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By Rob Ewing

Viridiana Benitez – a daughter of immigrants, an English-as-a-second-language learner and a first-generation college student – knows firsthand what it's like to overcome challenges in academia. Now, the Arizona State University assistant professor is aiming to help current college students in their own higher education journeys.

In the spring of 2023, Benitez is launching an innovative new course to provide research experience for ASU Online students who utilize a learning modality that, despite its many benefits, has previously lacked the same research opportunities afforded to traditional immersion students who learn in-person, on campus.

"It is just so important for students to be able to conduct the research they are learning about," Benitez said.

Benitez is the primary investigator of the Learning & Development Lab at ASU, where she researches cognitive development with a focus on how young children learn words, how they track the patterns of their environment and how language experience, such as bilingualism, affects cognition. She hopes to better understand how to promote the development of language in children, in particular, the kinds of early experiences that might support dual language development.

This fall, she was recognized as an Early Career Award winner by her doctoral training institution, Indiana University. She was selected based on the quality of her early career research and the impact she is having on the field of psychology.

Benitez received her developmental psychology training under the mentorship of Linda Smith, a renowned professor in the field of cognitive development.

"I received the email early this year that I was selected, and I was just very proud, surprised and also very humbled to have received it. The training I received from Dr. Smith really enabled me to become the scientist I am today, and for that I am grateful," Benitez said.

To accept the award, Benitez flew back to Indiana for a reception dinner with her academic peers and family. At the ceremony, she acknowledged another prominent faculty member from Arizona State University — the late Martha E. Bernal, the first Latina PhD in psychology, which she also received from Indiana University, who studied ethnic identity development among Mexican American children.

Bernal is recognized as a groundbreaking figure in the fields of clinical and developmental psychology, and contributed significantly to the advancement of ethnic minority psychology. Each year, ASU's Department of Psychology also awards The Martha E. Bernal Memorial Scholarship Award to deserving doctoral students who are contributing to research on ethnic identity and minority mental health.

"I have also been reflecting about Martha Bernal's story and how she may have made it a little easier for someone like me — a daughter of immigrants who is an English-as-a-second-language learner and a first-generation college student — to be able to complete a PhD," said Benitez. "Additionally, for ASU to be recognized as a Hispanic-Serving Institution, I think is really amazing. We're serving a lot of Latino

students, and in particular, in our work, we focus on bilingualism, which is an important factor in the Latino experience."

This course Benitez is launching in the spring, titled "Learning words across language and development," is designed to provide the hands-on psychology learning required for continuing training and graduate education. In it, ASU Online students will engage in a 15-week research opportunity to examine the mechanisms of word learning and bilingualism across development.

While the students are working remotely, they will attend weekly meetings with the Learning & Development Lab and help to conduct a literature review on bilingual word learning, design experiments to fill gaps in the literature, and conduct research with adults and children via Zoom.

"Right now, we're conducting a study in which we're inviting parents to read bilingual books to their young child, aged 3 to 4. We're interested in how caregivers incorporate both languages as they are reading to their child," said Benitez. "I'm very excited for this cohort of students and for all that they will have the opportunity to accomplish."



Study shows violating intentions related to drinking predicts future alcohol problems in young adults

By Kim D'Ardenne

Drinking to excess is bad for your health and was recently identified as a leading cause of death among Americans aged 20 to 49 years.

Research from Arizona State
University has shown that
drinking more than planned is
a stronger predictor of future
drinking problems than actual
consumption or impulsive
personality traits in young adults.
The study was published in
Addictive Behaviors.

"Intending to have only a few drinks or to go out for a certain amount of time and violating those intentions predicted long-term, alcohol-related problems and consequences more than alcohol use itself," said Julie A. Patock-Peckham, research assistant professor in the ASU Department of Psychology.

Setting an intention to drink a limited amount or to drink for only a specific amount of time and then violating that goal is called impaired control over drinking by researchers who study addiction.

The study included 448 young adults aged 21 to 25 years who, after initial testing, underwent follow-ups six and 12 months later. Because impaired control over drinking could be related to how impulsive people are, the researchers measured general impulsiveness in addition to how much alcohol the participants consumed at each time point.

The six- and 12-month follow-up sessions let the researchers test whether impulsive personality traits or drinking more than intended were associated with problem drinking in the future.

Impulsivity traits predicted drinking behaviors, but the strongest indicator of future drinking problems was impaired control — intending to drink a certain amount and then exceeding that intention.

"It could be that impaired control over drinking is a sign that someone already has a problem, but the prospective nature of this study let us show that impaired control longitudinally predicted drinking problems and was distinct from trait impulsivity," said William Corbin, professor of psychology at ASU. "Impaired control over drinking is not a byproduct of impulsivity. It is a marker that drinking problems could escalate in the future and is an important early intervention target."

This work was funded by the National Institute for Alcohol Abuse and Alcoholism and the Burton Family Foundation.

What is your dog really feeling?

You may think you know what your dog is feeling, but do you really? Research in the Arizona State University Department of Psychology suggests that we may not be as successful in guessing our dog's emotions as we think we are.

Holly Molinaro is a psychology doctoral student in the Behavioral Neuroscience and Comparative Psychology training program in the Department of Psychology. She was recently announced as a winner of the ISSR graduate poster competition along with fellow psychology student Nayen Lee.

She is part of the Canine Science Collaboratory under the mentorship of Clive Wynne, dog expert and professor of psychology.

Molinaro's undergraduate education came from Stetson University in Florida, where she studied pygmy rattlesnake behavior, and she received a master's at Sonoma State, where she studied the social behavior of baboons. At ASU, she is expanding her research to focus on animal emotion and cognition, specifically on positive emotions.

"I was really interested in the positive emotion aspect of animals because that's really understudied," said Molinaro. "Animal behavior is so broad, and most animal emotion research is focused on the negative emotions, like 'how can we stop animals from feeling these negative emotions?' But we don't have a lot of research on how can we increase their positive emotions, let alone how can we even understand if they're feeling good or bad."

The research done at the Canine Science Collaboratory currently centers around four domains: dog welfare at the animal shelter; behavioral problems at home; human-dog interaction; and dog's wild relatives and what they can tell us about what makes dogs unique. Molinaro hopes that her positive emotion work helps to improve the welfare of rescue dogs and for people to give animals a chance in a new environment.

"What I've recently done was look at human perception of dog emotion and how the context plays a role in it and how the situation or context influences how we think the dog's feeling," said Molinaro.

Molinaro edited video clips where dogs were either in an agitated state or a positive state and altered the context surrounding the moments. The dogs were either presented with a typically negative stimulus, such as a cat or a vacuum cleaner, or a positive

stimulus, such as a treat.

"For one study, I just took away the context," said Molinaro. "You just show a video of the dog and ask people how good or bad you think the dog is feeling, how calm or agitated you think the dog is feeling. And then I show them the same videos with the context back in, and we found that it definitely changes how people view the dog's emotions."

She found this interesting and continued into another study of swapping the context leading up to the dog behavior.

"I took it a step further and I mixed up the video context. The dog might look like it's getting a treat, but it was really being scared by the vacuum. What we found with that is no matter what the dog's doing, people rate the dogs really good or bad based on the context. If the dog is being shown receiving a treat, participants always felt that the dog is feeling good even if that video is actually a dog being scared or reprimanded," said Molinaro.

Molinaro's advice for the general public is to understand that we may be reading the situation and not actually the animal's behavior.

Psychology undergraduate aims to better understand the role of discrimination in sleep

By Rob Ewing

Crystal Li, an Arizona State
University undergraduate
psychology major with a minor
in Spanish, hopes to make a
difference in diverse communities
through graduate research.

When she was in high school, she volunteered in an underserved community in the San Francisco Bay Area that had just been hit with a U.S. Immigration and Customs Enforcement raid for undocumented immigrants. Her internship gave her firsthand experience with the impact that research and interventions can have on the youth in the community. She conducted research with the students, and from that point on, she knew that she wanted to pursue psychology research.

"The first lab that I joined was the Adolescent Stress and Emotion Lab with Professor Leah Doane. I've been in that lab for almost two years now, and the other lab that I'm a part of is the Arizona Twin Project with professors Mary Davis and Kathryn Lemery-Chalfant," Li said. "Coming into college, I really didn't know what specifically my research interests were, but all I knew was that I really wanted to prioritize working in a lab that worked with diverse populations."

The Adolescent Stress and Emotion Lab conducts research on child and adolescent wellbeing using physiological, psychological and contextual factors with a particular focus on stress.

"We focus on understanding daily

experiences, physiology and sleep in the prediction of health and academic trajectories, as well as how transactions between culture and neurobiological systems may influence these pathways across development," Doane said.

While conducting research in the lab, Li was mentored by graduate student Jeri Sasser, a graduate mentor in the ASU ENERGIZE project, which guides underrepresented students in psychology and neuroscience to streamline the process of conducting research to prepare for graduate school. This mentorship encouraged Li to also give back as an

undergraduate mentor in the program.

"I'm currently an ENERGIZE peer mentor. This means that I mentor students about labs and connect them to resources, as well as check in and see how everything's going. I think that's really a nice little thing to do because Jeri was that person for me when I joined the Adolescent Stress and Emotion Lab. Mentorship is so important to inspire students to continue pursuing research and to believe that they have a place in research," Li said.

Li is currently applying to doctoral programs for developmental psychology. Her future research interests are in studying culture, sleep and stress, and academics and their role in development among ethnic, racial and minority youth.

This fall, Li also defended her honors thesis as part of the psychology honors seminar on the relationship between ethnic racial discrimination and both objective and subjective measures of sleep among Latino students in their transition to college.

"I presented to my classmates as well as my thesis committee, which was Dr. Doane, Dr. Jinni Su, Dr. Thao Ha and Jeri Sasser," Li said. "It was such a wonderful experience, but I'm so glad it is over now! I spent over a year and a half on the project, and to see it through to completion was extremely validating."

Li's advice to other students who are scared of pursuing research? Just go for it.

"I was very scared to join a lab because I had no idea what to expect and I didn't know if I was well-suited for that kind of environment. Research can be really daunting for students – that's why I really appreciate what ENERGIZE is doing, and I wish I'd known about it when I was initially applying to labs," Li said.

"Something that I'm really interested in looking at is continuing my investigation of my honors thesis on discrimination in sleep and further exploring protective factors that can help protect you from harmful effects of discrimination," Li said. "Transitioning into higher education is difficult for many people, and when you add in any kind of race-based stressor, that can be a huge barrier."



By Kim D'Ardenne

Many American adults aged 40 to 65 are struggling.

The life expectancy of this group is declining, driven by disease and "deaths of despair" like drug overdoses and suicide. Research from Arizona State University has shown they are also less healthy, mentally and physically, than previous generations of Americans were in midlife.

Frank Infurna, associate professor of psychology at ASU, is determined to find out why this is happening and what can be done to mitigate or even prevent these phenomena.

"Our previous work has shown that middle-aged adults in Germany, Mexico and South Korea are thriving. People born in the 1960s in those countries are doing better than people born in the 1940s and 1950s. But in the U.S., the opposite is true. Middleaged Americans are doing worse than their same-age peers in other countries and compared to other birth cohorts of Americans." Infurna said. "We want to know if these trends exist in other highincome countries like the U.S. and quantify any differences."

Infurna was recently awarded five years of funding from the National Institute of Aging to dig into how the experience of middleaged Americans directly compares to middle-aged adults in other wealthy, industrialized nations across the world.

The power of harmonized data

To study middle-aged Americans, Infurna relies on large datasets that include information about mental and physical health, years of education and finances.

These data sets are made up of nationally representative samples, which means that demographic characteristics like age, race, ethnicity, gender, marital status, income, education and employment of the participant group are matched to the country as a whole. Such data sets give researchers like Infurna a broad picture of what middle-aged adults experience.

When the information that makes up these data sets is collected in different ways — for example cognitive health might be measured using two distinct questionnaires — researchers can only make indirect comparisons based on general trends. Previous work from Infurna's lab has compared middle-aged Americans to peers in other countries, such as Mexico, South Korea, Australia and Germany, in this way.

Infurna's current work will leverage harmonized data, which means the contents of one large-scale data set can be directly compared to another. This project will use nationally representative data sets from the U.S., England, South Korea, China, Mexico and parts of Europe, including Germany, Spain, France, Greece and Italy. In summary, the researchers will compare middle-aged Americans to their peers located in 16 other countries.

"These data sets are big, which is important for the questions we want to answer. The U.S. data set — The (University of Michigan) Health and Retirement Study — includes over 30,000 Americans older than 50 years," Infurna said. "We expect that in total, we will be analyzing data from over 100,000 people across the world."

The harmonized data will let the research team trace the life trajectories that lead to mental and physical health differences between middle-aged Americans and the rest of the world. They will be able to examine finances (like the impact of overall household wealth, income and debt), including specifics about out-of-pocket health care expenses. Comparison of physical activity levels and how middle-aged adults across the world balance caring of aging parents with having children are also possible topics of study.

"This work is the first step in studying the extent to which differences exist and uncovering reasons why differences exist across countries," Infurna said. "Any findings could also contribute to identifying factors that can promote resilience among adults in midlife and inform prevention and intervention efforts."





Jinni Su, an assistant professor in Arizona State University's Department of Psychology, knows the importance of scientific research in the fight against addiction, mental health problems and substance abuse. She conducts research on alcohol abuse within marginalized populations, with recent findings highlighting the link between racial discrimination and drinking, the protective role of personality and problem drinking, and the importance of parents during the transition to college during the pandemic.

Su, a developmental psychologist with training in human development and statistical/molecular genetics, recently gave a presentation on behalf of the Wellness, Advocacy, Voices, Education and Support (WAVES) initiative from the organization United Chinese Americans. She

spoke in Chinese about alcohol use, mental health and supporting adolescent Chinese Americans.

"I study adolescent and young adult mental health and alcohol use-related problems. I try to understand the risk and protective factors that influence mental health and alcohol use-related problems," said Su. "One of my focuses is trying to understand these processes within racial and ethnic minority populations, because they face their own unique challenges and they are relatively underrepresented in research."

Drinking as a coping mechanism for issues like the increased stress from the pandemic, inflation or to cope with discrimination can lead to long-term challenges. Over 3,500 people died from alcoholrelated causes in Arizona in 2022, and 60% of those cases came from issues related to chronic overuse of alcohol, such as Alcohol Use Disorder.

"My dream is, of course, to have my work be impactful and to be a change leader to inform practices, prevention and education programs that can actually help serve the people," said Su.

Over 305,851 Asian
American/Pacific Islanders
live in Maricopa County,
and the population has
experienced a growth rate
of 138% since 2000. Many
of them speak English as a
second language, and so
speaking about research in
Chinese makes a difference

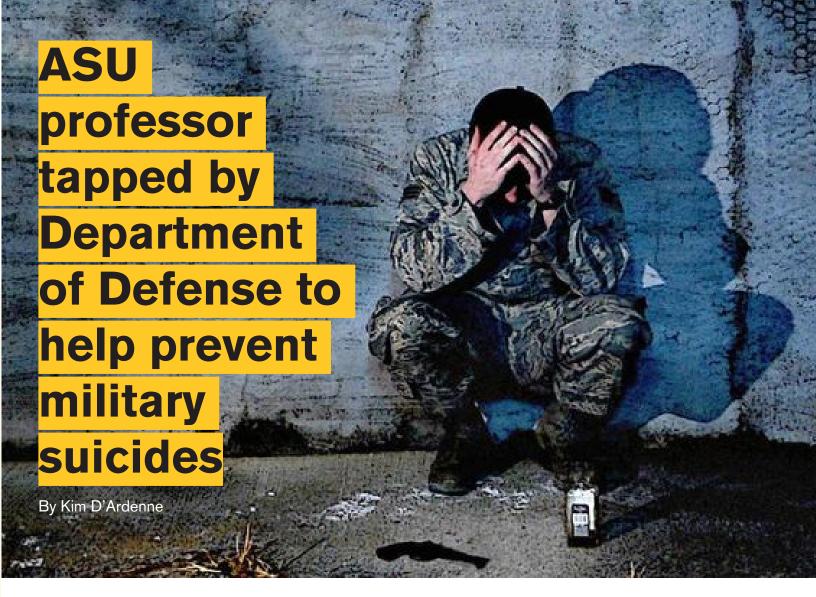
in connecting with the community and preventing problems such as adolescent alcohol abuse.

According to the UCA WAVES, many Chinese American adolescents suffer mental health challenges in silence due to the stigma associated with seeking out treatment and may turn to alternative methods for coping with the challenges of bilingualism or discrimination.

"It's really special to me that I have the opportunity to engage with people who are working on the front line of the WAVES program — a program that is interacting with my community members and serving them," said Su, adding, "I hope I can get more and more involved and be able to contribute to promoting the mental health of Chinese American adolescents."

Related: ASU launches first online master's degree in addiction psychology with in-person practicum





Rebecca Blais named to Suicide Prevention and Response Independent Review Committee

More than four times as many military service personnel and veterans have died by suicide than as a result of military operations since 2001.

The rates of death by suicide among military personnel have also been increasing, and in the 2022 National Defense Authorization Act, Congress mandated the creation of an independent assessment of the issue. On March 22, Lloyd J. Austin III, the secretary of defense, announced the Suicide Prevention and Response Independent Review Committee.

The committee of 10 includes clinical psychologists, epidemiologists, social workers, doctors, retired military and a chaplain. The group has expertise in suicide ideation and mortality,

mental health disorders, substance use, sexual assault and weapon safety.

One of the clinical psychologists is Rebecca Blais, associate professor of psychology at Arizona State University. Her research studies the link between military sexual trauma and suicide and how to best support military service personnel who have experienced sexual violence.

"Exposure to sexual trauma in the military is one of the biggest risks for death by suicide. A service person who has been exposed to sexual trauma in the military is four times more likely to experience suicidal ideation — thoughts of suicide — than someone who has been exposed to combat trauma," Blais said.

"Dr. Blais was specifically requested to contribute to this mission based on her critical expertise in working with the military," said Tim Hoyt, deputy director for force resiliency in the Office of the Under Secretary of Defense for Personnel and Readiness. "She has a nuanced understanding of the multitude of risk factors faced by the men and women in uniform, and we look forward to her recommendations as a member of the committee."

Over the next several months, Blais will be traveling a lot with the Suicide Prevention and Response Independent Review Committee. The committee meets at least once a month at the Pentagon. The group will also complete nine site visits at locations including Camp Humphreys in the Republic of Korea, the Naval Air Station North Island in California, Camp Lejeune in North Carolina, and three locations in Alaska that have experienced increases in active duty personnel dying by suicide.

"These nine locations include each of the military services and a wide variety of geographic locations where service members are stationed," Hoyt said.

During the site visits, the committee will conduct focus groups with service members and military leadership as well as individual interviews, and will confidentially survey service personnel.

"We plan to stay on base as much as possible so we can get a 360-degree perspective. We also will be available outside of formal interviews and meetings — like hanging out in the gym or at a coffee kiosk for the day — to give people the opportunity to come talk about topics they might not be comfortable saying in front of others," said Blais, who understands the importance of connecting with service members in unique environments to facilitate open communication. She has conducted therapy for veterans while downhill skiing and working on motorcycles.

In addition to the site visits, the committee will conduct an exhaustive review of suicide prevention and response programs, and will work to identify factors that can help prevent death by suicide.

"Military sexual trauma is just one concern," Blais said. "We will also be looking at financial concerns, housing and neighborhood safety, and food security. Current issues with inflation are exacerbating an already challenging living arrangement for many. We will also consider how remote or isolated a base is, and broadly how military culture views and discusses suicide."

By Dec. 20, the committee will deliver a report to the secretary of defense that makes recommendations for policy changes for the military community at large and also for the specific sites that were visited. The findings and recommendations of the committee will be presented to Congress in February 2023 and will be implemented by the Office of Force Resiliency.

"Suicide within the military is such an important issue, one that affects so many lives," said Steven Neuberg, Foundation Professor and chair of the ASU Department of Psychology. "Professor Blais has considerable evidence-based expertise and insights into this problem, and we're happy that our department can contribute to solutions through her service on this important independent review committee."

Military personnel, veterans or their loved ones who are experiencing thoughts of suicide may contact the Military/Veterans Crisis Line, a confidential support available 24 hours a day, seven days a week, at 1-800-273-8255 (press 1), via text at 838255, or chat at www.veteranscrisisline.net.



Translating addiction research into real-world interventions

By Rob Ewing



One of the challenges in combating substance use disorders (SUDs), from nicotine addiction to the opioid epidemic, is the disconnect between the worlds of academic research and community practice. Agencies working to make a difference within local communities often feel they cannot access or benefit from cutting-edge research.

These community agencies also have no direct way to influence the research agenda, despite having valuable insight into the questions for which answers are most urgently needed and an informed perspective on what approaches are more or less likely to work in real-world settings.

A new effort from Arizona State University is hoping to change that, while also providing new, state-of-the-art training for the fight against problems linked to addiction.

Since the launch of the Substance
Use and Addiction Translational
Research Network (SATRN)
in December 2020, the group

has built a rich and diverse community bridging academic researchers and community agencies throughout Arizona, all working in prevention, treatment and policy related to SUDs. SATRN's mission is to foster communication and collaboration among its affiliates, and to support new research that will have a meaningful impact on individual and societal problems related to addiction.

Leading the SATRN effort is



Michelle "Lani" Shiota, an associate professor of psychology at ASU. Her own research investigates positive emotions, emotion regulation, emotion in close relationships and emotion-related mechanisms of behavior change.

"SATRN is an amazing community, and I'm grateful for all our members who bring diverse knowledge and lived experience to the table." said Shiota. "So much goodwill and resources are being devoted to issues around substance use disorder. All of us working in this space share a passion for finding ways to improve people's health and well-being, but it's a complicated set of intertwined problems, and we may come at them from very different perspectives. Each individual holds one puzzle piece-worth of knowledge. If we can put all those pieces together, we should be able to see the bigger picture that emerges, identify key gaps in the picture where more research is needed, and find the best points of leverage for improving people's lives."

A particularly important partner in this work is SATRN Steering Committee Member Matt Meier, also director of the Master of Science in Addiction Psychology program and codirector of clinical training at the ASU Clinical Psychology Center. Meier is a pivotal figure in multiple efforts related to SUDs across ASU and leads a \$1.3 million HRSA grant training providers in addiction treatment and management. This new program aims to expand access to care to more people in need, with particular emphasis on telehealth and cultural competence in working with Native American populations. Meier and Shiota are also working to develop a new program providing online continuing education training that will share cutting-edge science directly with the behavioral health community.

Another central SATRN initiative is its Glen
J. Swette Seed Grant program, which funds innovative, early-stage research led by academic and community partners in collaboration.

Examples include a project tracking the effects of cannabis legalization in Arizona, led by Madeline Meier of ASU, Anne Boustead of

the University of Arizona and the MATFORCE coalition; as well as a new intervention aimed at preventing substance use among children of incarcerated parents, led by ASU's Liza Hita and Helena Valenzuela of the Arizona Department of Corrections.

Another seed grant-funded project, led by ASU's Raminta Daniulaityte and Haley Coles of <u>Sonoran Prevention Works</u>, has studied the potential of drug-checking services to detect fentanyl in street drugs, potentially saving lives.

SATRN also hosts a lunchtime brown-bag talk series each semester of the academic year; working groups on topics of shared interest including harm reduction, youth messaging surrounding marijuana, neonatal abstinence syndrome and new parents, and dissemination, implementation and adaptation across cultural contexts; and an annual meeting where members can network, share knowledge and form new collaborations.

"Our hope is that through enhanced communication and collaboration, research on addiction and substance use disorders can move at a faster pace and ask the right questions, and that policy is able to follow," said Shiota.

To keep up to date on SATRN's activities, email <u>SATRN Administrative Associate Camille Avila to</u> be added to SATRN's newsletter and email lists.

Using curiosity to build resilience in children

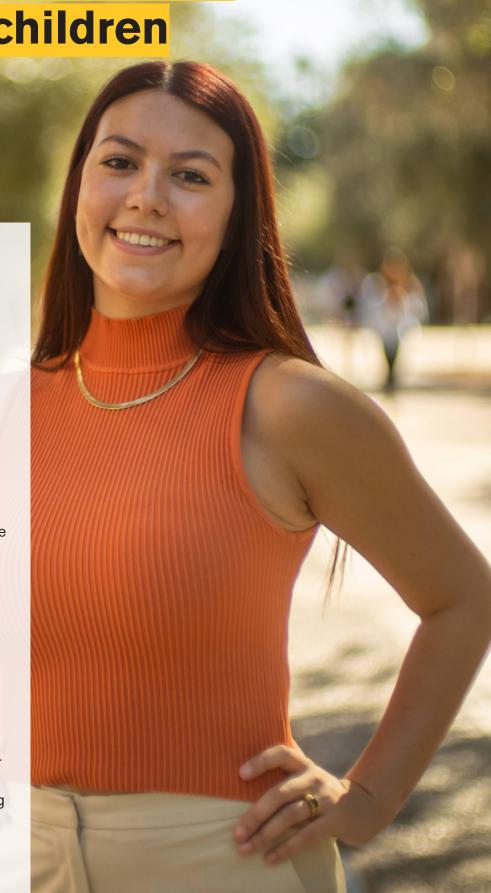
By Rob Ewing

Paola Hernandez receives prestigious scholarship to support her research

While in high school, Paola
Hernandez worked as a nurse aide
at a local hospital in Texas, a state
where, according to a 2022 report
by the Texas Care for Children,
from 2009 to 2019, there was a
35% increase in the number of high
school students who reported that
they attempted suicide, and over
3,000 children are on waitlists with
reported extensive mental health care
needs that aren't being met.

Hernandez saw the need for psychiatric assistance for younger patients first-hand at the hospital where she worked. That experience sparked an interest in helping children with adverse childhood experiences and traumas.

"My family always supported me in whatever I wanted to do, but they didn't have the experience to answer many of the complicated questions, such as course selection, or planning my academic future," Rodriguez said. "They always emphasized that I needed to think about my future and



have a career because that was something they never had the chance to do."

When Rodriguez found out that she was named the Dean's medalist, she called her family and they were both excited and stunned.

"I had never won an award like this before, so for them to hear that I was the winner was really validating," Rodriguez said. "My family is all really proud of me and excited for me."

Rodriguez hopes to become a clinical psychologist specializing in children and families, and aims to make a difference in the lives of children who are struggling to cope with emotion or conflict.

"I would love to have my own practice for children, adolescents, and families and specialize in mental health and social-emotional development," she said.

"I wanted to learn more about the preventative measures that can be taken," Hernandez said. "There is so much we can do to help build resilience in young children who have experienced trauma or adversity."

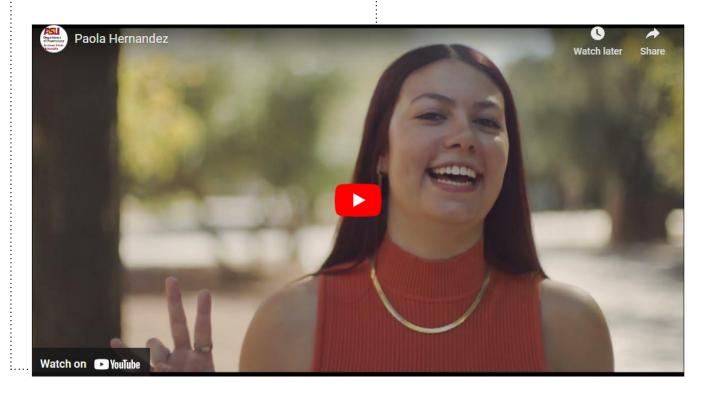
Today, as a psychology major at Barrett, The Honors College at Arizona State University, Hernandez is channeling that early influence into research. She was recently awarded the Jenessa Shapiro Undergraduate Research Scholarship, which she hopes to use to explore how curiosity can help children's mental health.

Hernandez joined the Emerging Minds Lab with Assistant Professor Kelsey Lucca, an NSF Early Career Award winner, to better understand the impact of childhood trauma on curiosity and resilience. The lab conducts research investigating how infants and young children learn about the world around them, with a primary focus on curiosity.

"It is so important to work with young children, because their minds are still developing. This is why it's so crucial to start therapy and start those prevention methods at that time, because once the brain fully develops, it's a lot harder to work on those areas. When you can build right at the beginning, it helps to set them up with resources, coping mechanisms and things that they can do while they're growing up," Hernandez said.

Hernandez is currently developing her thesis based on research that she's been assisting with at the lab on parent-infant interactions during playtime and how that promotes resilience and curiosity. Specifically, she is interested in how parents introduce new toys to children.

"Paola joined our lab through ASU's ENERGIZE program. A graduate student mentor helped Paola



match with a lab that shared her interests," said Lucca. "Since arriving in our lab, Paola has been working on a project exploring early curiosity and persistence in young infants. Paola has a long-standing interest in children's resilience, and in her thesis project, she is exploring the origins of resilience by testing how infants react to new challenges."

In her study, the "challenging task" Hernandez is figuring out is how a novel toy works to promote a child's curiosity. She developed a new coding protocol called "PICE" (parents' role in infant curiosity through exploration) that captures both how parents introduce a novel toy to their infants and how infants subsequently interact with and explore that toy.

The parents and children play together for five minutes and then a new toy is introduced, enabling the child to explore. The lab doesn't prompt the parents on how they should interact with the children, and this enables the lab to watch how the parents engage with their child.

"We want to know: Do they ask questions? Do they describe the toy? Do they kind of put it aside? Are they very involved in the play session? Do they kind of just sit back and watch? All of these are important to understand for us to see how that affects the infant's exploration. Do they explore more when their parent is more engaged or when their parents are just observing?" said Hernandez.

The lab is in the coding stages of this research project and hopes to better understand this question as their project continues.

"The findings from Paola's research will be used to provide new insights into how caregivers can support children in overcoming challenges at the very earliest stages of development. Paola has been collaborating with her graduate student mentor, Nayen Lee, on this project, and together they submitted an abstract for this project to the upcoming Society for Research in Child Development conference," said Lucca.

Since joining the lab, Hernandez has also been an active member of the ENERGIZE program

and has helped mentor new students to learn about research opportunities, similar to her experience a few years ago.

"Last spring, our lab, together with the ENERGIZE team, co-hosted our inaugural "Who Wants to be a Researcher?" trivia night — an event for undergraduates designed to showcase research happening across the department. Paola was the co-host of this event and served as an undergraduate student panelist, alongside graduate student Jeri Sasser and my lab's former lab manager, Sarah Kiefer, who is now a PhD student in psychology at Brown University," said Lucca.

This experience in the research environment opened Hernandez's eyes to what possibilities were out there.

"Research comes with a lot of trial and error. Everything is constantly changing, and you are always realizing new things after coding the data," said Hernandez. "It has really prepared me for graduate school knowing that everything doesn't have to be perfect, and you often learn the most from the times when things aren't going the way you expected them to."

Hernandez travels from Mesa to conduct her research in the lab, and the funding from the Shapiro scholarship enables her to pursue research without needing to find an additional job to pay for the transportation.

The Jenessa Shapiro Undergraduate Research Scholarship provides funding up to \$5,000 for underrepresented students to pursue research in a psychology research lab. The scholarship was created with the awareness that ENERGIZE students may face financial challenges that preclude their ability to take advantage of research opportunities.

"Since I'm currently doing research on curiosity, it would be really fun to kind of tie that into the graduate school research I want to do on trauma, adversity and resilience. I've always really been interested in focusing my research on marginalized populations and groups because, unfortunately, they're very underrepresented in science," Hernandez said. "I would like to do research on families that have undergone adversity, and how that may actually impact a child's curiosity, since that's a big part of their learning development."



Kieran Andrew to present at the Emerging Researchers National Conference in Washington, D.C.

For one undergraduate student, major life decisions serendipitously happen around the dinner table.

Kieran Andrew, a student at Arizona State University's Barrett, The Honors College double majoring in psychology and neuroscience, began his research journey as a high school junior who happened to be sitting with his future mentor, President's Professor Heather Bimonte-Nelson, at a graduation dinner gathering with mutual family friends.

He began to talk with her about the research in her lab, Behavioral Neuroscience of Memory & Aging lab, and was offered a chance to participate as a volunteer researcher as a senior in high school. Four years later, while Andrew was once again seated at Bimonte-Nelson's dinner table during a laboratory gathering, he completed an application for a travel scholarship right before the deadline. His mentor and peers from the lab pushed him to finish and offered support while celebrating.

He recently was announced as the recipient of one of the travel awards for the Emerging Researchers National (ERN) Conference in Washington, D.C. The ERN Conference in Science, Technology, Engineering and Mathematics is hosted by the American Association for the Advancement of Science, Inclusive STEM Ecosystems for Equity & Diversity Programs and the National Science Foundation Division of Human Resource Development within the Directorate for Education and Human Resources.

At this conference, Andrew will present research that he has been working on since high school in the Bimonte-Nelson lab on sex differences in Alzheimer's disease in a transgenic animal model.

"Being hands-on with the projects in the lab has been incredibly helpful, as well as the large breadth of experience I've been able to get from not just people in my life, but the people I've been able to meet through lab connections," Andrew said.

The Bimonte-Nelson lab aims to characterize the cognitive and brain changes that occur during aging, as well as develop behavioral and pharmacological strategies to attenuate mnemonic and neurobiological age-related alterations. Andrew assists with conducting the memory tests in the lab, as well as performs complex data processing, scoring and analyses.

"I first met Kieran when he was a high school student, in a casual environment — even in this atmosphere, just from chatting with him informally about what our lab does, he showed an innate curiosity and asked insightful questions," Bimonte-Nelson said. "Over the years working with him on a weekly basis, it has become clear to me that he has a deeply critical and intellectual mind - he is a born scientist. He has had valued contributions in the lab spanning performing experimental physiological procedures to cognitive testing, and he has also done an excellent job teaching other lab students, mentoring with both knowledge and patience. He especially excels at deciphering and analyzing complex data patterns."

"I cannot wait to see what the future holds for Kieran. He has worked so hard. This is just the beginning of a wonderful journey for him," Bimonte-Nelson said. "Whichever of his dreams he pursues — becoming a neurosurgeon or continuing his research in a doctoral program — he will excel and make the world a better place."

Bimonte-Nelson also hosts brain fairs for the community and aims to expand access to neuroscience for all levels of learners.

"For me, it has been super helpful to have a mentor like Heather. I don't think I would be able to receive awards without her — I'm generally the guy who's just quiet and gets the work done and then just waits until the next thing is ready to pop up. But with Heather, she's a very proactive mentor and she definitely wants the best for her students, and that is more than I could ask for," said Andrew.

Through a project with Bimonte-Nelson, he is also part of ASU's NSF-funded Louis Stokes Alliance for Minority Participation – Western Alliance to Expand Student Opportunities program, which aims to support undergraduate researchers that have been historically underrepresented in STEM. Andrew recently presented research at the Arizona Alzheimer's Consortium as well, where he was an author on three posters, including one in collaboration with the Banner Alzheimer's Institute.

"I was able to create a regression tree from the MRI data to see how well people performed in our tasks and what brain areas were associated with performance. This project analyzed the executive function of the brain. While it was an introductory study, I presented data on possible ways we can analyze this type of research," Andrew said.

In addition to his presentations at AAC and in Washington, D.C., for ERN, Andrew is conducting an honors thesis.

"I'm leaning toward experimentally testing learning and memory interference as we age," Andrew said. "A related study was done in our lab before I was in it, but there are many questions left. I am interested in revisiting that topic."

In the future, he is deciding between pursuing an MD in neurosurgery or a PhD in computational neuroscience.



ASU President's Professor Douglas Kenrick recognized for contributions to evolutionary psychology

The Human Behavior and Evolution Society recently announced that ASU President's Professor Douglas Kenrick is the 2022 recipient of the Lifetime Career Award for Distinguished Scientific Contributions.

Kenrick was previously the president of the Human Behavior and Evolution Society in 2018 and is the author of "Solving Modern Problems with a Stone-Age Brain."

The Human Behavior and Evolution Society is an interdisciplinary society of those studying human behavior from an evolutionary perspective and

includes scientists from the anthropological, psychological and biological sciences. Previous winners of the Lifetime Career Award include Randy Nesse, professor and founder of the ASU Center for Evolutionary Medicine; Steven Pinker, the Johnstone Family Professor of Psychology at Harvard University; Martin Daly, emeritus professor of psychology at McMaster University; Leda Cosmides, Distinguished Professor at the University of California, Santa Barbara; and David Buss, professor at the University of Texas, Austin. The award is considered one of the highest honors an evolutionary psychologist can receive.

"The HBES Lifetime Career Award for Distinguished Scientific Contribution is awarded to HBES members who have made distinguished theoretical or empirical contributions to basic research in evolution and human behavior," Kenrick said. "It is an honor to be considered among the greats in our field. To be given this award is about as good as I could do in my life."

Kenrick, an evolutionary social psychologist, investigates how human social behavior and thought might reflect biological adaptations that influenced our ancestors' survival and reproductive success.

He is the co-director of the Evolutionary Social Cognition Lab with Foundation Professor Steven Neuberg and D. Vaughn Becker, associate professor in the ASU Human Systems Engineering Program. Over the course of his research career, Kenrick and his team have mentored hundreds of undergraduate and graduate students.

The lab combines theoretical and conceptual frameworks to answer questions about how social goals can influence people's perceptions, beliefs and decisions.

RELATED: Modern technology vs. our stoneage brains

In 2010, Kenrick published a new model of human motivation together with Neuberg and two ASU alums, Vladas Griskevicius and Mark Schaller. This model is an adaptation of Maslow's hierarchy and places kin care at the top of the pyramid of needs.

"We focus, in particular, on the ways in which self-protection, mating, status-striving, social affiliation, disease avoidance and kin care goals selectively facilitate who we pay attention to, who we remember and how we choose to behave toward other people," Kenrick said.

Although evolutionary psychology has often been seen as the study of "selfish genes," and been misconstrued to imply that selfish genes translate into selfish people, Kenrick suggests that the best evidence from psychology, anthropology and human biology suggests that our ancestors, who needed their group members to survive and reproduce, were selected for cooperation rather than individual selfishness.

"We're designed to live in groups. We're designed for our genes to do better when we are nice, not when we're nasty. Your genes might be selfish, but if you're a selfish person, you're going to be socially isolated," Kenrick said. "People don't want to deal with you if you're nasty, whether you are a group member or a leader. Some people have presumed that if you're a domineering, pushy, nasty person, you can get somewhere in life; but if you slip up when you use that strategy, the other group members are going to want to remove you.

"If you're a nice leader, on the other hand — somebody who cares about the group and who shares information — people will like you and want to keep you on as a leader. And there's a side benefit: Research demonstrates not only that other people like you more if you are cooperative and supportive, you are also likely to feel better about yourself. We seem to be naturally inclined to feel good when we make others feel good.

"So the bottom line seems to be: The best thing you can do for yourself is to be unselfish."





Addiction is a challenge that hits people in different ways. Often substances that one person has no issue with can become problematic for another person, and Matthew Broussard, an ASU Online graduate student in the addiction psychology master's degree program, hopes to find out why this is.

"Substances as a whole are utilized in our culture for a ton of different reasons. We use coffee to be stimulated and be more focused at work. We use alcohol to relax and unwind with friends. Some subgroups of Indigenous tribes use plants for ceremonial purposes or religious purposes," Broussard said. "But there seems to be a problem with some people using those tools or those drugs to cope with traumas or depression or anxieties in a way that's maladaptive and detrimental to their health

"I'm really interested in focusing on why are some people able to utilize these substances in a positive way, in a way that's adaptive and can help them in their life, and why are some people using it in a way that is detrimental to their lives?"

Broussard graduated from the Department of Psychology with bachelor's degrees in psychology and philosophy and continued to earn a master's degree in the science of health care delivery from the College of Health Solutions. While in this program he was named an NSF scholar in the Graduate Research Fellowship Program and conducted research on the impact of childhood trauma on substance use. He also conducted research as an

undergraduate research assistant in the Substance Use, Health, and Behavior Lab, the Social Addictions Impulse Lab and the Clinical and Translational Science Lab.

As an undergraduate, he founded the Ecstasis Club, which focused on leading academic conversations and workshops surrounding altered states of consciousness. In the context of psychoactive drugs, they hosted seminars on harm reduction and provided educational resources for prevention purposes.

"Right now I'm transitioning into client-based practice for more clinical experience, getting my license and owning an addictions counseling firm. I previously studied health care delivery at the Downtown (Phoenix) campus, which was more of an administrative approach to health care and research," Broussard said.

Broussard aims to own a private addictions practice in the future and hopes to continue on to a clinical psychology doctoral program. He understood the necessity of gaining handson training for a more holistic approach to health care.

"My strategy is to take a holistic approach without having judgment because there is a lot of shame involved. There is a lot of guilt involved. Removing judgment and focusing on being able to just try to understand what's going on in a patient's life and how can we help is a really beneficial approach because a lot of providers don't get that right," he said.

Broussard knows from personal

experience the impact that trauma and addiction can have on a family.

"Throughout my childhood, I've been exposed to certain family members using substances in a very negative way and I can see how that impacted our family dynamic. I was really interested in understanding the underlying mechanisms even from an early age.
Why were certain members able to manage substance use without any issues and others couldn't?"

He was drawn into the Master of Science in addiction psychology program because it is an accelerated program with required practicum hours guided by professionals with decades of experience. The program is not just specific to licensure in Arizona, so the coursework and hours are broadly applicable to licensure in other states as well.

"I really don't know where I'm going to end up. But this program allows me to have a lot of possibilities. I can look at the requirements for licensure in other states and see if I meet those requirements or what other steps are necessary," Broussard said. "This master's program has been very applicable, and it's really cool to take the skills that we learn and immediately apply them into our clinical setting."



A successful transition to college life is the first step to graduation. Among Latino college students, graduation rates are on the rise but still lag behind other ethnic groups.

New research from the Arizona State University Department of Psychology has demonstrated the importance of family relationships for Latino students as they adapt to college. Family dynamics – especially communication and parent awareness of their child's daily lives – had both immediate and long-term protective effects on student well-being. The study was published in Developmental Psychology.

"Family really matters. We examined how family dynamics during the last year of high school and across the first year of college impacted Latino students' transition to college. What we found is that family communication has lasting and positive benefits on the adjustment to university life," said Jeri Sasser, an ASU psychology graduate student and first author on the paper.

The research team followed 207 Latino students during their last year in high school and first year of college. The study participants completed questionnaires about family communication, parent support and knowledge of their daily lives, and their own well-being when they were in high school and during their first and second semesters of college. The questions about family communication assessed the quality of communication between the students and family members such as parents, grandparents, siblings, aunts and uncles. The student well-being measures included alcohol use and levels of depressive symptoms.

Positive family communication during the senior year of high school predicted fewer depressive symptoms during the first semester of college. The benefits of family communication persisted beyond the first semester by way of parent awareness of their child's daily lives.

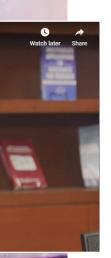
The students' perception of how aware their parents were of what was happening in their lives was related to less alcohol use during the first and second semesters of college.

"Depressive symptoms and alcohol use tend to increase when people go to college, and that can be hard to change. This study shows that establishing family communication before the college transition may promote lower levels of depressive symptoms and alcohol use," said Jack Waddell, an ASU psychology graduate student and second author on the paper.

The study also found that student experiences in college affected family dynamics. For example, students who reported increases in depressive symptoms during the first semester of college also reported decreasing parent support during their second semester.

"Latino youth continue to be one of the largest ethnic minority groups represented in higher education settings, but they have the lowest graduation rates," said Leah Doane, professor of psychology and senior author on the paper. "We are doing a good job of increasingly promoting college-going pathways for Latino youth, and we need to do a better job of understanding what happens when they are in college from an individual, family and institutional perspective to enhance their abilities to succeed and graduate."

Outreach to families has been a longstanding priority at ASU, which was recently designated a Hispanic-Serving Institution by the US Department of Education. The Educational Outreach and Student Services Department hosts the ASU Family Hub, which works to make it easy for parents to stay connected to their ASU students.



Understanding why and how people drink alcohol

By Rob Ewing

When people drink alcohol, it can be for very different reasons, ranging from coping to social behavior. Research done in the Arizona State University Department of Psychology hopes to uncover how temporal attitudes toward drinking can shift and the context in which drinking occurs.

"Essentially, my research aims to identify individual risk factors of alcohol or risky alcohol use and negative alcohol-related outcomes. We are trying to better understand some of the contributing factors to why substance use disorders develop and people experience negative consequences," said Scott King, a graduate student in the psychology PhD program at Arizona State University. King is part of the clinical training area under the mentorship of William Corbin, professor of psychology and director of the Behavioral Alcohol Research for Clinical Advancement (BARCA) lab.

King wants to know why some people have more reward-based experiences and other people have negative consequences such as addiction or depression. He recently received the Sharon Manne Graduate Student Research Award, given each semester to provide funding for personal research projects that address important and timely mental and physical health issues.

He uses ecological momentary assessments (EMAs) to study drinking in the real world. These are real-time surveys conducted on a smartphone during a drinking episode and can help researchers like King to understand the real context that people are in.

The benefit of EMAs is that unlike in a simulated bar lab or research setting, the participants are in their normal environments and can provide accurate information about how they are consuming alcohol.

While social drinking is fairly common, issues arise when people actively choose to drink alone. According to the 2019 National Survey on Drug Use and Health (NSDUH), over 85% of adults have had alcohol at some point in their lives, with over 50% of adults choosing to drink alcohol in the past year. However, drinking alone as an adolescent predicts long-term alcohol use problems as an adult, including an increased risk of binge drinking and dependency.

"There's a significant minority of people who drink alcohol alone or choose to drink alcohol alone, and those individuals expose themselves to a whole other range of consequences above and beyond the people who drink alcohol only with others," said King, "so that's one of the questions I applied to look at, was to differentiate how reasons for drinking alcohol differ between social and solitary contexts."

King is also interested in how drinking may change throughout time for an individual and hopes to discover indicators that would predict risky drinking behaviors.

"One day, someone might drink to have a good time, and another day, someone might drink because they're feeling socially anxious or are in a bad mood, and I want to not only examine how the drinking measures differentiate between social or solitary contexts, but also how they fluctuate over a single drinking episode," said King.

The Sharon Manne funding is part of a generous philanthropic gift from Sharon Manne, a professor in the Department of Medicine at the Robert Wood Johnson School of Medicine and the associate director of cancer prevention and control at the Rutgers Cancer Institute of New Jersey. Manne was a doctoral student in ASU's clinical psychology program and was mentored by Research

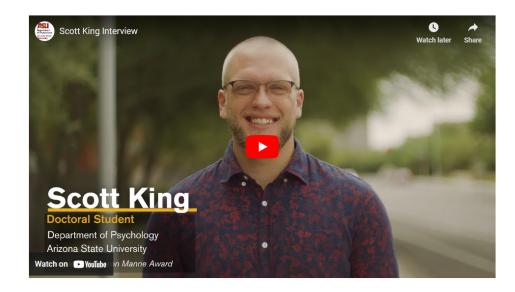
Professor Irwin Sandler and former faculty member Alex Zautra. She has committed to fund \$25,000 in research proposals developed by ASU doctoral psychology students each year that allows them to conduct independent research projects, often outside the scope of what they are working on with their mentor.

"It's really impressive for a graduate student so early in their career to develop this kind of project with such independence, but that has been characteristic of Scott from the time he arrived at ASU. He has very clear ideas about the research he wants to pursue and he works incredibly hard to pursue his interests. I have no doubt that this project will yield important results and this is just the beginning for Scott in what promises to be a highly productive career as a scientist," said Corbin.

When King found out his proposal was selected, he was elated.

"It was really, really exciting just to have the opportunity to collect my own data and to answer some ideas that are near and dear to my heart," said King. "It means a lot to receive funding – to have alumni who have gone through similar programs and put that trust into young graduate students like myself, to say, 'Hey, continue on this mission.' This gift really advances our careers and hopefully continues the cycle of excellence in research. There's a lot of weight behind those gifts and we really appreciate it."

Related: <u>ASU study shows</u>
<u>childhood loneliness linked to</u>
<u>stress, problem drinking in adults</u>





By Rob Ewing

Each year, approximately 250,000 children enter the foster care system, and at any given time, upwards of 400,000 children are in the system. Additionally, according to the Arizona Department of Child Safety, there are nearly five children in care for every licensed foster family.

A graduate in Arizona State University's

clinical psychology training program hopes to find new ways to help those children and families at the most pivotal time.

Austin Blake, a doctoral student in the Department of Psychology, was recently named a National Research Service Award Fellow by the National Institute of Child Health and Human Development for her project "Estimating the Impact of Outof-Home Placement on Health Risk Behavior in Adolescents Exposed to Maltreatment: An Advanced Causal Inference Approach."

The award provides funding for her research and allows Blake to receive additional training necessary for her research career, including in the areas of child welfare research and advanced statistical methods.

"I study the link between parent and child separation and health risk behaviors. One context in which separation occurs frequently is through maltreatment — both abuse and neglect," Blake said. "Prior to coming to ASU, I studied kids who were adopted from foster care, and oftentimes they entered foster care because of parental addiction and other things like that. Once coming here, I became really interested in just how substance use and other health risk behaviors develop across adolescence and adulthood."

Blake wants to find out if removing the child from the home increases or decreases the risk for later adverse health risks behaviors.

"The time period when a child is removed from the home and their guardians is a crucial window of time. I believe that future interventions should target that time period in order to reduce the long-term impacts of the experience," Blake said.

Using a public data set of maltreated children, Blake will be using an advanced causal inference statistical method to determine more specific differences between children who are removed from the home versus those that remain.

"We're looking at what mechanisms might underlie the effect of out-of-home placement on later health risk behavior. Through this research, we can identify factors that we can target for that population. For instance, we might want to focus on adolescents' increases in depression or anxiety, or perhaps their relationships with parents. Being able to identify causes at this stage can prevent those increases in health risk behavior while in foster care," Blake said.

What makes Blake's research different from what has been done before is that she is using advanced statistical methods to account for confounding variables so that she can most accurately estimate the effect of out-of-home placement on health risk behaviors. In populations like this, it is impossible and unethical to run randomized research on placing children in foster care, so being able to identify potential areas for intervention can be difficult.

Additionally, rather than looking at younger children, her research is focusing on adolescents. The adolescent period between ages 13–18 is a turning point that redirects developmental trajectories of health risk behavior, such as initiating substance use and sexual behavior. Blake wanted to focus on this age group as well because when compared with younger children, teenagers placed in foster homes experience greater placement instability and greater difficulty adjusting to new caregivers or guardians.

Blake's two primary co-sponsors at ASU are Regents Professors Laurie Chassin and David MacKinnon, considered leaders in the fields of health risk behaviors and statistical mediation, respectively. Their mentorship has helped shape how Blake looks at statistical data and applies it to real-life situations, such as improving the foster care system.

"Throughout my academic career, I've been working with Dr. Chassin on projects that broadly look at how substance use develops and the etiology where it comes from. Specifically, I've been looking at how parent-child separation may impact those trajectories," Blake said. "This is such important research because there are really far-reaching impacts, such as the intergenerational risk for substance use."

Data are from the National Survey of Child and Adolescent Wellbeing I (NSCAW-I), a large longitudinal, national probability sample of 6,228 children (ages 0–14 at baseline) who were investigated for child maltreatment between October 1999 and December 2000.



Annie Cooper conducts research to help teens and their families

Senior psychology student Annie Cooper came to Arizona State University as a transfer student from community college and immediately immersed herself in as many opportunities as possible.

She joined the Psi Chi Honors Society as the director of their social media accounts and found herself realizing that she could be the next president.

"I thought, why not give it a shot?" Cooper said.

Now, not only is she president of Psi Chi, but she conducts research as part of three labs — the Heart Lab with Associate Professor Thao Ha, the Behavioral Alcohol Research for Clinical Advancement Lab with Professor William Corbin and the Memory and Attention Control Lab with Associate Professor Gene Brewer.

Cooper, who is graduating this December, has been named the Dean's Medalist for the fall semester in the Department of Pyschology.

After graduating, Cooper intends on going to graduate school for behavioral neuroscience and hopes to continue conducting research on relationships, mental health and addiction.

"Each of the labs that I am a part of conduct important research on various parts of the human experience and I'm looking forward to growing more as a researcher in a graduate program," Cooper said.

While conducting research, she also launched her own full-service marketing

company to promote nutritional supplements through strategic social media and influencer marketing. This social media marketing background gave her an insider's look into her honors project with the Heart Lab.

"For me, I enjoyed marketing, but it's not something I saw myself doing in the long term. I wanted a career that felt purposeful and I didn't really think marketing could give me that. Once I started getting involved with research, I found that it's something that really excites me," she said.

Cooper joined the Heart Lab two years ago while she was volunteering at a Title I high school in Phoenix. She noticed that many of the girls had been through difficult experiences, including many unhealthy relationships with partners, parents, family and friends.

"I was interested in how those affected the students long term, even just after seeing them in the classroom and things they were struggling with. It was more than anything I'd ever seen at other public schools," Cooper said.

This experience translated to her research in the Heart Lab.

According to a national survey of high school students, more than 28% had experienced digital dating abuse in the past year with 32% of male students and 24% of female students reporting having experienced it. Among students with dating experience, 76% reported either using or experiencing at least one digital dating abuse behavior in their lifetime and 59% reported both using and receiving digital dating abuse behavior.

"Right now we're looking at parental mediation, a strategy used by parents to monitor and regulate their child's media use and digital dating abuse. We're seeing if the two relate to one another – if parental mediation makes parents more aware of digital dating abuse. A lot of parents aren't aware that this is such a problem," Cooper said.

"The problem with digital dating abuse is that it lacks the boundaries of in-person abuse. This means it is a lot easier to have this consistently happen to you if you're in a relationship like that. We're looking at this research to see if parents are aware of digital dating warning signs so we can hopefully come up with good interventions in the future," she said.

Cooper's independent project highlights the importance of parental involvement in adolescent relationships.

"Annie is one of those students who is always willing to step up, and she shows great initiative in research. Her independent research project with fellow student Shane Kasmarogi is an excellent example of how she can turn something she is interested in into a research project," said Ha, the lead researcher at the Heart Lab.

In addition to her work in the Heart Lab, she is conducting research on trauma and its impact on cognition with the Memory and Attention Control lab.

"We're trying to look at trauma and cognition and see how people with the highest 20% ratings of trauma perform on these cognitive assessments versus the people who don't," Cooper said. "This includes developmental trauma as well as more acute trauma, like a traumatic brain injury."

Cooper is also a research assistant in the Behavioral Alcohol Research for Clinical Advancement Lab lab where she is conducting a literature review for internalizing disorders such as anxiety and depression and coping models with substance use.

"My interest lies in the treatment of all of these issues. I'm interested in the treatment of anxiety, depression, post-traumatic stress disorder and substance misuse. For instance, even though we categorize them differently, someone with anxiety or depression might have PTSD as well because they've experienced trauma in the past, and they might self-medicate with some substances," Cooper said.

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