Researcher Spotlight – Dr. Greg Hajcak

Dr. Greg Hajcak is a licensed Clinical Psychologist and the Sheri Sobrato Professor of Child and Adolescent Mental Health at Santa Clara University. He has received continuous funding from NIMH since 2000 (PI or Co-Investigator on 20+ grants) and has published more than 375 peer-reviewed papers. Much of this research has involved large and longitudinal studies to better understand the development of anxiety and depression among adolescents and young adults—focusing on valid and reliable EEG/ERP biomarkers of brain function. Before joining the faculty at Santa Clara University, Dr. Hajcak was Professor of Psychology at Florida State University (2016-2023) and Stony Brook University (2006-2016).

Project Title: *Building an Affirming Life and Navigating Challenging Emotions (BALANCE) Study*

Project Overview:
In 2021, the U.S Surgeon General declared a youth mental health crisis, and post-COVID estimates suggest that one in five adolescents have experienced depression, with rates of depression being 2-times higher in LGBTQ+ and at-risk youth.

To address this urgent public health issue, the Santa Clara team aims to examine whether two online interventions (a novel digital application and telehealth-based peer counseling) can be personalized for youth to reduce depression. In partnership with the Youth Advisory Board and Alum Rock Counseling Center, the clinical science team will develop the digital application and peer counseling materials and recruit for the study. Further partners Flourish Labs will provide peer support and MUSE will create the digital application, and the team will collectively create a public website for resources at no-cost, including training and intervention materials.

The views and opinions expressed in the Researcher Spotlight interviews are those of the individual, and do not necessarily reflect the policy or position of CIAPM or CalHHS*

Questions:

1. **How does your work address health inequities in depression within the State of California? What is impactful or novel about your work?**

Post-COVID estimates suggest that one in five adolescents have experienced depression in the past year [1,2]. Moreover, youth are among the least likely to receive mental health services[1]. Among youth, the more than 25% who identify as LGBTQ+ are twice as likely to experience depression, in part due to social stigma, rejection, and victimization related to their marginalized sexual identities [3,4]. In fact, LGBTQ+ youth are among the highest risk groups for mental health problems. More than half of LGBTQ+ youth seeking mental health services were unable to access them in the previous year [5].

Our project takes these facts as a starting point — and tests scalable intervention and prevention approaches to reduce depression in youth that combine two online approaches: (1) a digital mental health application and (2) telehealth-based peer counseling. The digital intervention implements empirically supported principles that focus on behavioral activation and emotion regulation. In addition, in collaboration with a youth advisory board comprised of members from the LGBTQ+ community, we have developed content that focuses on increasing resilience in the face of stress and rejection — as well as building strong social support networks and communities that can foster a sense of social safety, which is critical for both mental and physical health, especially in marginalized communities like LGBTQ+ individuals [6,7].

While mental health treatments focused on behavioral activation, emotion regulation, resilience, and social safety can positively impact any and all individuals regardless of identity or social standing, we have developed every single aspect of this study for the

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[1] Substance Abuse and Mental Health Services Administration. (2022). Key substance use and mental health indicators in the United States: Results from the 2021 National Survey on Drug Use and Health (HHS Publication No. PEP22-07-01-005, NSDUH Series H-57). Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. https://www.samhsa.gov/data/report/2021-nsduh-annual-national-report

[2] Racine, N., McArthur, B. A., Cooke, J. E., Eirich, R., Zhu, J., & Madigan, S. (2021). Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: a meta-analysis. *JAMA pediatrics*, *175*(11), 1142-1150.

[3] Flores AR, Wilson BDM, Langton LL, Meyer IH (2023) Violent victimization at the intersections of sexual orientation, gender identity, and race: National Crime Victimization Survey, 2017–2019. PLOS ONE 18(2): e0281641. https://doi.org/10.1371/journal.pone.0281641

[4] Mpofu, J. J. (2023). Overview and methods for the youth risk behavior surveillance system—United States, 2021. *MMWR supplements*, *72*.

[5] National Survey on LGBTQ Youth Mental Health (2022). The Trevor Project. https://www.thetrevorproject.org/survey-2022/

[6] Diamond, L. M., Dehlin, A. J., & Alley, J. (2021). Systemic inflammation as a driver of health disparities among sexually-diverse and gender-diverse individuals. *Psychoneuroendocrinology*, *129*, 105215. https://doi.org/10.1016/j.psyneuen.2021.105215

[7] Diamond, L. M., & Alley, J. (2022). Rethinking minority stress: A social safety perspective on the health effects of stigma in sexually-diverse and gender-diverse populations. *Neuroscience and biobehavioral reviews*, *138*, 104720. https://doi.org/10.1016/j.neubiorev.2022.104720

LGBTQ+ community with the LGBTQ+ community. We have a group of LGBTQ+ youth who serve on our youth advisory board and who have iteratively designed our intervention with us. This approach ensures that we aren't just informing our intervention on current theoretical and empirical perspectives, but also the specific needs and desires of the actual community we are trying to uplift.

2. **How does your work push the paradigm against traditional depression research approaches? What is lasting impact you hope to make?**

Our work pushes the paradigm against traditional depression research approaches in multiple ways. First, this work focuses explicitly on novel solutions that are scalable, personalizable, accessible, private, and youth-focused, addressing many of the identified barriers to mental health access for all youth, but especially LGBTQ+ youth. Both digital mental health applications and peer counseling are cost-effective and scalable pathways to improve youth mental health. Although digital mental health solutions hold enormous promise for youth — especially in terms of their potential dissemination — a major issue with mental health apps is continued participant engagement [8,9]. On the other hand, youth increasingly suggest that traditional therapy does not meet their developmental needs — and not feeling understood or respected can lead to distrust and disengagement with mental health services, particularly among those with minoritized identities [10]. *Peer counseling* is based on the notion that connection and positive change can be facilitated by working with trained, near-aged individuals with lived experience. Peer counselors can foster a strong alliance based on shared interests, identities, and experience with mental health difficulties. Yet, the efficacy of peer counseling has not been studied among youth.

Our study addresses these issues by testing the efficacy of both peer counseling and our novel digital application among 800 youth (aged 14 to 19), with 50% or more identifying as LGBTQ+. We also test whether the combination of peer support and our digital application might have synergistic effects, addressing the drawbacks of each simultaneously. We will evaluate the efficacy of these approaches — in isolation and combination — so that we can provide empirically supported guidance on the best scalable solutions to improve mental health in California for all youth, but with the design, population, and experience to

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[8] Cohen, Z. D., DeRubeis, R. J., Hayes, R., Watkins, E. R., Lewis, G., Byng, R., Byford, S., Crane, C., Kuyken, W., Dalgleish, T., & Schweizer, S. (2022). The Development and Internal Evaluation of a Predictive Model to Identify for Whom Mindfulness-Based Cognitive Therapy Offers Superior Relapse Prevention for Recurrent Depression Versus Maintenance Antidepressant Medication. *Clinical Psychological Science*, *11*(1), 59-76. https://doi.org/10.1177/21677026221076832 (Original work published 2023).

[9] Mahon, J. J. (2006). A Discourse Comparison of Antisocial and Well-adjusted Male Adolescent Peers: Dyadic Analysis of Verbal Dominance, Submissiveness, and Agreement by Context.

[10] Ojeda, V. D., Munson, M. R., Jones, N., Berliant, E., & Gilmer, T. P. (2021). The availability of peer support and disparities in outpatient mental health service use among minority youth with serious mental illness. *Administration and Policy in Mental Health and Mental Health Services Research*, *48*, 290-298.

be able to offer LGBTQ+-specific recommendations if we were to identify group differences in treatment effects. While the intervention will benefit the individual enrolled in the study, the impact will not stop there. We will be making all educational content and the digital application that we design with the youth advisory board freely available after the study closes, and we will also promote these resources on our social media pages that we are developing in collaboration with an LGBTQ+ -owned marketing team based out of Oakland, CA.

Finally, another novel approach we take is that we have designed the study and our assessments in a way to allow us to identify what aspects of our intervention work best for whom, and why (i.e., precision medicine), by measuring a range of psychological and biological variables related to stress reactivity before the intervention, after intervention completion, and again 8 weeks later. Specifically, given previous work showing the relationship between inflammation and depression [6,11], we will be measuring inflammation across two biological markers (protein and gene expression) to evaluate the effectiveness of our intervention at a psychological, as well as biological, level. This approach is novel in LGBTQ+ populations and provides critical insight needed to determine what kinds of public health efforts would be most effective in addressing depression — specifically for whom and on what level of health (psychological, biological).

3. **How is CIAPM funding crucial for your work?**

CIAPM funding is one of a kind. Many funding agencies tout community engagement and state an emphasis on community engaged research. However, using funds to directly benefit the community often comes with push back or extensive agency questioning as to how the community collaborators will benefit the project. CIAPM funding requiring funds to directly benefit the community is unique and demonstrates that community engagement isn't just a "nice to have" but a "must have" for sound science with actual public impact.

This structure has helped ensure that our study will conduct community-engaged participatory research, which is uncommon in broader academia. We believe that this approach will better directly benefit the state and communities we reside in throughout all stages of the study. Our study can also serve as evidence to disseminate to other scholars, to demonstrate the benefit to integrate community partners at all stages, from idea generation to study design and dissemination. Further there is something to be said about feeling supported and understood by the entity controlling your funds. Given the structure of this funding, it is clear that CIAPM acknowledges that community engagement is vital;

[11] Slavich, G. M., & Sacher, J. (2019). Stress, sex hormones, inflammation, and major depressive disorder: Extending Social Signal Transduction Theory of Depression to account for sex differences in mood disorders. *Psychopharmacology*, *236*(10), 3063-3079.

this support and shared perspective makes for smooth and insightful collaborations between funding agencies and researchers with policy impact goals, which is immensely beneficial in terms of progress and impact as well as working conditions and the mental wellbeing of the scholars doing the work (which is often overlooked). It is these factors that makes CIAPM funding so enticing, and what encouraged us to apply.

The funds are substantial enough for large-scale studies, and the structure helped ensure that the work would benefit our communities from the get-go. The structure of this funding and has allowed our study to engage with our community across multiple levels, from our youth advisory board comprised of 14-23 year olds who are members of the LGBTQ+ community who simply want to give back, to LGBTQ woman-owned marketing groups who can help ensure the study reaches populations historically left out of large-scale studies. We also have been able to directly benefit a youth-focused resource center in the Bay Area that serves marginalized and underserved youth -- which benefits the community on multiple levels within one partnership. A common gripe of more policy-focused scholars is a lack of knowledge and ability regarding how to take our research findings and integrate them into common knowledge or get findings into the hands of those who can actually catalyze change. CIAPM and the structure of their funding ensures we are closing the gap between academic knowledge and real-world impact, and that is incredibly unique and appreciated.

While the inherent structure of CIAPM funding was enticing in the first place, this type of funding is needed now more than ever, especially in consideration of work focused on decreasing health disparities and advancing health equity. While there have been increases in funding calls pertaining to health disparities by large federal agencies in the past few years, the history of funding in LGBTQ+ research has historically been scarce. Further, LGBTQ+ research funding from NIH and other government agencies has been eliminated (as of 2025), completely halting many of the largest-scale LGBTQ+ health equity projects that were pushing forward progress in health. The state of LGBTQ+ federal health funding is unlikely to change in the next couple of years, severely damaging the community and ensuring that health equity cannot be achieved. Community-engaged, precision medicine, policy-focused, team science is critical for the progress of health equity in the LGBTQ+ population and is currently unfunded at the largest federal funding sources, which are needed for large-scale precision medicine work. A pertinent example is that almost all of the words critical to even just describing our work — diversity, equity, inclusion, discrimination, gender diversity, sexuality, pronouns — are being eliminated from federal websites. Researchers are encouraged to frame their work in a way that doesn't use these words, which is extremely difficult, if not impossible, and harmful to the LGBTQ+ community and LGBTQ+ health equity scholars who have devoted their lives to this work.

The type of work we are doing here would literally be impossible without funds from the CIAPM. The funding we have received from CIAPM has ensured that, at the very least, we will be able to positively benefit the mental health of LGBTQ+ youth in CA, and ensures that multiple scholars (across multiple levels — associate professors, assistant professors, post-doctoral fellows, master's students, and undergraduate students) in this area are employed and able to continue to ensure that progress in this field will not stop. Further, given that we plan to make our intervention publicly available, this funding is going to allow LGBTQ+ youth all over CA and the greater United States to have access to evidence-based, community-developed mental health care in a time where access will be even harder than it already was. State and private funding is critical to keep this field going, and CIAPM is an exemplar of what it looks like for a state to support their communities and uplift those who are underserved in broader society.

4. **Why are the populations you are investigating often overlooked and important to include in depression research?**

One in five adolescents have experienced depression in the past year [1,2], and the more than 25% who identify as LGBTQ+ are twice as likely to experience depression. All youth — but especially LGBTQ+ youth — face more barriers than adults to receiving mental health care. More than half of LGBTQ+ youth seeking mental health services were unable to access them in the previous year [5], and these numbers were prior to the huge changes in health resources dedicated to advancing equity. Reasons for this range from systemic (e.g., stigma) to logistical (e.g., cost, availability). All of the data suggest a critical need to focus on LGBTQ+ youth in depression research. Not only is it critical to include LGBTQ+ youth in depression research, but it's also critical to include them in the development of the intervention content and design to ensure personalized approaches that can address their specific barriers and health needs.