



School of Medicine
CENTER FOR HEALTH DISPARITIES RESEARCH

Healing the Academy: Addressing Mental Health Disparities Among Underrepresented Graduate and Professional Students

Steering Council Report

February 2022

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Table of Contents

1 **Project Overview**

3 **The Invisible, yet Dangerous, Mental Health Crisis Among Graduate and Professional Students**

6 **Our Steering Council Members**

7 **Data Collection**

9 **Data Analysis: Effects of Hostile Academic Environments and Structural Vulnerability on Mental Health**

11 **Study Findings**

16 **Community-Based Recommendations for Healing the Academy**

22 **Project Limitations**

23 **Final Reflections**

Table of Contents

24	Recommendations for future research on health disparities among UGPS
----	--

25	Resources for Graduate and Professional Students
----	--

26	You are not alone, we want to hear from you!
----	--

27	Acknowledgements
----	------------------

28	Programmatic Challenges & Future Recommendations for the Center for Healthy Disparities
----	---

29	References
----	------------

31	Appendix A
----	------------

Project Overview

Graduate student mental health is alarming, with evidence that suggests an increasing anxiety and depression worldwide (Forrester, 2021; Woolston, 2019). The World Health Organization (WHO) identifies college student mental health as a global public health priority (Cuijpers et al., 2019). Our research using photo voice, wherein subjects documented their psychological wellbeing photographically, showed the academic environment is especially problematic for underrepresented graduate and professional graduate students (UGPS), which includes first-generation, non-binary, racial/ethnic minority, LGBTQ+, rural background, and low-income students. Moreover, the COVID-19 pandemic has worsened the mental health conditions of marginalized communities, including underrepresented students.

Hostile work environments, negatively affect the psychosocial development, emotional well-being, and mental health of faculty members at research universities (Vázquez, 2019). The extent to which these environments affect underrepresented communities in graduate school is still unknown. International experts call for collaboration to change academic culture and create infrastructure to engage and treat graduate student mental health. This is the driving force of our community-based project *Healing the Academy: Addressing Mental Health Disparities Among Underrepresented Graduate and Professional Students*.

Using a community-based participatory research (CBPR) approach, the "Healing the Academy" project focused on addressing mental health disparities among underrepresented and professional graduate students. From April 2021 to February 2022, seventeen members of the Steering Council (SC) engaged in a process of shared learning and decision-making to guide project development.

Our SC members represented the voices of first-generation graduate students in diverse academic stages (e.g., coursework, qualifying exams, or dissertation stage), members of underrepresented racial and ethnic minority groups, and diverse academic disciplines (e.g., STEM fields, Social Sciences, Humanities, and Professional Fields).

The specific aims of this project are twofold:

1. Engage key stakeholders in defining how academic environments impact UGPS mental health and identifying possible solutions.
2. Characterize the academic structures that contribute to poor mental health among UGPS.
 - a. Conduct a cross-sectional study with underrepresented graduate students to model the influence of academic structures on UGPS mental health.
 - b. Use a light-weight ecological momentary assessment (EMA) with a subsample of UGPS ($n = 10$) in the cross-sectional study to capture real-time examples of the academic structures on mental health.

The study hypothesis is as follows: Hostile work environments are one of the driving factors in poor mental health among UGPS (particularly for first-generation, URM, and/or graduate students who identify as English as a Foreign Language learners).

Using a combination of surveys and tech-enabled longitudinal light-weight data collection, this project attempted to capture nuances in academic structures explaining both historical and institutional factors in UGPS mental health outcomes.

The Invisible, Yet Dangerous, Mental Health Crisis Among Graduate and Professional Students

Graduate student mental health is a global crisis (Evans et al., 2018; Forrester, 2021; Woolston, 2019a). A recent study published in *Nature* (Woolston, 2019b) indicated that 36% of graduate students have sought professional help for anxiety or depression caused by their PhD studies, nearly 40% of respondents said they were unsatisfied with their work–life balance, and 21% of respondents said they had personally experienced harassment or discrimination. Moreover, the constant need for external validation, high levels of competency, and precarious work conditions may trigger poor mental health outcomes among this student population (Harris & Linder, 2018), particularly, for underrepresented graduate and professional students (UGPS). UGPS were conceptualized in this research as first-generation students, members of underrepresented minorities (URMs), and English as foreign language (EFL) learners. This student population may experience structural and intersectional inequalities that impact their mental health and academic success more severely than traditional students (Council of Graduate Schools & The Jed Foundation, 2021; Gardner & Mendoza, 2010; Wulff, Austin, & Associates, 2004).

UGPS often have weaker support systems, struggle to find a sense of community, and tend to experience greater bouts of social isolation (Hyun et al., 2006). Social isolation has been defined as “a state in which the individual lacks a sense of belonging socially, lacks engagement with others, has a minimal number of social contacts and they are deficient in fulfilling and quality relationships.” (Hand, McColl, & Associates, 2014, p.324).

The lack of social development (and the lack of the validation of being a graduate student who is respected and appreciated) can negatively affect psychosocial development, contribute to mental health conditions, and ultimately, drop-out of UGPS from graduate and professional programs. Despite international efforts to include diversity within research on graduate student mental health, so far, most studies seem to have a narrow definition of underrepresented groups, and they typically fail to study the effect of intersectionality on graduate students' mental health. Previous research has also failed to focus on the structural characteristics that put some students at a disadvantage (gender, race/ethnicity, citizenship) and thus greater risk for poor mental health outcomes.

Project Overview

Healing the Academy was built on pilot work (Vázquez and Cheney, Forthcoming) that found UGPS experience microaggressions and feel devalued, marginalized, and censored in their academic environments. These environments were described as spaces where diverse systems of oppression interact, in terms of inadequate income, poor advising/mentorship, and hostile environments, and determine their mental health and emotional well-being. UGPS characterized graduate school as a hostile space, describing experiences of disrespectfulness and being purposely excluded from resources and opportunities available for them.

This project is a pilot award funded by the NIMHD UCR Center for Health Disparities Research. The award, Fostering Interdisciplinary Research-early Stage Pilot Grants (FIRST), are mentored research projects that aim to support early stage investigators as they transition to research independence. This project explored the role that hostile academic structures played in the reproduction of mental health disparities among UGPS.

Research Team

This project was led by Dr. Evelyn Vázquez (principal investigator) in collaboration with mentors Drs. Ann Cheney (primary mentor) and Michalis Faloutsos. Our graduate student researcher Ms. Manasi Rajadhyaksha, a UCR Ph.D. candidate, and our student assistant Vinz Angelo Madrigal.

The aim of *Healing the Academy* was to enrich the empirical study of the academic profession (particularly, graduate students' emotional well-being and mental health) by using a community-based participatory research (CBPR) approach. This approach is helpful to identify community-based interventions needed to promote more inclusive, just, and fairer academic and work environments for UGPS.

Our Steering Council

Our steering council (SC) consisted of eighteen stakeholders, including 10 graduate students, four UCR faculty members, four members of staff and/or administration, representing UCR Graduate Division, GradSuccess, The Well, and UCR Counseling and Psychological Services (CAPS), respectively. SC members convened monthly for a duration of 60 minutes. Eligible members received a \$75 e-gift card for their contribution to our project. Using the CBPR approach, the SC was mainly responsible for overseeing project goals, partnership development, assisting with the interpretation of survey data, and engaging in two-way capacity building activities.

Steering Council Members

Following is a list of all the Steering Council Members who contributed to the development of this report. The information provided below includes council member names, school/department of association, and their self-identified social identities or positionality.

Graduate students:

- Amanda Scott-Williams, UCR/School of Education; Mother, Native American (Seminole), First-gen graduate student
- Gabriela Ortiz, UCR/Anthropology; Chicana, First-gen college student
- Madeline Vera-Colon, UCR/Environmental Toxicology; First-gen Mexican-American, First-gen student, female, low SES
- Nelly Cruz, UCR College of Humanities, Arts, & Social Sciences; First-gen student, Mixtec/Mexican American, female
- Amanda Hale; UCR/CNAS
- Jaqueline Dighero

Faculty and Staff members:

- Connie Marmolejo, Ph.D., UCR The Well; First-gen college student, Latinx
- Hillary Jenks, Ph.D., UCR/Graduate Division; White woman PhD & intersectional feminist
- Cynthia Villarreal, Ph.D., School of Education

Research team:

- Principal Investigator: Evelyn Vázquez, Ph.D., Dept. of Social Medicine, Population and Public Health (SMPPH); First-gen college student; Latinx; woman of color; English as a foreign language learner
- Primary Mentor: Ann Cheney, Ph.D., Dept. SMPPH; female, rural background
- Mentor: Michalis Faloutsos, Ph.D., Computer Science; First-generation immigrant
- Graduate Student Researcher: Manasi Rajadhyaksha, Ph.D. Candidate, School of Psychology; international student, first-gen graduate student, female
- Student Assistant: Vinz Angelo Madrigal, Undergraduate Student, Computer Sciences

Data Collection

We received IRB approval for the project on 9/28/2020. All graduate students who agreed to participate in the study provided consent prior data collection. For the cross-sectional survey, participants chose their own pseudonyms and responded to a multi-question online survey via Qualtrics. The survey included measures of quality of life, hostile academic environments, discrimination and harassment, financial burden, poor mentorship, mental health conditions, and access to mental health services. The survey was created using validated measures from the UC Graduate Student Well-Being Survey (2017), including the Center for Epidemiological Studies Depression Scale Revised (CESD-R). In addition, we included the Generalized Anxiety Disorder 7-item (GAD-7) scale in our cross-sectional survey. Our sample includes N = 98 graduate and professional students (Table 1). Graduate students were compensated for their participation in the cross-sectional study with one Kroger's e-gift cards worth \$25.

Finding from the cross-sectional survey informed the items to be included in longitudinal phase (Aim 2). Participants who scored positive for clinical anxiety and at risk for clinical depression in the cross-sectional survey, as well as those who were positive for suicidal ideation, were invited to be part in the light-weight EMA longitudinal study. To collect data in the light-weight EMA longitudinal study, participants will be posed short but frequent app-based questions about the relationship with advisor, support needed, and coping strategies in the forms of wellness tips. Data will be collected three times a week through R'Mate, which is an existing student-based technology app that facilitates the connection and interaction with students.

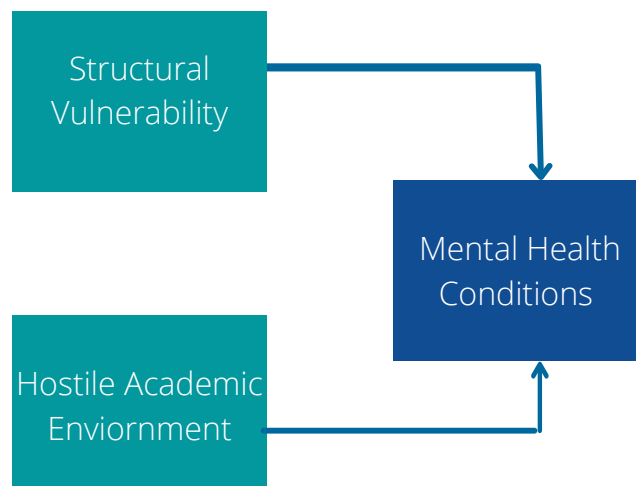
Enrollment Table

Number of Enrolled Study Participants					
Racial and Ethnic Categories	Sex/Gender				
	Females	Males	Non-Binary	Prefer not to state	Total
African American	1	1	0	0	2
Asian	14	25	0	1	40
Hispanic or Latino	16	7	0	0	23
Indigenous Latin American	1	1	0	0	2
Middle Eastern	2	1	0	0	3
Native Hawaiian or Other Pacific Islander	2	0	0	0	2
White	6	1	4	0	11
Mixed-race (including Native American, Alaska Native, Native Hawaiian, and Other Pacific Islander)	11	2	0	0	13
Other	0	1	1	0	2
Racial Categories: Total of All Participants	53	39	5	1	98

Data Analysis: Effects of Hostile Academic Environments and Structural Vulnerability on Mental Health

Figure 1 presents the theoretical model that informed the quantitative data analysis conducted for this research project. The model consists of two independent variables, structural vulnerability and hostility, and one dependent variable, mental health conditions. The outcome variable was measured using participant scores on measures of anxiety, depression, and suicidal ideation. The independent variable of structural vulnerability was computed by combining subvariables of race, gender, social class (first-generation status + member of an underrepresented community), income levels, and financial confidence (food insecurity + homelessness). The second independent variable, hostility, comprised of three different sub-variables: relationship with faculty advisor and peers, academic environment, and experiences of microaggression, discrimination, and harassment as graduate and professional students.

Figure 1



Correlation and multiple regression analysis were conducted to examine the relationship between structural vulnerability, hostile academic environment, and mental health conditions. Some of these bivariate correlations were particularly interesting. First, being member of an underrepresented community had significant positive correlations with anxiety and depression levels ($r = 0.20$, $p < .05$; $r = 0.25$, $p < .05$). This indicates that there is an association between being members of marginalized groups/communities and risk of developing clinical depression and anxiety symptoms. Second, all three measure of dependent variables, anxiety, depression, and suicidal ideation, were positive correlated with each other (*anxiety-depression*, $r = 0.74$, $p < .01$; *anxiety-suicide*, $r = 0.41$, $p < .01$; *depression-suicide*, $r = 0.45$, $p < .01$;). Third, the independent variable, hostility, had positive correlations with anxiety ($r = 0.33$, $p < .05$), indicating a significant relationship between hostile academic environments and levels of anxiety. These significant correlations encourage further analyses on the role of structural factors and hostile environments in supporting or impeding UGPS' mental health.

Three separate regression models were run to analyze whether changes in the dependent variable could be predicted by independent variables. Model 1 (Refer to Appendix A-Table 1) included all independent variables along with the outcome variable of anxiety, producing $R^2 = .215$, $F(5, 1.322) = 0.044$, $p < .05$. Results indicated that only the independent variable of hostility significantly predicted the outcome variable. Model 2 (Refer to Appendix A-Table 2) included all independent variables along with the outcome variable of depression, producing $R^2 = .259$, $F(5, 1.414) = 0.047$, $p < .05$. Results indicated that only hostility significantly predicted the outcome variable. Finally, model 3 (Refer to Appendix A-Table 3) included all independent variables along with the outcome variable of suicide, producing $R^2 = .187$, $F(5, .895) = 0.782$, $p > .05$. Results showed no predictive relationship between the dependent variable and any of the independent variables. Thus, the regression analysis found that hostile academic environments was the only independent variable that significantly contributed to the regression model, suggesting that UGPS in highly hostile environments are more susceptible to experience clinical depression symptoms and are expected to demonstrate high clinical anxiety levels.

Study Findings

Findings of the cross-sectional survey indicate that UGPS experience a high prevalence of mental health conditions, including clinical anxiety, clinical depression, and suicidal ideation. From the participants' perspectives, mental health conditions are exacerbated by hostile and oppressive conditions reproduced in graduate school, such as the discrimination towards marginalized identities. Moreover, the interaction of structural, relational, and individual factors such as income, poor mentorship/ advising, and social status, e.g., being a low-income first-generation student, increases the risk for mental health disparities among UGPS.

Participants Characteristics

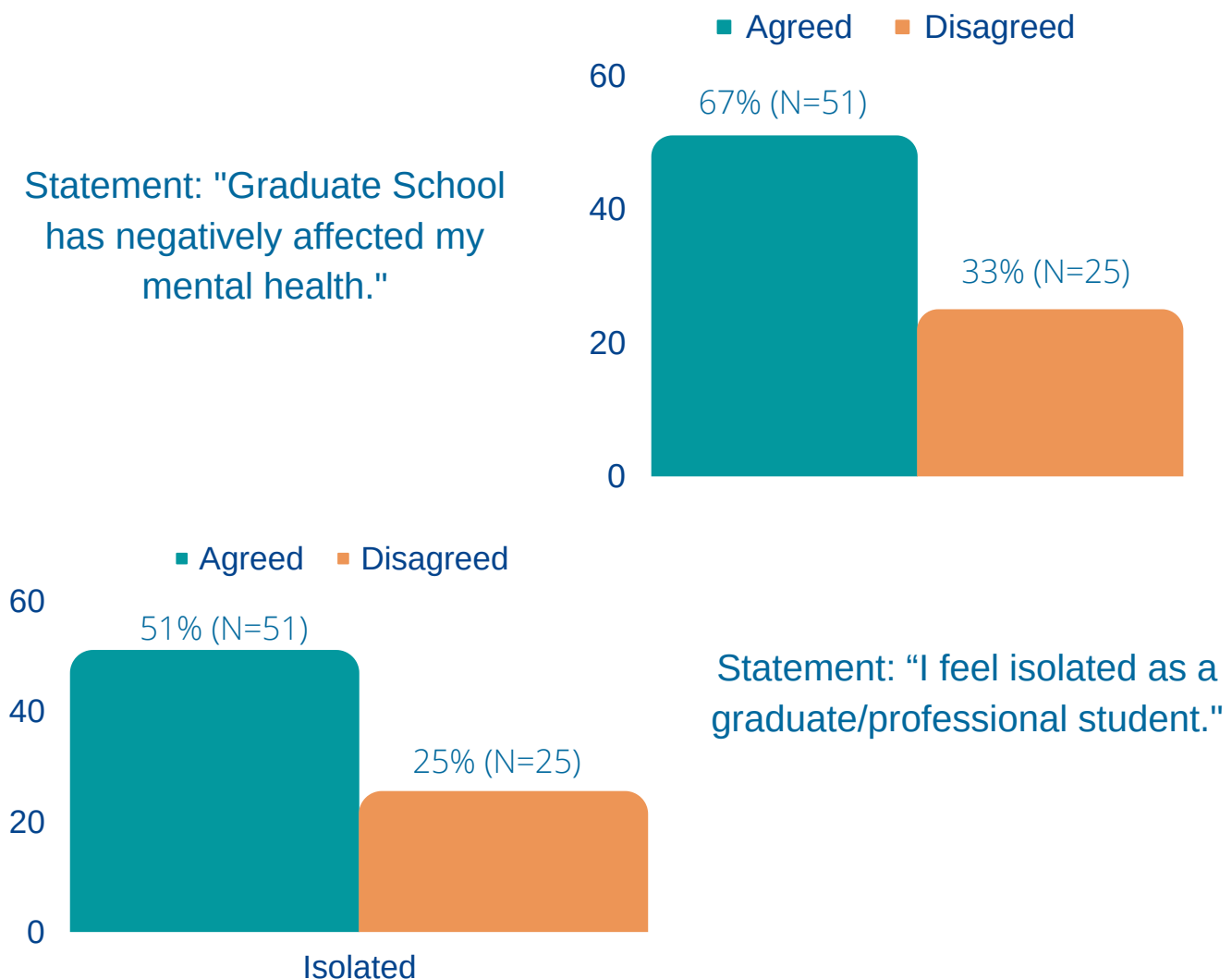
Most students self-identified as first-generation students (71%) and as members of an underrepresented and/or vulnerable community (71%), including racial/ethnic minority, LGBTQ+, rural background, immigrant, or refugee. About 39% of the sample included international students and 47% of the sample identified as English as a Foreign Language Learner (EFL).

In addition, 54% of participants identified as females, 40% as males, and 5% as non-binary. The majority of the participants identified as Asian (41%), followed by Hispanic or Latinx (23%), Mixed-race (13%), White (11%), African American and Indigenous Latin American (2%), Middle Eastern (3%), Native American and Native Hawaiian (2%). Participants represented various academic disciplines, including STEM fields (52%), Social Sciences and Humanities (16%), and professional fields (32%), and were at diverse academic stages, such as coursework (49%), qualifying exams (27%), and dissertation level (27%). Most participants were low income: 22% had a yearly income between \$15,000 to \$24,999; 12% had a yearly income between \$10,000 to \$14,999, and 20% a yearly income between \$0 to \$9,999. Among all participants belonging to the low income group, approximately 30% reported receiving some financial assistance from either parents or other relatives.

Regarding food insecurity, 11% of participants received government assistance (e.g., CalFresh, formerly known as Food Stamps) and 33% received campus assistance such as food pantry. Homelessness, 7% of participants have been homeless during graduate school, with higher occurrences during summer months.

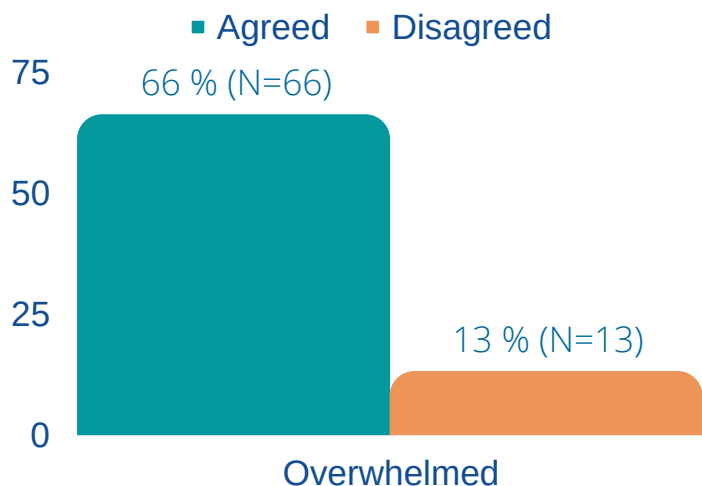
Mental Health Conditions Among Underrepresented Graduate and Professional Students

Participants in the study indicated that graduate/professional school negatively affect their mental health (67%). In addition, UGPS feel isolated (51%).



A significant percentage of participants (66%) felt overwhelmed by the demands they have as a graduate/professional student and recognized that graduate school has negatively affected their mental health (67%).

Statement: “I feel overwhelmed by the demands I have as a graduate/professional student.”

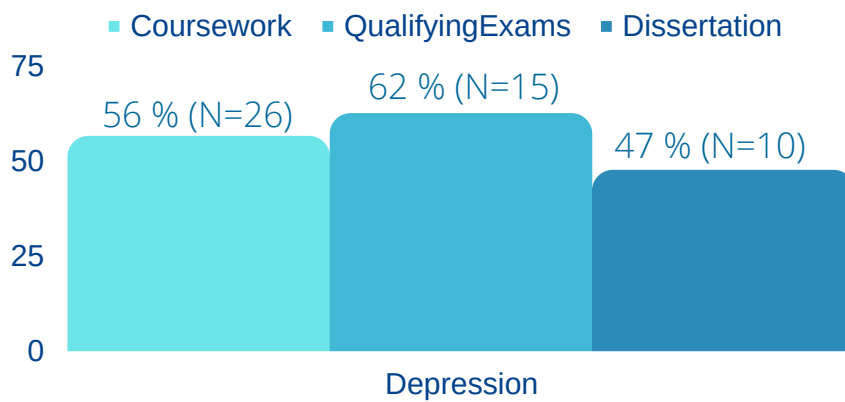


Moreover, 34% of the sample screened positive for clinical anxiety and 55% for at risk of clinical depression. Most students in both conditions, were in STEM fields and were currently at the coursework or qualifying exam stage. It was also noted that most of these participants were at the intersection of two marginalized identities: being a first-generation student from an underrepresented and/or vulnerable community.

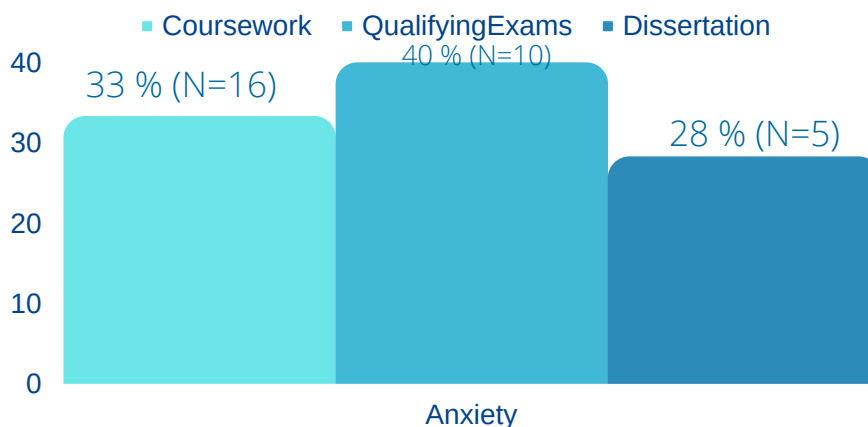
For anxiety (GAD-7 scale), the clinical significance is ≥ 10 (10-14 is moderate anxiety and 15-21 severe anxiety), for depression (CESD-R scale), a score equal ≥ 16 indicates a person at risk for clinical depression. Finally, we explored suicidal ideation with questions, “Since you started your graduate program, have you ever thought about committing suicide?” and “Since the COVID-19 pandemic started, have you ever thought of committing suicide?”

The percentages in the graphs below are reflective of each of our subsample. This subsample included all participants, at the coursework, qualifying exams and dissertation stage, who received significant scores on measures of depression, anxiety, and suicidal ideation.

Participants at risk for clinical depression (across stages in program)

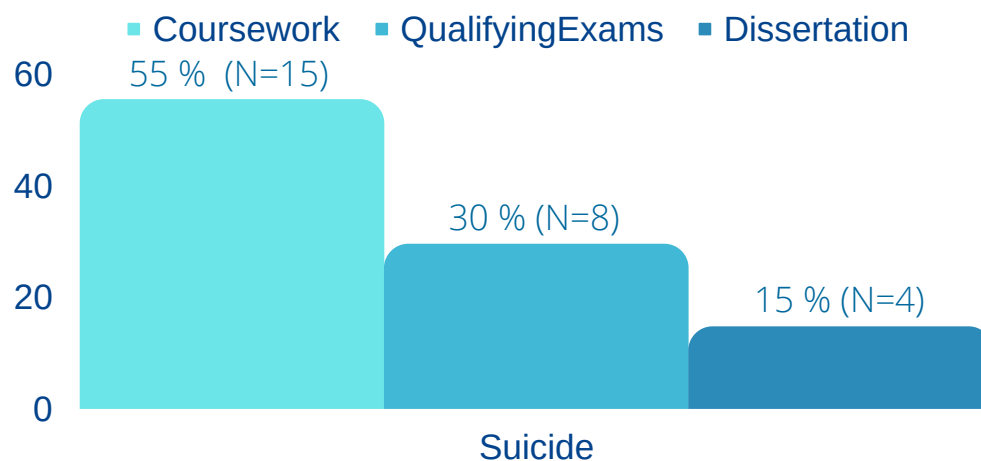


Participants with clinical anxiety (across stages in program)



For suicidal ideation, 31% of participants reported knowing a graduate/professional student who has had suicidal thoughts. Furthermore, 28% of participants said they had suicidal thoughts since they started their graduate program. Most recently, 21% of participants reported that they started having suicidal thoughts since the start of the COVID-19 pandemic. Majority of the participants with a history of suicidal ideation were in the coursework and qualifying exams stages and belonged to STEM disciplines.

Participants with suicidal ideation (across stages in program)



According to the Centers for Disease Control and Prevention (CDC), the annual prevalence of suicidal ideation in adults is 4.8% in the western United States (Ivey-Stephenson et al., 2022). Therefore, **the high prevalence of suicidal ideation among UGPS is significantly alarming and must be addressed promptly.**

Community-Based Recommendations for Healing the Academy

Participants shared recommendations to improve the mental health and emotional well-being of underrepresented graduate and professional students. These recommendations were shared in the open-ended questions of our survey and include:

1

Recommendations for improving the safety and quality of life of underrepresented graduate and professional students (UGPS)

2

Recommendations for enhancing the mental health services available for UGPS

3

Recommendations for decreasing suicide ideation among UGPS

Following a socio-ecological model (Dahlberg & Krug, 2002), these recommendations were clustered into three levels: institutional, relational, and individual.

1. Recommendations to improve safety and quality of life

Underrepresented graduate and professional students (UGPS) navigate graduate school while trying to meet their basic needs, such as housing and food security. Here are some community-based recommendations to improve the quality of life of UGPS:

Institutional

- “Make sure that graduate students get a stable income, so they don’t have to struggle with finances.”
- "Improve student wellness/ make students feel appreciated. Stock lounges with snacks or weekly/biweekly free lunches... Help us focus on basic self-care that we neglect."
- "Continue to provide mental health services that are accessible, while ensuring that there is no negative stigma associated with receiving these services"
- "The university can require training about being kind to others & sensitivity training (things to say & what not to say, being racially sensitive)"

Relational

- “The relationship between the advisor is the most important thing and too stressful for them. They have to let them know that graduate school life isn't everything.”
- “I think for one faculty/ staff/ advisors can send positive messages maybe once a week. I think them being encouraging by saying they are here for us and being understanding instead of intimidating or hard to talk to would help.”
- "I think there could be a buddy system/mentoring program that connect younger to older mentors. I think this can give them someone to talk to right away and ease a lot of the stress of grad schools and give them access to existing group dynamics and feel that someone is looking out and caring for them from the start."

Individual

- “Students should join clubs (cultural or technical) if they are feeling alone.”

2. Recommendations for enhancing the mental health services available for UGPS

Most participants shared negative experiences while trying to access mental health services. Many of their recommendations point out to the need for institutional change.

Institutional

- “Provide information on how [Psychological Services] works more explicitly. Have the health center open for more than 7 hours to have more time to receive calls. Create the ability to set online appointments. Create more specific phone lines.”
- “Make it streamlined where I can just show up and discuss, I don’t know where to even begin finding a resource and am stressed about having to figure it out. Make it clear what types of things that can be helped with, so I don’t question if it’s even worth it”.
- “[Psychological Services] services need to be expanded in terms of earlier appointment times. There also needs to be more specialized counselors for LGBTQ+ issues. I did not feel heard by the therapist that did my intake and I did not return. It is also difficult during business hours to schedule [Psychological Services] appointments because that is when we are the busiest. Introduce online scheduling for appointments.”
- “[T]ele-health option should stay around even after the pandemic to support those that can't drive to campus on off school days or those that may be researching far away.”
- "More mental health therapists and decrease wait times to make an appointment, help with finding a therapist outside campus."
- "The university should invest way more in counseling services"
- "Email reminders on how to access/make an appointment for these services."
- "There could be more access, or easier access, to mental or health healthcare services."
- "Mandatory sessions for mental health that make us feel good about ourselves and take off the tension for some time."
- "Hire more counselors. Particularly, people of color."

-
- “Make it easier to access mental healthcare services outside of campus without all of the outside referral paperwork involved. A person dealing with depression and anxiety in graduate school will not have the time and energy to go through all of the waiting before they see someone.”
 - “Increase the size of the [Psychological Services] office and hire more staff for specific issues like LGBT+ identity, experience working with autism, experience working with students with disabilities, etc. There are a few clinicians at [Psychological Services] who are very good.. but the demand continues to be higher than the supply.”

Relational

- “Creating anonymous group chat therapy.”
- “Email reminders on how to access/make an appointment for these services.”
- “Make Zoom therapy sessions instead of just in person. Train the therapists better so they don't say insensitive things such as “have you thought of another career path?”

Individual

- “I do like that for professional students we have to meet with the wellness counselor at least once a year. I think that is nice just to reinforce that it's nice they do that.”

3. Recommendations for decreasing suicide ideation

Participants shared the need to change the culture of graduate school, mainly to hold accountable abusive faculty members, principal investigators (PIs) and peers that promote hostile academic environments towards underrepresented graduate and professional students.

Institutional

- “Inform faculty of the variety of ways mental illness can manifest so they can detect people at risk.”

-
- “Confront the thoughts of them; reassure students thoughts of suicide are not taboo and not something to be embarrassed about.”
 - “Improve student wellness/ make students feel appreciated. Stock lounges with snacks or weekly/biweekly free lunches. Add a sleep/ nap pod. Help us focus on basic self-care that we neglect.”
 - “PIs should be kept in check as they constantly cross boundaries, discriminate and put pressure on students as the graduate students have nowhere to go where they will be listened to and anything will be done. Even when you go and explain the situation to a graduate program advisor or grad division, they tell you to endure it. There is too much power over students' graduate careers in the hands of the PIs. They especially feel full liberty with international students because they have power over their visa status and mainly due to lack of knowledge over their rights by international graduate students.”
 - “Continue to provide mental health services that are accessible, while ensuring that there is no negative stigma associated with receiving these services.”
 - “Increase awareness of different job paths than those our professors may have taken. We see a lot of highly successful people in prestigious positions around us, and if we don't feel like we can reach the top of some ladder of success, it's depressing to not know about other options. It would be good to have more awareness of jobs in our fields that would allow us to live comfortably, without necessarily requiring a finished graduate degree. Awareness that it is acceptable and encouraged to have a backup plan would help a lot. Also, awareness that just because graduate school is difficult, doesn't mean that lack of support and frequent emotional suffering are required. Changing the culture to hold genuinely abusive or awful mentors or graduate advisors or PIs accountable, rather than those things getting brushed under a rug because those people have power.

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- “They can have the faculty/ administration attempt to interact more w/ their students and ask them how they're doing or if they need any assistance.”
 - “More meditation classes, better and more prominent resources for dealing with problematic people within the university.”

Relational

- “I think there could be a buddy system/mentoring program that connects younger to older mentors. I think this can give them someone to talk to right away and ease a lot of the stress of grad schools and give them access to existing group dynamics and feel that someone is looking out and caring for them from the start.”
- “Stop putting so much pressure on the graduate students to try to fix issues that administration gets paid to do, that way we can focus on why we are here, our research.”
- “I think faculty/ staff/ advisors can send positive messages maybe once a week. I think them being encouraging by saying they are here for us and being understanding instead of intimidating or hard to talk to would help. The university can require training about being kind to others & sensitivity training.”

Individual

- “Talking with a stranger about my illness.”
- “Increase the number of activities/clubs and convince every student to join at least one of them.”
- “Short events which foster interactions between graduate students and even undergraduate students would help a lot. These interactions would help me get in more with the culture and strengthen the sense of belonging to the university which in turn helps with mental health in a way.”

Project Limitations

- Due to the logistical challenges encountered and the time constraints experienced thereafter, there was a delay in initiating the light-weight EMA longitudinal study. This impacted the data collection for this phase.
 - As data collection for the longitudinal study started during the last phase of our project, no preliminary data or findings are included in this report
- Time constraints also obstructed the project team from conducting one-on-one-interviews with key stakeholders, including faculty advisors, staff members, and department chairs
- As this was a pilot study, potential participants from other campuses were not included due to the nature of the project
- Prior to data collection, a consent form was obtained from all participants and only those responding to 85% of the cross-sectional survey questions were compensated for their involvement in our project
- The final data set included complete responses from participants who were eligible to participate in the study. Those who did not meet the recruitment criteria were not included in the sample. Therefore, even though the original sample included responses from 127 UGPS, the final sample consisted of only 98 participants
- Another limitation of our project is oversampling in the data collection phase, with more males from the coursework stage and STEM fields being included in the sample

Final Reflections

From quantitative and qualitative responses, hostile environments are the main cause of mental health conditions among the sample included in this project. Members of our Steering Council, talked about the lack of funding on college campuses as a crucial factor contributing to poor mental services for UGPS.

Our SC members proposed the following priorities and concluding remarks:

- Develop/Improve institutional mechanisms of accountability for administrators, faculty advisors, peers, and staff members that are mistreating UGPS and abusing power (e.g., international students)
 - Promote mandatory series of trainings (e.g., a culture of care; unique mental health needs among UGPS)
- Protect and secure the rights of UGPS (e.g., student activism)
- Advocate for institutional and structural investments to improve psychological and counseling services provided for UGPS
- Increase institutional awareness of the services available for UGPS (e.g., affordable housing, adequate income, food pantries, peer groups)
- Promote ownership from graduate programs and faculty on nurturing and sustaining graduate students' quality of life and mental health
- Shift the cultural norms and values promoted in graduate school (e.g., precarious working conditions; oppressive norms; and isolation). Some ideas for fostering new cultural norms include (Posselt, 2021):
 - Build a culture of shared responsibility, commitment, and social justice
 - Ensure equitable access to varied resources for well-being
 - Develop institutional policies that purposefully dismantle cultures of scarcity, hostility, and fear in graduate programs
 - Enhance the communication of diverse stakeholders, including graduate division, graduate school programs, advisors, and graduate students
 - Create safe spaces that promote ample feedback and increased support for UGPS (e.g., guarantee confidentiality and non-retaliation policies) to minimize fear, ambiguity, and confusion
 - Decrease ambiguity around processes and outcomes expected from programs and advisors (e.g., admission packages; the qualifying exams)

Recommendations for future research on health disparities among UGPS

1. Structural factors and institutional policies
 - Explore mechanisms and/or policies that enhance accountability for administrators, faculty, peers, and staff members engaging in hostile or toxic practices with underrepresented students
 - Identify the services needed for underrepresented students across diverse higher education institutions (e.g., community colleges) and student populations (e.g., undergraduate, graduate, and professional students)
2. Decolonizing higher education
 - Identify the psychological approaches to mental health that work better for UGPS, including students from different racial/ethnic backgrounds, members of the LGBTQI+ community, disabled students, low-income, undocumented students, and/or immigrants
 - Some possible approaches to consider include: trauma-based and culturally sensitive services; psychology of liberation
3. Faculty & Administration Engagement
 - Conduct more CBPR research with graduate students, administrators, faculty, and staff members to explore their recommendations to decrease mental health disparities among underrepresented students
4. Need for nation-wide and global studies
 - Investigate the causes of the high prevalence of suicidal ideation
 - Develop and implement suicide interventions
 - Expand future studies to include a larger and more diverse sample of underrepresented students
 - Explore the intersecting effects of marginalized identities on graduate and professional students' mental health and emotional well-being

Resources for Graduate and Professional Students

We encourage departments to share updated and culturally sensitive information about mental health and well-being services available for graduate and professional students at their institutions. The following national- and university-level resources are proposed to support their mental health and well-being.

National resources

- National Suicide Prevention Lifeline (Available in English and Spanish) 1-800-273-8255, website: <https://suicidepreventionlifeline.org/>
- SAMHSA's 24/7 National Helpline 1-800-487-4889, SAMHSA's National Helpline: <https://www.samhsa.gov/find-help/national-helpline>
- The National Alliance on Mental Illness (NAMI): <http://www.nami.org/>
 - NAMI's StigmaFree pledge: <https://www.nami.org/Get-Involved/Pledge-to-Be-StigmaFree>

UCR resources

- Counseling and Psychological Services (CAPS): <https://counseling.ucr.edu/>
- GradSuccess: <https://graduate.ucr.edu/gradsuccess>
- Student Disability Resource Center (SDRC): <https://sdrc.ucr.edu/>
- Live Health Online - free chat sessions with a Therapist or Psychiatrist if enrolled with UCSHIP - 0\$ copay for behavioral health services!
<https://counseling.ucr.edu/what-livehealth-online#behavioral%20health%20live%20health%20online>
- Student Affairs Case Management (SACM): <https://casemanagement.ucr.edu/>
- Student Health Services (SHS) <https://studenthealth.ucr.edu/>
- The Well: <https://well.ucr.edu/>
- Basic Needs: <https://basicneeds.ucr.edu/>

You are not alone, we want to hear from you!

Steering council members recommended the creation of a safe space where other underrepresented graduate and professional students, mentors, advocates, health care professionals, and activists can share their reflections about our report and/or recommendations for healing the academy.



Visit our website: healingtheacademy.com

Follow us on Twitter: [@HealingHigherEd](https://twitter.com/HealingHigherEd)

LET'S TALK ABOUT THE MENTAL HEALTH AMONG UNDERREPRESENTED GRADUATE AND PROFESSIONAL STUDENTS

#healingtheacademy



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Programmatic Challenges & Future Recommendations for the Center for Health Disparities Research

The research team encountered some institutional challenges that created barriers for the implementation of our pilot project:

- Institutional challenges: these include administrative difficulties, delays in processing compensations (e.g., students members of our Steering Council received their compensations after nearly one full year into the project)
- Challenges providing compensations to SC members: Because of delays and lack of clarity processing the compensations of SC members, we changed the agreed compensation of \$30 per meeting attended (up to \$300 per ten meetings attended), to one compensation of \$75
- Timeline challenges: Delay in getting approvals from the IRB led to changes in timeline and study design. As a result, certain changes needed to be made to the project, with the one-on-one interviews no longer being conducted

Recommendations for the Center for Health Disparities:

- Develop mandatory series of trainings for staff members on community-based participatory approaches; some members still do not understand the role of steering council (SC) members, as they assumed SC members are research participants--this lack of understanding affect work efficiency
- Provide Principal Investigator with monthly budget updates
- Ensure institutional policies that facilitate the engagement of graduate students and staff members (who work on campus) in CBPR efforts, for instance being part of an SC
 - Develop concrete steps to compensate SC members
- Promote institutional mechanisms that fully support junior faculty of color (e.g., make sure there is no intimidation from staff members to PIs, such as including high administrators in email exchanges)

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Appendix A

Table 1. Regression Analysis of the dependent variable “Anxiety”

Variable	<i>B</i>	β	<i>SE</i>	<i>T-Value</i>
Intercept	.049		.511	.096
First-generation	-.194	-.089	-.275	-.704
Underrepresented Group	-.201	-.093	.303	-.663
Race	.088	.026	.434	.202
Gender	-.033	-.018	.275	-.129
Income	.023	.009	.324	.070
Food Insecurity	-.119	-.066	.227	-.525
Homelessness	.282	.076	.475	.594
Hostility	-0.14	-.333	.007	-2.096*

* $p < 0.05$

R-squared= .215

Table 2. Regression Analysis of the dependent variable “Depression”

Variable	<i>B</i>	β	<i>SE</i>	<i>T-Value</i>
Intercept	-.053		.503	-.104
First-generation	-.056	-.024	.284	-.196
Underrepresented Group	-.427	-.191	.298	-1.432
Race	-.032	.009	.425	-.072
Gender	.132	.069	.250	.528
Income	.103	.038	.309	.333
Food Insecurity	.043	.023	.216	.199
Homelessness	1.020	.239	.536	1.904**
Hostility	-.013	-.291	.007	.047*

** $p < 0.01$

* $p < 0.05$

R-squared= .414

Table 3. Regression Analysis of the dependent variable “Suicidal Ideation”

Variable	<i>B</i>	β	<i>SE</i>	<i>T-Value</i>
Intercept	.233		.508	.458
First-generation	-.083	-.024	.275	.303
Underrepresented Group	.148	-.191	.304	.486
Race	-.427	.009	.438	-.975
Gender	.131	.069	.254	.516
Income	.287	.038	.324	.886
Food Insecurity	-.114	.023	.226	-.505
Homelessness	.145	.239	.473	.307
Hostility	-.002	-.046	.008	-.278

R-squared= .895