

# Grad CAFE: Impacting Wellbeing with a Holistic Food-Centered Mentoring Program

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This case study report shares the latest findings from a National Science Foundation (NSF) funded research project examining the impact of Grad CAFE (Graduate Communities for Academic Fellowship & Efficacy). This innovative mentoring program provides a holistic, strengths-based, community-building approach to mentoring graduate students centered around food and enhances graduate student mentoring by creating an interdisciplinary community. Grad CAFE addresses factors impacting student persistence: capacity, interest, and belongingness, and uses components of the Hispanic Serving Institution (HSI) “servingness” framework: outcomes, experiences, and internal organizational dimensions. Grad CAFE experiences (e.g., classes, mentoring, and Cafecito dinners) aim to enhance short-term outcomes (academic identity, capacity, and interest), leading to an increased sense of belonging, improved mental health and wellbeing, and long-term outcomes such as satisfaction, retention, and completion. Grad CAFE supports graduate students at a Research 1, HSI, and public land-grant university where challenges exist in recruitment, retention, and completion rates for underrepresented doctoral students in STEM. Students participate in a multi-level mentoring program as peer mentors in their first or second year and as community leaders after completing comprehensive exams. The student-centered, student-led format of the program enables scaling up without increasing faculty/staff workload and provides students with valuable mentoring and professional development experiences. Since fall 2023, Grad CAFE has served 16 community leaders and 67 peer mentors. We present preliminary results from focus groups conducted after spring semester 2025. Participants emphasized that centering activities around food is vital to address food insecurity, reduce stress, build community, and enhance their wellbeing.

*Keywords:* Graduate students, food insecurity, holistic mentoring, peer mentoring, belonging

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## Introduction

Graduate Communities for Academic Fellowship & Efficacy (Grad CAFE) is funded for five years with \$1 million from the National Science Foundation (NSF) Innovations in Graduate Education (IGE) program. Grad CAFE transforms traditional approaches to mentoring graduate students by combining evidence-based best practices, such as culturally inclusive mentoring and a strengths-based approach, with targeted factors that impact student persistence (Wai-Ling Packard, 2016) through the HSI “servingness” framework of Garcia et al. (2019). The larger research project aims to assess the impact of Grad CAFE on the wellbeing,

retention, and degree completion of graduate students. The institutional context for the program is a Research 1 (R1) doctoral degree-granting, public, land-grant university with the Hispanic Serving Institution (HSI) designation. Although the University is nationally ranked in granting doctorates to Hispanic and Native American students, internal data reveal gaps in enrollment numbers, first-year retention rates, and the time it takes to complete doctoral degrees in science, technology, engineering, and math (STEM). As a holistic, intersectional, and interdisciplinary program, Grad CAFE includes a multi-tiered mentoring community and professional development centered around food.

Grad CAFE activities are intentionally planned around food for several reasons: 1) to address the issues of poverty and food insecurity that are widespread among graduate students, 2) to address graduate students skipping meals due to a lack of time, and 3) to create a sense of fellowship and community that comes from sharing a meal. The team works to help students shape their academic identity, embrace their whole selves, and reduce tokenization and isolation through intersectional and interdisciplinary connections. Grad CAFE experiences include classes, one-on-one mentoring, peer mentoring communities, and full cohort monthly ‘Cafecito’ dinners. These experiences are expected to have a positive impact on program outcomes, including an increased sense of belonging, improved mental health, and overall wellbeing. These experiences are embedded within the university’s organizational dimensions of culturally inclusive practices, culturally relevant mentoring and pedagogy, and a focus on HSI servingness (Garcia et al., 2019), which are expected to create a favorable campus climate for student and program success. In this paper, we focus specifically on the impact of food-centered activities on students’ wellbeing.

## Literature Review

### Issues Facing Graduate Students

Graduate students in the United States face a myriad of issues that can contribute to attrition, including a lack of motivation, limited financial resources or departmental support, bad advising, mental health issues, and the feeling that they do not fit in at the institution, among others (Gardner, 2009). Based on institutional data, female and underrepresented graduate students specifically report higher stress levels than other demographics related to finances, family responsibilities, course loads, and workloads, and express concerns about their ability to persist at the university. Research has also shown challenges in retention and completion among graduate students in the United States, especially those from traditionally underrepresented backgrounds (McGee, 2020).

Nationally, the underrepresentation of various demographic groups in STEM fields remains a long-standing issue (McGee, 2020; Posselt, 2020; Wai-Ling Packard, 2016). Some challenges faced by graduate students from traditionally underrepresented backgrounds include feeling a sense of tokenism, feeling isolated, experiencing discrimination, and encountering microaggressions (Miles et al., 2020; Miller & Orsillo, 2020). These experiences can result in feelings of exclusion and a heightened sense of needing to prove they belong in the program. In addition, low representation of STEM faculty and students from traditionally underrepresented backgrounds contributes to a lack of access to peer, near-peer, and faculty mentors, hindering the development of a culturally affirming community (Harris & Linder, 2018).

### Food Insecurity and Graduate Students

Research indicates that food insecurity and a decrease in mental health and wellbeing are increasing among graduate students (Martinez et al., 2020). As reviewed by Nazmi et al. (2019), estimates suggest approximately one-third of graduate students have limited or uncertain access to adequate food. Research also shows that graduate students are six times more likely to experience depression than U.S. adults, with stressors such as the high-pressure, isolating academic culture, problematic relationships between mentees and their supervisors, as well as perceived institutional discrimination, financial issues, and poor mentorship (Martinez et al., 2024). In the literature, several factors have been identified as increasing the risk of food insecurity among graduate students. Hammad and Leung (2024) assert that the issue of food insecurity is particularly salient for graduate students because of their unique circumstances. Common graduate student issues such as difficulties in achieving work-life balance, financial insecurity, and a demanding, stressful workload, which can exacerbate food insecurity. Additionally, graduate students with food insecurity have significantly elevated levels of depression, anxiety, and stress (Coffino et al., 2021).

## Methods

### Research Design

The NSF IGE Grad CAFE research study utilizes a mixed-methods evaluative approach with a convergent parallel research design. The University’s Institutional Review Board (IRB) approved the research protocol. This case study presents findings from a preliminary qualitative analysis of focus group data collected during the second semester of the first year of the NSF IGE grant. The focus groups took place at concluding events during Spring 2025. The research question for this preliminary analysis is: In what ways did gathering around food contribute to Grad CAFE program student experiences and outcomes?

### Study Participants

Participants in the research study were recruited from the Spring 2025 cohort of Grad CAFE. A face-to-face presentation describing the study was delivered during a program event at the beginning of the semester. The invitation to participate included community leaders (post-comprehensive exam doctoral students in STEM who receive a stipend for working with Grad CAFE) and peer mentors (first- or second-year doctoral students in STEM). They were informed that participation was voluntary and that they could withdraw from the study at any time without consequences (i.e., participation in the research study is not a requirement of Grad CAFE). The inclusion criteria for the research study were that they must be

18 years of age or older, proficient in English, a current doctoral student in a STEM discipline, and enrolled in Grad CAFE in one of the NSF-funded STEM sections supporting U.S. citizens (based on agency funding requirements). Of the 32 students enrolled, 31 provided informed consent (97%).

**Post-Program Focus Groups**

The moderator’s guide for the focus groups was developed, in part, based on the Grad CAFE logic model. The Grad CAFE logic model emphasizes how within an environment shaped by internal organizational dimensions such as culturally inclusive practices and a focus on HSI servingness, experiences such as classes and Cafecitos positively impact academic identity, capacity, and interest, leading to an increased sense of belongingness and improved mental health and wellbeing resulting in improved satisfaction, retention, and completion. Example questions included, “What motivated you to get involved with Grad CAFE?,” “Thinking back to your time in Grad CAFE, can you tell me about any experiences that helped you feel a sense of belonging or community?,” and “How did gathering around food influence your experience in the program?” At the end of the focus group questions, participants were given the opportunity to discuss any other topics that had not yet been raised. Before facilitating the focus groups for the study, the research team received training in qualitative methods and conducted a pilot focus group.

Three focus groups were conducted after the Grad CAFE semester ended in May 2025. One focus group included exclusively community leaders, while two additional focus groups included peer mentors. All three sessions were recorded digitally via Zoom. Each focus group was facilitated by

two research team members who served as moderators along with a notetaker. The audio files were initially transcribed automatically, and these were later revised for accuracy.

**Thematic Analysis**

We started by transcribing the recordings to familiarize ourselves with the content of the focus groups. Each transcript was reviewed multiple times to develop a thorough understanding of the data. During this initial review, we noted early observations and recurring themes, including references to food. For initial coding, we used open coding with inductive methods to identify and label segments of data that were meaningful or relevant to our research question. The codes were kept brief and descriptive. After coding, we analyzed how different codes clustered conceptually by generating themes. Related codes were grouped into broader themes that reflected underlying patterns in the data.

The initial themes were examined and developed into a coding framework, which was then used for data analysis. A qualitative analysis software program (MAXQDA) was utilized for organization and analysis. During the review of themes, we examined each one to ensure internal consistency and distinctiveness. This involved revisiting the original transcripts to confirm that the data supported the themes and that no significant content was missed. Each theme was defined to convey its scope, relevance, and connection to the study’s research question. Each theme was supported by multiple coded data segments from various participants, ensuring depth and credibility. The final phase involved writing a narrative interpretation, supported by illustrative quotes for contextual depth and participant voice.

**Table 1**  
*Focus Group Participants*

Focus Group	Type of Participants	Number of Participants
1	Community Leaders	8
2	Peer Mentors (1 <sup>st</sup> & 2 <sup>nd</sup> year grad students)	8
3	Peer Mentors (1 <sup>st</sup> & 2 <sup>nd</sup> year grad students)	3
	Total Participants	19

**Results**

In total, 19 people participated in one of three focus groups (see Table 1). The focus group length was between 58 minutes and 70 minutes, with transcript length from 48 to 58 typed pages

each. The analysis of the focus groups highlighted common themes related to the influence of food in the program, including direct experiences of food access in Grad CAFE, sense of belonging, campus climate, program engagement, and well-being. In this report, we focus on food access and sense of belonging due to space limitations.

## Food Access in Grad CAFE

Participants identified several factors associated with the impact of food through their direct experiences with food access through the Grad CAFE program. Several community leaders shared their personal experiences with food insecurity during graduate school. One community leader told their story of food insecurity, their feelings of stigma, and the importance of having food available to them through Grad CAFE:

Last semester, I was quite food insecure, actually, and like knowing I could come here two or three times a week and get food, take leftovers if I wanted, was quite helpful for me without me like outwardly having to say, like, 'hey, I'm having trouble finding food or getting food.' That was really nice too, like, it keeps you on the same level as everyone else, so that we could all get food, and if you're food insecure, you don't have to feel awkward getting food as well. (Community Leader)

Among the more significant impacts discussed were experiences of combating the stigma surrounding food insecurity, being acknowledged by others, and students learning about the availability of campus resources through Grad CAFE, including the food pantry and how to request food items for pick-up. One community leader described these impacts on a peer mentor and highlighted their own recognition of the human experience of food insecurity:

This semester, I thought, was really impactful... one student during our weekly wins said that her weekly win was getting tomatoes at the on-campus food pantry. And I thought, (it) was a little jarring. Because I understand that there's food insecurity, but I've never met someone who outwardly spoke about it. And so she came in really excited that there was an annual request (of what to ask for in the pantry). And that's something that really, like, stuck with me. Others shared the value of food to them beyond their times of food insecurity, such as:

I think it has been very helpful, even when I'm not food insecure, to know that I don't have to worry about lunch that day and if I take some things home, I don't have to worry about dinner that day either, especially when you're really busy and you don't actually have time to cook something. So, something that you're able to reheat, something healthy and filling, is really nice. (Community Leader)

Multiple peer mentors and community leaders expressed appreciation for the program's provision of meals, which helped alleviate their financial stress and ensured reliable, stable access to nutritious options. Participants also acknowledged the program's overall positive impact on their ability to maintain a healthy diet despite their busy lab and academic schedules.

The days that I really appreciated the food the most were the days when we had something really nutritious, cause I eat a lot of, like, ramen at my desk... I just think of that broccolini all the

time {focus group laughter and agreement}, and like having a salad every single time where I could eat a lot of vegetables during our school day. (Community Leader)

Participants described the importance of food access in the program for meeting their basic needs. A community leader expanded on this topic, explaining that Grad CAFE not only fulfilled their basic needs with food, but also with clothing. They shared that the program t-shirt was their only new piece of clothing in that academic year. Another community leader was grateful for the support they received from the co-directors and the Grad CAFE community as they navigated a difficult housing transition.

## Sense of Belonging

The Grad CAFE program had a positive impact on peer mentors' confidence and sense of community, with the food element contributing significantly to a comfortable atmosphere and enhancing the students' sense of belonging. Peer mentors described the benefits of sharing meals together as, "It felt more casual when you could just like chat and eat. It feels less like a classroom," and "It also was like a conversation starter, 'oh we have this today, what do you like?,' so not talking about, like, school stuff." A peer mentor summarized the feeling of community meals as, "It was really like, I don't know {pause} tribal that we eat together {focus group laughter and agreement}."

Multiple peer mentors described the importance of gathering in community as underrepresented graduate students. This was raised as specifically helpful to address their needs as a graduate student in STEM:

I think, again, this goes back to the community aspect, just being able to collectively share our experiences. Even though they come from different backgrounds, but we are all in the imposter syndrome or whatever that looks like. Being able to vent and hear feedback of how other people dealt with it. (Peer Mentor)

Additional benefits noted relate to cultivating resilience and problem-solving among underrepresented graduate students. One peer mentor shared,

Knowing that I'm not alone in this fight. I'm not crazy. Don't drop out your first year, things like that, really gave me the perseverance that I needed to kind of, keep going and not dwindle out and flame out that first year.

Other peer mentors explained the importance of community and resource sharing in Grad CAFE for addressing challenges, for example, "I'm having issues with my advisor recently, so I'll probably, like, now I know who I can go speak to." A different peer mentor echoed appreciation of resources and went on to emphasize the importance of building community over food, stating:

I would say, like for me, the biggest need that I had was just kind of, yeah, community. Seeing other people, meeting other people in grad school, and like having a space to regularly

interact with people because in grad school it's really easy to, when things get busy, is when you put like socializing and kind of seeing people, you avoid that because like, well, I need to put the time into these projects and things. So then, it's kind of like when you're most isolated is when you're struggling the most. But that's also when you don't have time to do something. So having like regularly scheduled, 'Here just come eat food, talk to people,' like, that, I think, was meeting my need.

## **Discussion**

This research paper focused on a preliminary analysis of qualitative data from the NSF IGE-funded Grad CAFE research study. As described here, we engaged STEM doctoral student participants of Grad CAFE in post-program focus group discussions to understand the benefits of Grad CAFE and the influence of food access as part of the program. Because this was a preliminary analysis, the data reported here are limited to the importance of centering program activities around food. We will continue to analyze the qualitative and quantitative data as part of the larger mixed-methods study.

### **Food Access: Meeting Basic Needs**

The data reported here highlight the importance of food access in Grad CAFE for meeting the basic needs of doctoral students in STEM fields at an HSI. This finding aligns with the prior work of Moya et al. (2025), who found that among undergraduates at an HSI, students face significant challenges related to basic needs, including food insecurity. They further found that these issues relate to academic outcomes. For example, the lowest levels of food security were associated with the highest levels of difficulty concentrating, the highest frequency of considering degree delays, and the highest rates of taking graduation delays among undergraduates at the HSI. The concept of a supportive institutional environment to meet basic student needs is fundamental to operationalizing the multidimensional conceptual framework of servingness within HSIs (Garcia et al., 2019). As the University is one of a select few R1 HSIs, Garcia and colleagues' framework is relevant for creating a program that addresses diversity issues in STEM and aligns with our mission as an HSI. To our knowledge, the analysis we report here is the first qualitative study related to food access that examines the lived experiences of graduate students in STEM doctoral programs at a large, HSI public research university. The literature review revealed a limited amount of prior qualitative research on the lived experiences of university students facing food insecurity, with predominantly quantitative reports published on the rates of food insecurity among the student body.

### **Enhanced Sense of Belonging**

The togetherness and time for conversation during meals provided opportunities to share experiences with others in Grad CAFE. These interactions were found to disrupt feelings of marginalization and isolation associated with aspects of students' intersectional identities that are underrepresented in their STEM departments and labs. Results indicated that including meals at Grad CAFE activities enhanced positive feelings, fostered a sense of belonging among doctoral students in STEM, and contributed to a welcoming environment where graduate students felt cared for and safe in at least one part of the campus community. A possible explanation for these results is the cross-cultural importance of sharing meals with others in supporting social connections. Sharing a meal as a community within Grad CAFE is a form of communal eating. The frequency of this type of meal sharing is used as a measure of social connectedness worldwide and has been shown to positively contribute to happiness and wellbeing (De Neve et al., 2025).

## **Conclusion**

Based on our literature review and that of others, this is the first mentoring program of its kind centered on food access to serve doctoral students in STEM fields at an HSI, public land-grant, research university. Using qualitative methods to prioritize the voices of STEM doctoral students themselves, we found that incorporating food into a holistic, multi-tiered mentoring program is an evidence-based, effective practice. Food access in Grad CAFE contributed to building community, enhancing students' sense of belonging, and improving wellbeing while addressing food insecurity.

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