthy coping mechanisms.

Discussion

There are various implications for this study. The data and information gained could be used to identify and decrease sources of stress, feelings of anxiety, and alcohol abuse, all of which are very common issues on college campuses that need to be addressed. This could be accomplished by expanding the counseling and psychiatry resources on campus to include workshops to help with substance use as well as major stressors in students’ lives, making sure to touch upon how they relate to each other. Specifically, programs could be implemented targeting the student population that deals with daily stressors and unhealthy coping mechanisms.

Figure 1
A scatterplot was created with a positive linear relationship to show the correlation between alcohol consumption and stress and feelings of anxiety.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Stress</th>
<th>Anxiety</th>
<th>Alcohol Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>0.41</td>
<td>0.32</td>
<td>0.45</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.32</td>
<td>0.45</td>
<td>0.41</td>
</tr>
<tr>
<td>Alcohol</td>
<td>0.45</td>
<td>0.41</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Table 2
Correlations

References


